

PROCTER LEIBER RESIDENCE: CONDITION ASSESSMENT

10901 N Oracle Rd, Oro Valley, AZ 85737

Poster Mirto McDonald has been hired to produce an updated condition assessment report for the Procter Leiber building at the Steam Pump Ranch.

Historical Background

This Spanish Colonial / Mission Revival Style residence was built for John Procter and his family after their acquisition of the property in 1933. The building appears to have originally consisted of two equal wings separated by a central living room and a covered porch. The porch may have been fully enclosed shortly after construction. In the early 1970s, Procter's grandson, John Leiber, and his wife, Cheryl, moved into the house. Since that time, there have been a number of significant changes, including the renovation of the kitchen area, a second-story addition above the living room (recently demolished), and the addition of a master bedroom suite at the eastern side of the building.



PROCTER-LEIBER RESIDENCE, 1940S

Assessment Goals

In addition to this assessment, PMM will provide schematic level information to renovate the building to a "white shell" state. For this building, we understand this to mean the following will be provided:

- Basic lighting suited to the flexible use of the building
- Convenience power suited to flexible use of the building
- Heating, ventilation, and cooling for the entire building
- Restrooms suited to flexible use of the building
- Plumbing connections to other locations if needed

The "white shell" state will specifically exclude:

- Signage
- Furnishings and furniture systems
- Interior design and interior finishes
- Casework outside of restrooms
- Task lighting

Overall Assessment

The Procter Leiber Residence is in overall fair condition. There is evidence of differential settlement on the North Elevation that has resulted in damage to the adobe, plaster finish, and integral color concrete slab. Water intrusion in the East Bedroom has resulted in ceiling failure and possible damage to the adobe walls. It appears rodent activity in the building has been managed but sanitation is recommended throughout. The Arizona Room has signs of possible water intrusion, floor depression, and deflected roof joists.

Summary of Recommendations:

The recommendations in the report to follow include provisions for stabilizing the building and rehabilitating as a “white shell”. For the sake of stabilization, the following items should be considered:

- Deflected roof joists at Arizona Room. Recommend reinforcing joists with new framing. Prior to reinforcement, existing joists should be jacked up to remove sag slowly over time. See structural report.
- SE Porch Addition is in very poor condition and should be removed entirely.
- Differential settlement on north side of building leading to adobe damage.
- Plaster cracking due to possible water intrusion throughout. Remove plaster at areas with cracking to evaluate condition of adobe beneath.
- Clay tile roof at Arizona Room requires attention. Remove clay tile roof over Arizona Room, replace weather resistive barrier, and reset tile.

While the several portions of the building are in fair condition, the program and layout do not align with future use of building. See report body for recommendations on “white shell” treatments.

It is likely this building contains hazardous materials that will require abatement by a professional, see Appendix 03 for additional information. A hazardous material report should be obtained by the Owner prior to beginning any work.



North elevation looking east

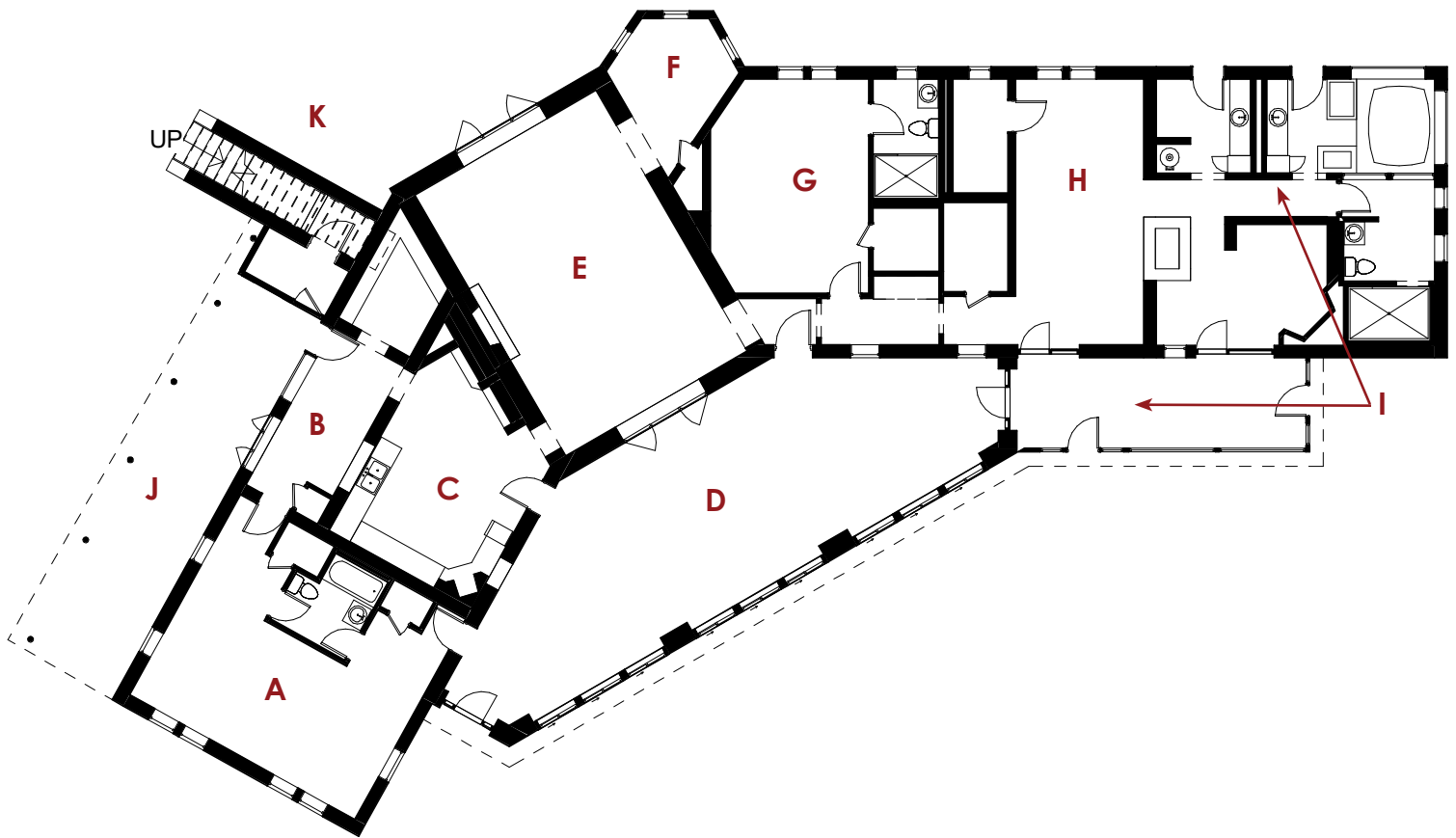


North elevation looking west

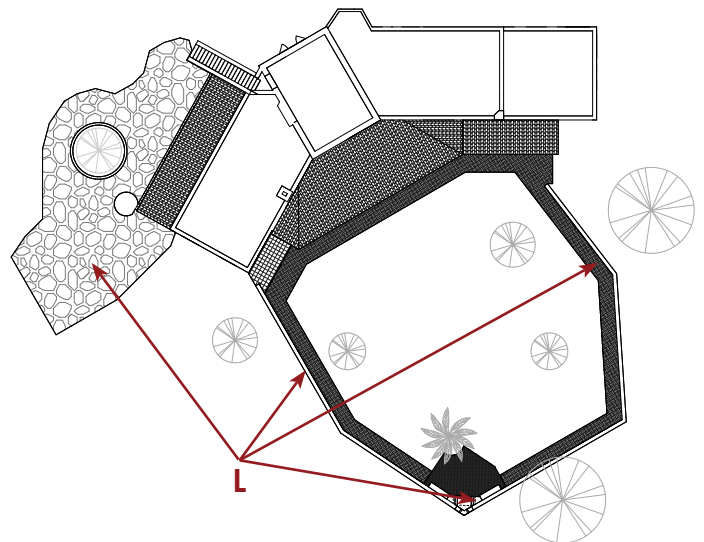


South building elevation

CURRENT FLOOR PLAN



- A. WEST BEDROOM, BATH, + CLOSETS
- B. ENTRY, WATER HEATER CLOSET + STORAGE ROOM
- C. KITCHEN
- D. ARIZONA ROOM
- E. LIVING ROOM
- F. SITTING ROOM
- G. NORTH BEDROOM, BATHROOM, + CLOSET
- H. EAST BEDROOM, BATHROOM, + CLOSET
- I. EAST ADDITION (UTILITY ROOM, BATH, SUNKEN LIVING ROOM, PORCH)
- J. NORTH WEST PORCH
- K. STAIR + STORAGE RM BELOW
- L. SITE WALL + SITE PAVING



SITE PLAN

01 SITE ISSUES

This narrative summarizes the grading improvements and utility improvements necessary for renovation of the Procter Leiber House at Steam Pump Ranch. The information presented is prepared based on visual observation and utilizing information available from prior work completed by CEC [EEC] under the direction of the PMM. No new field survey or existing utility investigation was performed for this exercise.

Grading Improvements

This narrative describes two separate grading exercises associated with improvements to the Procter Leiber House: the Courtyard and the Building Perimeter.

- Courtyard Grading Improvements

Existing Conditions:

The existing courtyard on the south side of the Procter Leiber House is bounded by a concrete wall on the west, east and south sides. The north side of the courtyard opens to the patio of the House. The existing ground is grass covered with (4) four trees spaced throughout the courtyard, and a patio made of brick pavers. The ground surface within the perimeter wall appears to be relatively flat, with a slight visible slope that falls to the south. The ground has divots throughout the courtyard causing an uneven surface and a potential tripping hazard. The pavers are uneven and also pose a potential tripping hazard.

Proposed Grading Scheme:

It is recommended to regrade the entire interior courtyard ground surface to remove the existing divots and create a smooth, walkable surface. The existing slope shall be maintained from the building patio to the south courtyard wall. The pavers shall also be replaced and relayed with an even surface. If possible, it is recommended to cut an opening(s) into the bottom of the existing wall to allow runoff in excess of ground infiltration to exist the perimeter enclosure (to be determined based on historical preservation restrictions).

- Building Perimeter Grading Improvements

Existing Conditions:

The existing ground surface around the building perimeter is earthen & grass covered on the east and west sides, and gravel covered on the north side. The ground adjacent to the east and west building sides appears to be relatively flat with a slight slope away from the building. The gravel surface adjacent to the north side of the building appears to be relatively flat with no slope.

Proposed Grading Scheme:

It is recommended that a minimum ground slope of 5% be provided when the building is adjacent to a pervious surface. Additional field survey will be necessary to confirm the existing slope (if any) of the ground surfaces adjacent to the building perimeter. This field survey will be used to determine the extent of the grading improvements.

Utility Improvements:

This narrative describes the water and sewer improvements for the Proctor Leiber House.

- **Water**

The location of the existing water service to the building is undetermined. An existing 8" water main is located approximately 70-feet west of the building. If the existing water service is determined to be non-viable, a new water service can be installed to connect the building to that existing 8" water main.

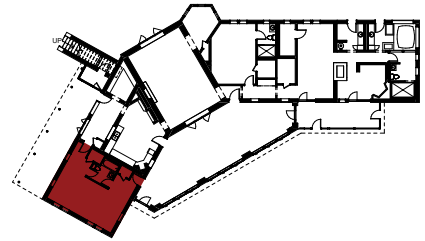
- **Sewer**

There appears to be what is a sewer service cleanout near the front porch on the north side of the building. It is unknown if the existing building is served by a sanitary sewer connection, or if it is served by a septic system. An existing 8" public sewer main is located on the north side of the Stem Pump Ranch property, approximately 280-feet north of the building. If the means of existing sewer disposal is determined to be non-viable, a new sewer service connection can be installed to connect the building to that existing 8" sewer main.

02 ARCHITECTURAL

A : WEST BEDROOM, BATH, + CLOSETS

This area appears to have been part of a later building renovation that removed a demising wall, altered the original bathroom, removed and replaced the original windows with contemporary aluminum, and added a skylight. This wing is in fair condition. It is assumed a restroom in its current configuration will not be required in the new building use.



A.01 Exterior windows: Condition - Good

Typical aluminum frame single-hung window in single and pair arrangement. Likely originally matched wood frame single-hung windows elsewhere in the building but were replaced sometime in the 1970s or 1980s during a renovation.

Stabilization recommendation:

Rehabilitate wood subframes, replacing worn components in kind. Remove any existing sealant and reseal full perimeter interior and exterior. Remove aluminum windows and replace with new double pane, clear glass fixed aluminum windows.

New work proposal:

Recommend replacement with wood single-hung windows to match original construction.



A.02 Interior doors: Condition - Good

Interior five panel wood door

Stabilization recommendation:

Clean, adjust, and paint.

New work proposal:

Remove doors from hinges and salvage for use elsewhere in building. SD proposal removes bathroom and closet entirely. Replace door hinges and hardware when used elsewhere.



A.03 Interior doors: Condition - Good

Interior panelized door likely added during renovation, not original to building construction.

Stabilization recommendation:

Clean and adjust.

New work proposal:

Remove and discard door and frame. Passage door not required in this location for proposed scope of work.



A.04

Flooring: Condition - Fair

Typical integral color concrete slab, portion of which is covered by laminate tile in poor condition. Concrete slab has visible cracking.

Stabilization recommendation:

Remove laminate flooring and any related transitions. Reference Appendix 03 for recommendations for abatement of possible hazardous materials.

New work proposal:

Remove laminate completely to assess condition of concrete slab below. Perform recommended structural upgrades.



A.05

Interior wall / plaster: Condition - Fair

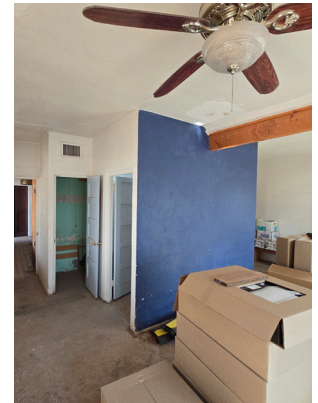
Adobe and wood frame walls with interior plaster finish. Exterior walls have cracking that requires patching.

Stabilization recommendation:

See Appendix 01: Plaster and Adobe General Notes for recommendations in plaster patching.

New work proposal:

Demolish and remove interior bathroom and closet walls completely. Layout does not serve programmatic needs of future building use. Complete any structural recommendations. Patch any cracking plaster or areas where damage has occurred according to Appendix 01.



A.06

Skylight: Condition - Fair

Shed skylight above current bathroom with open louvers.

Stabilization recommendation:

Cap louvers with weather resistive barrier. Remove any existing sealant and reseal full perimeter interior and exterior.

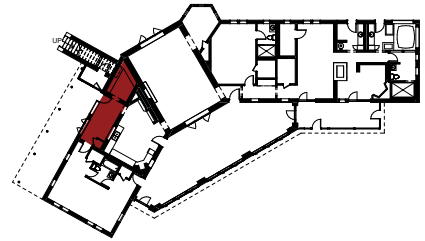
New work proposal:

Replace with new insulated glazing shed roof skylight. New product should be weather tight (no louvers).



B. ENTRY, WATER HEATER CLOSET + STORAGE ROOM

This space is accessed off the West Porch and serves as the main entry in the current building configuration. The flooring and T1-11 water heater closet appear to have been added sometime during the 1970s-80s and are in poor condition. There is evidence of possible smoke damage to plaster from nearby kitchen. The building electrical panel is located in the pantry off the entry but is no longer in use.



B.01 Flooring : Condition - very poor

Sheet vinyl in failing condition.

Stabilization recommendation:

The flooring is in very poor condition and should be removed. The majority of the flooring in the building is a stained concrete. Once flooring is removed, the condition of the concrete beneath should be assessed to determine whether exposing the concrete is an option. Reference Appendix 03 for recommendations for the abatement of possibly hazardous materials.

New work proposal:

Remove laminate completely to assess condition of concrete slab below.



B.02 Exterior windows : Condition - Fair

Divided lite steel casement window and wood frame fixed window. Both windows in fair condition.

Stabilization recommendation:

Wood: Rehabilitate subframes, replacing worn components in kind.

Steel: Reference Appendix 03 for abatement if hazardous material recommendations. Prime and paint steel sash.

Remove any existing sealant and reseal full perimeter interior and exterior.



B.03 T1-11 Closet : Condition - Very poor

T1-11 framed water heater closet with louvered door missing hardware in poor condition. No water heater currently present in closet.

Stabilization recommendation:

Demolish closet entirely and cap any existing plumbing. WH closet does not serve programmatic needs of future building use. Clean and sanitize area.



B.04

Pantry Closet: Condition - Fair

Triangular closet with ill-fitting double wood doors, wood shelving full perimeter, and non-functional building electrical panel. Double door is not original to building layout but the shelving likely is.

Stabilization recommendation:

Clean and sanitize all surfaces of existing shelving.

New work proposal:

Remove all shelving, doors, and lighting completely. Provide new hollow metal door to serve future building use.



B.05

Exterior doors: Condition - Good

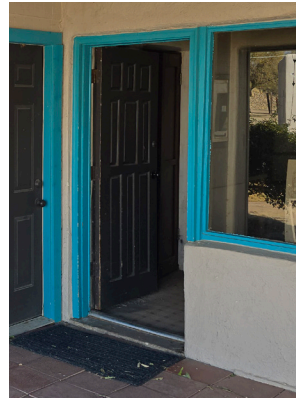
Exterior panelized wood door. This door is not original and likely replaced during a previous renovation. Door is suited to a residential use.

Stabilization recommendation:

Replace door weather stripping, clean, and adjust door and frame.

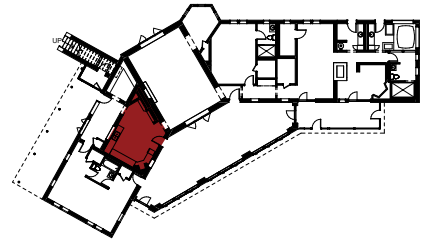
New work proposal:

Remove and discard door and all associated hardware. Re-use existing door frame. Provide new hollow metal door to serve future building use.



C. KITCHEN

The existing residential kitchen in the building was remodeled substantially at a later period. Judging by the wood paneling centric design, it is possible that this work was done at the same time as the northern building addition, likely in the late sixties or early seventies. The most prominent feature of the kitchen is the red brick and telephone pole fireplace. Red brick also occurs across the room supporting pantry shelving. This red brick material is in good condition. Cabinets are clear finished pine beadboard material with plastic laminate counter tops. Visually, the cabinets are in fair condition. The building has been host to a significant rodent infestation for many years, and it is likely that rodent damage has occurred inside the cabinets. It is certain that rodent waste has contaminated the porous surfaces of the wood material of the cabinets. The flooring is sheet vinyl in failed condition. The ceiling is clear finished T1-11 faux bead board, and is in fair condition, with no obvious signs of water damage. It is assumed that in no use case that a residential kitchen will be needed within the building. The majority of the kitchen is in fair condition. To stabilize the kitchen so it can be used in its current configuration we make the following recommendations.



Schematic Recommendation: The kitchen in its current configuration is not needed in the schematic design for the building. It is our recommendation that the entirety of the kitchen be removed back to the adobe walls of the historic building. This would include the flooring, cabinets, counter, shelving, brick fireplace and associated chimney, wood ceiling, and all lighting. Exposed surfaces to remain should be sanitized.

C.01 Interior doors: Condition - Good

Interior panelized door likely added during renovation, not original to building construction.

Stabilization recommendation:

Clean and adjust.



C.02 Red brick: Condition - Good

Red brick infill in window and around wood-burning fireplace and shelving.

Stabilization recommendation:

Thoroughly clean with low pressure, soap and water wash with a soft bristle brush.



C.04

Cabinets: Condition - Fair

Casework includes kitchen cabinets, counter tops, shelving, and

Stabilization recommendation:

Clean and sanitize all outside and inside surfaces of cabinets. This should be done by a contractor specializing in hazardous cleaning using cleaning materials which will sterilize and deodorize. Any components which are compromised due to rodent chewing or excessive soiling should be replaced in kind. As a further recommendation, rodent waste is possible or likely to be found in the inaccessible area of the toe kick of the cabinets, and possibly between the wall and the base cabinets. This material, if left in place may continue to smell once the building is brought into service. It is our recommendation that the cabinets should be removed such that this area can be accessed and sanitized and then reinstalled. The countertop is soiled and should be removed and replaced as part of this operation.



C.05

Ceiling and lighting: Condition - Good

T1-11 ceiling finish with recessed fluorescent lighting and several penetrations assumed for former mechanical devices.

Stabilization recommendation:

The ceiling is in good condition. The wood paneling should be thoroughly cleaned. The existing lighting is fluorescent tube fixtures, the function of which could not be assessed. Regardless of function, the fixtures should be replaced with new LED fixtures. Seal any ceiling openings to prevent further rodent activity.



C.06

Flooring: Condition - Very poor

Sheet vinyl in failing condition.

Stabilization recommendation:

The flooring is in very poor condition and should be removed. The majority of the flooring in the building is a stained concrete. Once flooring is removed, the condition of the concrete beneath should be assessed to determine whether exposing the concrete is an option.



C.07

Chimney: Condition - Fair

Chimney connected to kitchen red brick fireplace added during renovation in 1970s-80s.

Stabilization recommendation:

Chimney to remain as-is while fireplace exists in kitchen below. Cap roof opening with weather tight closure.

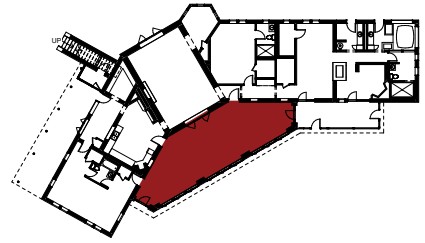
New work recommendation:

Complete structural recommendations.
Remove chimney structure completely.
Patch roofing and exterior stucco finished adobe parapet as required.



D. ARIZONA ROOM

The large Arizona room on the east side of the building faces Pusch ridge and offers the best views available from the residence. It is likely that the Arizona room was at one time open air, probably with screens in place of the windows currently in place. Historic photography shows that the sill beneath the windows was likely original. Glazing was likely added as soon as air conditioning was available. The exterior wall of the room appears to be adobe with painted plaster finish on exterior and interior. Modern replacement aluminum windows sit within painted wood sub frames. There is a later period frame addition on the north side of the room.



D.01 Roof Structure: Condition - Requires attention

Exposed rough-sawn 2x6 beams. The roof is exhibiting signs of significant deflection and has been temporarily shored. Reference structural report for additional information. Above the joists is a tongue and groove bead board deck. This material appears to be in generally good condition.

Stabilization recommendation:

Complete recommended structural upgrades. Paint existing and new structural members and deck.

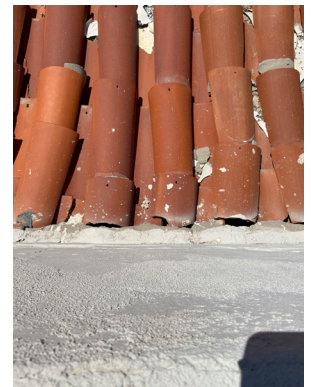


D.02 Tile Roof: Condition - Requires replacement

Clay tile roof and related assembly. The date of the last replacement of the weather resistive membrane beneath the tile is unknown, but is assumed to be well past its service life. As reported above, the roof members are significantly deflected. It is likely that this movement has created issues at the margins of the system, at flashings and eaves.

Stabilization recommendation:

Following completion of structural upgrades to supporting structure of roof, and of lintels at windows. Remove and salvage all tile material for re-installation. Remove and discard existing WRB down to deck, and remove all flashings and trim. Install new weather resistive barrier on top of existing decking. Install new flashings and reinstall clay roof tile. It should be assumed that it will be necessary to source matching material to account for breakage in salvage and installation process.



D.03

Exterior Window: Condition - Requires replacement

Historic photos indicate that the windows were likely large plate glass panels. At present, large built-up painted verticals separate each bay into 3 segments, each with a sliding aluminum window. These windows are inexpensive modern replacements and should be replaced. Reference structural report for work to lintel above each bay of windows.

Stabilization recommendation:

Complete recommended structural upgrades. Paint existing and new structural members and deck.

New work proposal:

Remove and discard existing aluminum windows and intermediate built-up wood verticals and associated wood trim. This will restore the bays to their original configuration. Provide (2) equal new custom insulated glazing panels in each of (3) bays. Trim these glazing units with custom wood trim, full perimeter inside and out. Provide continuous sealant both sides of window system.



D.04

Interior Windows: Condition - Good

The interior single hung wood windows of the Arizona room were once the exterior windows of the building, but have always been under deep cove, protected from rain and sun. They are in good condition.

Stabilization recommendation:

Clean, adjust, and paint

New work proposal:

Provide new wood single-hung window to match existing at location where window was removed as part of later kitchen remodeling.



D.04

Flooring: Condition - Requires attention

The Arizona room features 12x12 Mexican tile flooring with wide grout joints. This material is in good condition but the slab below has noticable depressions at the exterior wall.

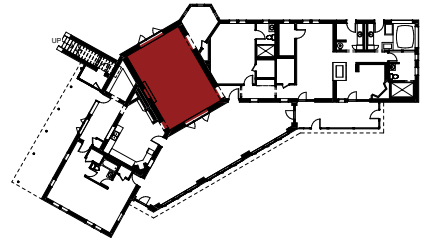
Stabilization recommendation:

Remove and discard tile. Demo slab (typ of building) and repour integral color concrete to match previous.



E. LIVING ROOM

The Living Room remains largely as it was originally built. At one time there was a second story above this space but it was removed in the 2000s. Structural members supporting the roof have since exhibited signs of deflection and require upgrades for base stabilization and potential use of the roof area as an occupied deck. The exterior adobe has painted plaster finish on either side that has sustained damage over time from water intrusion. Repaired areas require plaster patching to match existing. The central fireplace is in good cosmetic condition but is capped and assume non-operational.



E.01 Roof Structure: Condition - Requires attention

Rough-sawn 4x8 material with applied decorative elements. Above the joists is a painted tongue and groove bead board deck in generally good condition.

Stabilization recommendation:

Complete recommended structural upgrades. Salvage all decorative material for reuse on structural members. Paint new / existing structural members and deck.

Additive Alternate Recommendation:

Complete recommended structural add alt upgrades to increase load bearing capacity of roof structure for use as an occupied roof deck.



E.02 Exterior Windows: Condition - Good

Wood frame operable casement window with double awning lites above. Window and glass appears to be in good condition.

Stabilization recommendation:

Clean, adjust, and paint.



E.03 Fireplace: Condition - Good

Plaster finish fireplace with Mexican clay tile mantel with wide grout lines and decorative painted tile at base. Chimney is capped at roof and assumed non operational. Material is considered historic and serviceable.

Stabilization recommendation:

Clean existing grout and repoint where degraded. Provide new penetrating sealer to tile and grout.

Remove wire penetrations to plaster face and patch according to general notes for plaster repair.



E.04 Interior Plaster: Condition - Requires Attention

Previously repaired interior plaster requires additional coat to match texture of existing. Cracking throughout requires patching.

Stabilization recommendation:

See general plaster notes for areas with non-conforming plaster texture. Complete recommended structural upgrades to address cracking. Remove plaster in 12" around cracking. Float plaster patch material over entire area, feathering 12" over perimeter to meet existing material. Texture to match existing.

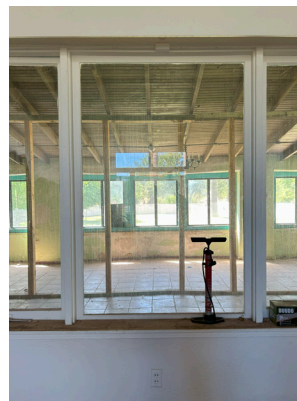


E.05 Interior window: Condition - Good

Interior wood casement window were once exterior windows of the building, but have always been under a deep cover, protected from rain and sun. Window is in good working condition.

Stabilization recommendation:

Clean and adjust window and hardware. Paint frame.



E.06 Flooring: Condition - Poor

Integral color concrete slab constructed without control joints. Slab shows significant signs of cracking, likely do to differential settlement.

Stabilization recommendation:

Complete recommended structural upgrades. New concrete slab and cast wall base to be integral color to match previous.

E.07 Chimney cap: Condition - Fair

Chimney cap at roof with sheet metal cap.

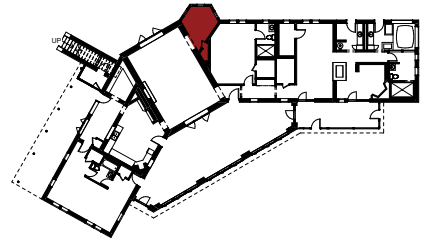
Stabilization recommendation:

Remove and discard existing cap. Install new weather tight sheet metal cover. Paint to match surrounding stucco.



F. SITTING ROOM

The Sitting Room shows significant signs of differential settlement and water intrusion. As a result, the cast-in-place concrete slab is in poor condition and requires replacement. The plaster ceiling has also failed in places revealing the wood frame roof structure above. The windows single hung windows were replaced during a previous renovation with inexpensive aluminum windows, although the wood sill and frame appear to be original.



F.01 Ceiling + Lighting: Condition - Poor

Plaster ceiling has been damaged by water intrusion and requires full replacement. Ceiling fan is not in working condition and does not meet programmatic needs of future building use.

Stabilization recommendation:

Complete recommended structural upgrades to mitigate cracking. Replace plaster ceiling with like.



F.02 Exterior Windows: Condition - Functional but recommend replacement

Likely originally wood single hung windows as seen elsewhere in building.

Stabilization recommendation:

Rehabilitate wood subframes, replacing worn components in kind. Remove any existing sealant and reseal full perimeter interior and exterior. Remove aluminum windows and replace with new double pane, clear glass fixed aluminum windows.

New work recommendation: Rehabilitate wood subframes, replacing worn components in kind. Remove any existing sealant and reseal full perimeter interior and exterior. Remove aluminum windows and replace widow unit with a custom, faithful replica of existing single hung wood window as found in Arizona Room.



F.03 Floor + Base: Condition - Poor

Cast-in-place integral color concrete slab and base shows signs of differential settlement and water intrusion.

Stabilization recommendation:

Complete recommended structural upgrades. New concrete slab and cast wall base to be integral color to match previous.



F.04**Interior Plaster: Condition - Poor**

Interior plaster is in failing condition and requires replacement throughout room.

Stabilization recommendation:

Plaster requires replacement throughout room. Follow Appendix 01 for general requirements in plaster repair. Plaster with previous repair to be textured to match.

**F.04****Interior Door: Condition - Good**

Existing five panel wood door.

Stabilization recommendation:

Clean, adjust, and paint.

New work proposal:

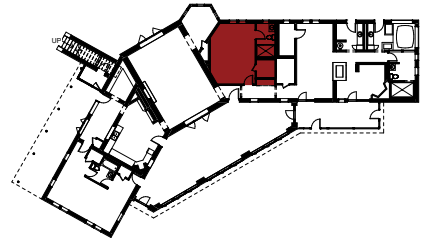
Existing door to remain in place. Replace door hinges and hardware if required by new building programmatic requirement.



G. NORTH BEDROOM, BATHROOM + CLOSET

This bedroom is in its original configuration with a bathroom and closet attached. While this room is in overall fair condition, the layout is at odds with the future programmatic desire for larger and more flexible spaces in the building. PMM's recommendation is to demolish all interior walls in this wing to accommodate larger programmatic space.

For stabilization purposes - it is assumed the home will not be used as a private residence in the future and funding should not be allocated to bring restroom to working condition.

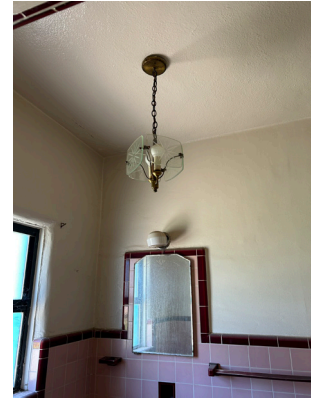


G.01 Ceiling + Lighting: Condition - Good

Plaster ceiling in good condition. Existing light fixtures do not meet programmatic needs of new building use.

Stabilization recommendation:

Complete recommended structural upgrades. Ceiling likely to incur damage through course of construction. Patch and/or replace plaster ceiling per Appendix 01: Plaster Repair General Notes.



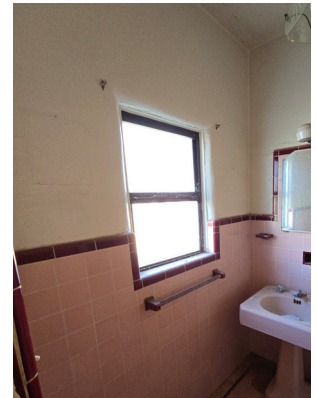
G.02 Exterior Windows: Condition - Functional but recommend replacement

Likely would have been wood single hung windows as seen elsewhere in building.

Stabilization recommendation:

Rehabilitate wood subframes, replacing worn components in kind. Remove any existing sealant and reseal full perimeter interior and exterior. Remove aluminum windows and replace with new double pane, clear glass windows.

New work recommendation: Rehabilitate wood subframes, replacing worn components in kind. Remove any existing sealant and reseal full perimeter interior and exterior. Remove aluminum windows and replace widow unit with a custom, faithful replica of existing single hung wood window as found in Arizona Room.



G.03 Floor + Base: Condition - Poor

Cast-in-place integral color concrete slab and base shows signs of differential settlement and water intrusion.

Stabilization recommendation:

Complete recommended structural upgrades. New concrete slab and cast wall base to be integral color to match previous.



G.04

Interior Doors: Condition - Functional but recommend replacement

Panelized wood door likely replaced during concurrent renovations sometime in the 70s - 80s.

Stabilization recommendation:

Clean and adjust.

New work recommendation:

Recommend demo of all interior walls in this portion of the building completely, including doors.



G.05

Bathroom: Condition - Poor

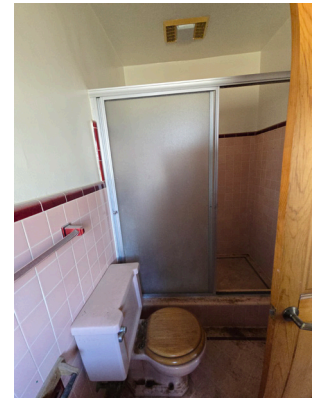
Bathroom finishes, fixtures, and configuration original to construction of 1930s home.

Stabilization recommendation:

Remove all plumbing fixtures and cap piping. Thoroughly clean and sanitize all elements and finishes according to Appendix 02: Best Practices for Cleanup of Rodent Infestation.

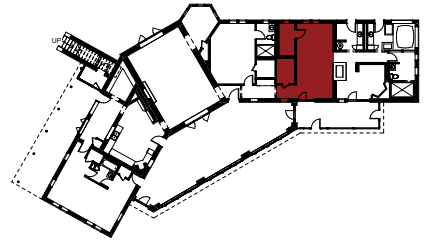
New work recommendation:

Demo restroom and closet interior walls, finishes, and fixtures entirely to better serve programmatic needs of building.



H. EAST BEDROOM, BATHROOM + CLOSET

This bedroom is in its original configuration with a bathroom and closet attached and open to the East Wing Addition. While this room is in overall fair condition, the layout is at odds with the future programmatic desire for larger and more flexible spaces in the building. PMM's recommendation is to demolish all interior walls in this wing to accommodate larger programmatic space. In order to stabilize this area, the configuration can be left as-is with repair work to plaster, slab, and roof structure only.



H.01 Ceiling + Roof Structure: Condition - Poor

Plaster shows evidence of water intrusion and has significant damage on north side where roof structure is visible above.

Stabilization recommendation:

Complete recommended structural upgrades. Ceiling likely to incur damage through course of construction. Patch and/or replace plaster ceiling per Appendix 01: Plaster Repair General Notes.



H.02 Floor + Base: Condition - Poor

Cast-in-place integral color concrete slab and base shows signs of differential settlement and water intrusion. Large cracking present throughout.

Stabilization recommendation:

Complete recommended structural upgrades. New concrete slab and cast wall base to be integral color to match previous.

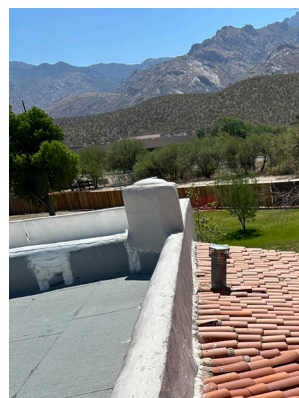


H.03 Chimney: Condition - Good

Chimney structure above roof - likely for use of standalone fire place during residential use of building. The ceiling has been capped in this location and there is no evidence of issue with remaining as-is.

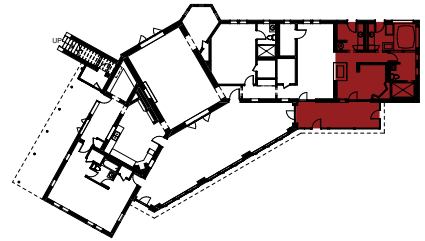
Stabilization recommendation:

See Appendix 04: Roof Work for required upgrades and stucco repair.



I. EAST ADDITION

The northern most cell of the building is an addition constructed approximately in the 70s. The character and material of the addition are out of character with the balance of the building. The focal point of the addition is a large riverstone clad fireplace surrounded by a sunken living area with built-in planters. Further north is a large master bathroom with a large jetted hot tub set in a prominent corner with large windows. Also in the restroom is a riverstone clad shower, which is dark, and will pose a challenge to clean. Flooring in the addition is typically ceramic tile which is in fair condition.



TYP. Stabilization recommendation:
It is assumed that the building will not be used as a private residence in the future. If this is the case, the addition will not provide much square footage for future uses. For this reason, we would not recommend committing funding to repairs of plumbing fixtures or lighting in this area. Short of the full schematic recommendation below, we would recommend to thoroughly clean and sanitize all elements and finishes according to Appendix 02: Best Practices for Cleanup of Rodent Infestation.

New work recommendation:
The configuration of the addition is at odds with the programmatic desire for larger and more flexible spaces in the building. The sunken area poses both a risk of injury, and an ADA access issue. For these reasons, it is our recommendation that the interior walls and finishes of the addition be removed back to the exterior adobe walls of the building.



I.01 Exterior Windows: Condition - Functional but recommend replacement

Windows throughout east wing are single pane aluminum fixed, single hung, or sliding contemporary to addition construction.

Stabilization recommendation:
Remove any existing sealant and reseal full perimeter interior and exterior.

New work recommendation:
Remove any existing sealant and reseal full perimeter interior and exterior. Remove aluminum windows and replace with new double pane, clear glass windows.



I.02

Ceiling + Roof Structure: Condition - Good

Wood 6x8 beams with decorative corbels and wood decking above.

Stabilization recommendation:

Beams and roof structure appear in good condition and require cleaning only.

New work recommendation:

Recommend removing decorative corbels to align with aesthetic intent of schematic work. Assess condition of beams / decking after removal of walls and river rock elements.



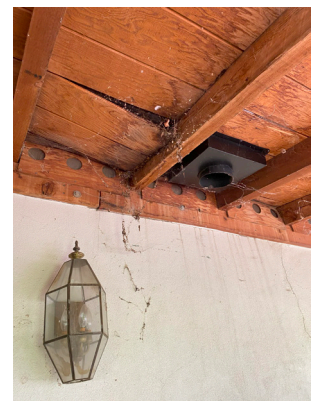
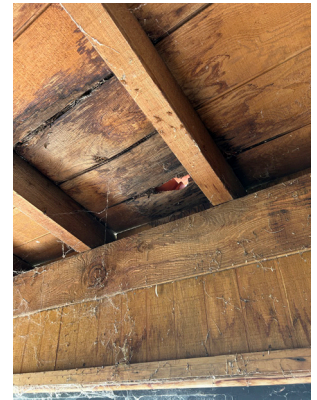
I.03

Porch Addition: Condition - Very Poor

Wood framed porch addition attached to Arizona Room and East Addition. The clay tile roof, T1-11 siding, aluminum windows, wood structure, and brick floor are in poor condition.

Stabilization recommendation:

Regardless of whether the proposed Schematic work is undertaken, it is our recommendation to demolish this later addition entirely. This work will include patching the plaster and adobe at the points of connection and reworking the roof where this addition connected to the historic portion of the Arizona room.



I.04

Exterior Doors: Condition - Functional but recommend replacement

Wood divided lite doors contemporary to East Addition. Doors are functional but do not align with future programmatic use of building.

Stabilization recommendation:

Remove any existing sealant and reseal full perimeter interior and exterior. Clean and adjust hardware as necessary.

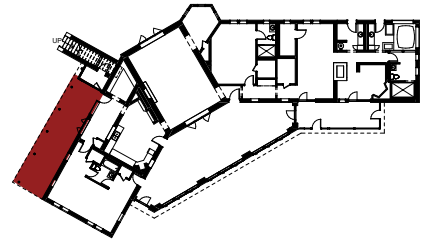
New work recommendation:

Remove any existing sealant and reseal full perimeter interior and exterior. Remove exiting door and frame / replace with new full-lite aluminum storefront door / frame.



J. NORTH WEST PORCH

Based on historic photos, the northern west porch was an addition built sometime in the 70s-80s, likely concurrent to renovations happening elsewhere in the building. It is wood frame construction with wood decking and a clay tile roof. The porch is in overall fair condition but possible underlying conditions could make it cost prohibitive to repair considering its low historical significance.



TYP. Stabilization recommendation:
The structural beams on the porch addition have visible wood rot that would require complete replacement. The wood decking above also shows signs of damage and in some places has been replaced/covered with T1-11 siding. The date of the last replacement of the weather resistive membrane beneath the tile is unknown, but is assumed to be well past service life. Clay tile roof is in poor condition and requires maintenance. The telephone pole columns and capitols are in generally good condition. For the reasons listed above, PMM recommends removing the porch entirely. This removal would require patching plaster and adobe at points of connection to historic building and red clay floor tile for future use.

Additive alternate recommendation:

Rebuild porch completely from scratch with new beam, joists, decking, and weather resistive barrier. Materials that may be salvageable for future use include: telephone pole columns, decorative capitols, clay roof tile, and red clay floor tile. Any re-used material to be cleaned and painted, if applicable.



Porch beam with visible wood rot



Failed decking replaced with T1-11 siding



Telephone poll columns and capitols



Floor tile to be salvaged

K. STAIR + ROOF ACCESS

Based on research of historic photos, the stair is either original to the construction of the building or was installed shortly thereafter. Initially the stair accessed the roof of the building, likely to provide better access to the views of Pusch ridge. Later, a second-floor addition was added to the building which was accessed by the stair. This addition was demolished around 2008 or 2009, but the stair remains. The stair treads and risers are cast concrete supported by adobe cheek walls.



The concrete stairs appear to be in fair condition, the adobe cheek walls are in fair condition. There is a storage room beneath the stair. This existing roof access stair poses a unique challenge to the project as a municipal facility. In its current configuration, the stair is unsafe with the following issues:

- Handrails are too low
- No guardrail
- Treads are steeply pitched to drain
- Accessible portion of roof is unsafe once reached due to lack of guardrail and short parapet

Because of the above, at present, there is no choice but to bar access to the stair, and to the potential amenity of the roof. The stair is an important historic element for the building and we recommend against removing it for that reason. Depending on future building use, it may be desirable to restore roof deck access.

Stabilization recommendation:

Maintain current condition prohibiting access to roof. Install new lockable metal gate at base of stair to selectively restrict access. Patch stucco damage incurred on stair cheek walls to match existing. Storage room addition west of stair to be removed completely and both storage areas sanitized in accordance with Appendix 02.

Additive alternate: We recommend the following treatments to restore access to the roof:

K.01 Stair treads:

Stair treads sloped steeply for drainage.

Add alt recommendation:

Level the stair treads. This can be done either by application of a polymer modified cementitious topping material, or by application of slip resistant porcelain tile. Field measurement has shown that the riser heights are consistent, and within code. Overlaying a consistent material will maintain code heights and uniformity.



K.02 Handrails:

Existing handrails are mounted to adobe cheek walls and are installed approx. 24" above tread height, below code compliant height.

Add alt recommendation:

Remove and discard existing handrails and repair adobe at points of connection. Install new IBC compliant steel handrails and guardrails to the concrete stair treads between adobe cheek walls.



K.03

Gate:

Existing stair blocked by plywood sheet barrier.

Add alt recommendation:

Remove existing plywood barrier and discard. Install lockable metal gate at base of stairs to selectively restrict access.



K.04

Guardrail at roof:

Existing parapet height is too low to be considered a guardrail.

Add alt recommendation:

Install new guard rail at accessible portion of roof. Set guardrail back approx 5' from edge of roof to reduce visibility of the railing. Railing posts to be anchored down through roof and connected to top of the roof beams below using lag screws. Suggest keeping rail members small and painting them a dark color in contrast to the light building in order to reduce visibility.



K.05

Roof / decking material:

The existing built-up roofing for the building is sloped to the west and drains pose a minor hazard to occupying the roof. Roofing is typically not rated as a walking surface, and use as an accessible deck would shorten the service life of the roof and likely void any warranty.

Add alt recommendation:

Option 1: Install new fluid applied walking surface such as Pli-dek for the accessible areas of the roof. This material is rated as a walking surface and has excellent slip resistance. If railings are installed as recommended above, the issue of the tripping hazards would be eliminated as the rails being set back from the parapet will exclude access to the areas of the hazard.

Option 2: Depending on the desired frequency and type of use for this roof deck area, it may be desirable to provide a more aesthetic setting for photos, etc. In this case, we recommend installing a pedestal paver system such as Tile Tech. Structural modifications will have to be accounted for with this product.



K.06

Below stair storage:

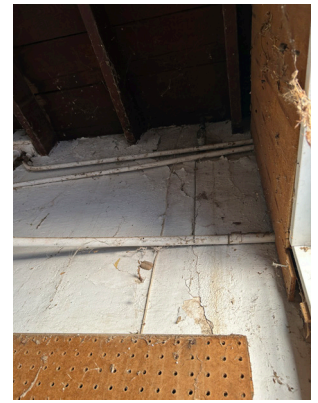
Two storage rooms beneath stair in poor condition. Historic photos show the outside storage room is an addition contemporary to the tile roof porch.

Stabilization recommendation:

Demolish exterior storage room T1-11 siding walls, floor, and interior finishes completely. Clean and sanitize both rooms in accordance with Appendix 02: Best Practice for Cleanup of Rodent Infestation. Patch stucco on adobe stair wall to match existing. Clean, paint, and replace hardware on existing original five panel wood door.



Exterior T1-11 storage room to be demolished



Underside of stair structure - new T1-11 storage wall room on the right



Interior of storage room to remain



Interior of storage room to be demolished

L. SITE WALL + SITE PAVING

The age and construction time of the site wall is unknown but assumed to be constructed with the original 1940s residence. There is a non-functioning barbecue in the south west corner. Both elements are adobe with stucco finish and are in poor condition. The site immediately surrounding the Procter Leiber house has various types of paving including concrete pavers, flagstone, and tile.

- L.01 South site wall: Condition - Poor**
Adobe wall with stucco finish. Wall has deteriorated and requires replacement.
Stabilization recommendation:
Complete recommended structural upgrades. Remove existing adobe wall completely and rebuild with CMU. Wall profile, height, and stucco finish to match previous.
- 
- L.02 Outdoor barbecue: Condition - Poor**
Non-functional outdoor barbecue. Adobe construction with stucco and tile finish.
Stabilization recommendation:
Complete recommended structural upgrades. Reconstruct decorative barbecue and surrounding tile top benches with CMU and light sand stucco finish. Barbecue is not required to be functional for future building programmatic needs.
- 
- L.03 Paved path along site wall: Condition - Poor**
Concrete paver border along site wall path and red brick paving at barbecue area. Path is in poor condition with unlevelled surface and many pavers pulled up.
Stabilization recommendation:
Complete recommended grading work. Remove red brick, reset sand base, set back red brick material.
- 
- L.04 Flagstone: Condition - Fair**
Flagstone set in mortar on North West Porch. Uneven in some places and poses potential tripping hazards.
Stabilization recommendation:
Complete recommended grading work. Remove flagstone completely and replace with decomposed granite.
- 

APPENDIX

01 PLASTER AND ADOBE GENERAL NOTES

The plaster finish of the building is in fair condition, and has been well cared-for by the town in recent years. Issues identified in previous assessment reports such as rodent burrowing and basal coving due to rising damp have been largely addressed. Patches made by town FM appear to be structurally sound, but in many cases are not a material or texture match for the original plaster. Large areas of peeling paint are observed in many areas of the building.

Line-item of issues and proposed treatments:

- **Structurally sound patches not matching adjacent finish**
 - Mechanically abrade surface of patch and 12" perimeter of adjacent plaster with stiff bristled steel wire brush
 - Float plaster patch material over entire area, feathering over 12" abraded perimeter to meet existing material. Provide medium sand or similar texture to match existing.
 - Paint
- **Areas of peeling paint**
 - Assess adhesion of plaster to adobe substrate by knocking and listening for hollow sound
 - Carefully remove sections of poorly adhered plaster
 - Assess condition of adobe. Repair if needed according to listed guidelines
 - Cut a "key" into the margin of the removal, to lock new material to existing
 - Install new plaster material in location of removal, flush with adjacent material
 - Float plaster patch material over entire area, feathering over 12" abraded perimeter to meet existing material. Provide medium sand or similar texture to match existing.

Extensive cracking on plastered / stucco finish may be a result of water intrusion. Recommend removing plaster in areas with extensive cracking to assess condition of adobe walls beneath. If adobe is in acceptable condition, adhere to repair guidelines listed above. If adobe is in poor condition, see below for recommended adobe repair treatments.

Adobe Repair:

The exterior adobe walls of the Procter Leiber House appear to be in fair condition but have possible deterioration hidden beneath the stucco and plaster finishes. Below is are general recommendations on repairing adobe walls.

- **Replacing damaged adobe bricks:**

Careful consideration should be given to the source of new adobe for repair work. A soil of similar composition to that used for historic adobe must be located. For example, the soil texture (or proportions of the clay-silt-sand mix) should match the original. Also, the new adobe, and the water used to make it, should have less salt than the original adobe to avoid future deterioration. Moisture content and shrinkage are two more important and inter-related considerations. The new (moist) replacement bricks will shrink as they dry during the first weeks after installation. This can cause more settlement of the wall and a new round of cracking. To avoid this, moisture content of the new bricks must be carefully calibrated. Repeated compacting of the mortar joints at intervals as the bricks dry and shrink is also recommended to maintain the dimensional integrity of the wall.
- **Adobe Crack repair:**

Cracks of all types in adobe, whether caused by settlement or shrinkage, should be repaired "like for like". That is, cracks should be routed out and patched with an adhesive that is the same strength as the base material. Deterioration is most likely to occur at the interface of two dissimilar materials, with the weaker material deteriorating first. Adobe is a soft material and any patching must be done using a compatible material. Samples of historic adobe should be tested for strength and composition before the mix design for patch material is finalized.

APPENDIX

02 BEST PRACTICES FOR CLEANUP OF RODENT INFESTATION

We recommend the following cleaning requirements and methods for the building due to the extensive rodent activity observed:

- **Safety:**
 - Always wear appropriate Personal Protective Equipment (PPE), including disposable coveralls, rubber boots, durable gloves, protective goggles, and an N95 or HEPA-filtered respirator
 - Ventilate the area by propping open doors and windows
- **General Cleaning Principles:**
 - *Never dry sweep or vacuum* rodent urine, droppings, or nesting materials, as this can aerosolize harmful particles.
 - Thoroughly spray and saturate all visible rodent waste with an appropriate liquid disinfectant before physical removal.
 - Allow disinfectant to remain on surfaces for 5-10 minutes (or as per label instructions) for effective inactivation.
 - Use disposable paper towels or rags to wipe up wet waste; avoid aggressive scrubbing
 - Double-bag all collected waste (droppings, dead rodents, nesting materials, used traps, contaminated insulation) in sealed plastic bags and dispose of according to local regulations. Contaminated insulation should be removed entirely.
- **Disinfectant Choices:**
 - Bleach solution: 1 part household bleach (5-6% sodium hypochlorite) to 10 parts water, prepared fresh daily.
 - EPA-Registered Disinfectants: Use commercial disinfectants labeled as "disinfectant" and registered by the EPA.
 - Enzyme-based cleaners: Highly effective for breaking down organic matter (urine, feces) and neutralizing odors at a molecular level; generally non-toxic and eco-friendly.
 - Caution: Never mix bleach with ammonia-containing cleaners or directly apply bleach to areas with heavy rodent urine, as this can produce toxic gases. Use an enzymatic cleaner first for heavy urine contamination.
- **Adobe-Specific Cleaning Considerations:**
 - Avoid Harsh Chemicals: Do not use strong acidic or alkaline cleaners, concentrated bleach, or abrasive cleaners on adobe surfaces, as they can cause discoloration, erosion, or structural damage.
 - Gentle Methods: For general cleaning, use dry brushing or a soft cloth. If wet cleaning is necessary, use minimal water and gentle, non-abrasive methods.
 - Test First: Always test cleaning agents and methods on an inconspicuous area of adobe to ensure compatibility and prevent damage.
 - Steam Cleaning: Can be used with caution on adobe surfaces, ensuring minimal over-saturation and thorough drying to prevent moisture damage.
- **Inaccessible Areas (Ceilings, Wall Cavities, Toe-kicks):**
 - Professional Services Recommended: Due to health risks and complexity, professional biohazard cleanup services are highly recommended for hidden contamination.
 - Specialized techniques: Professionals utilize electrostatic sprayers and fogging equipment (especially with enzyme-based cleaners) to penetrate and treat hidden contaminants without extensive demolition.
 - Air purification: Use air scrubbers with HEPA filters to remove airborne contaminants after cleanup.
 - Odor Neutralization: Employ enzyme-based odor neutralizers via spray or fogging to break down odor at molecular level. Ozone generators can be used with extreme caution in unoccupied spaces, but their effects are temporary if the source is not removed.
 - Avoid encapsulation: Generally, do not encapsulate unremoved rodent waste in wall cavities, as this poses long-term health risks (aerosolized pathogens, mold growth) and can perpetuate odors and attract new pests.

APPENDIX

03 LEAD AND ASBESTOS ABATEMENT

Due to the historic nature and age of the adobe building, it is highly probable that lead-based paints and asbestos-containing materials (ACMs) may be present within various building components. Common locations for lead-based paint include painted surfaces (walls, trim, doors, windows), while ACMs may be found in roofing, flooring (tiles, mastics), pipe insulation, ceiling tiles, joint compound, and other building materials.

No testing for lead-based paint or asbestos-containing materials has been performed as part of this condition assessment. Therefore, the presence, quantity, or condition of these materials cannot be definitively confirmed or ruled out at this time.

There are no existing lead-based paint or asbestos survey reports available for this property to inform this assessment.

Prior to any intrusive work, renovation, demolition, or disturbance of building materials, it is strongly recommended that a comprehensive lead-based paint and asbestos survey be conducted by a qualified and certified environmental professional. This survey will identify, locate, and assess the condition of any hazardous materials.

Until such time that materials are tested and confirmed to be free of lead or asbestos, all suspect materials should be treated as if they contain these hazardous substances. Appropriate health and safety protocols, including worker protection and containment measures, should be followed during any activities that may disturb these materials.

Any future work involving the disturbance or abatement of lead-based paint or asbestos-containing materials must comply with all applicable federal, state, and local regulations and standards for hazardous materials management and worker safety.

04 ROOF CONDITION

The built-up roof at the Procter Leiber House appears to be in fair condition but has various instances of patching, deteriorated material, and some ponding observed on the North elevation. As a part of the stabilization work, PMM recommends replacing the built-up roof entirely with a TPO system. Remove existing plywood crickets and replace. New roof should drain to same locations.

Rooftop mechanical equipment may be required in the future at which point the location of equipment relative to the parapet height will need to be addressed.

See section **K** for additive alternate recommendation to make a portion of the roof deck accessible. Clay tile roofs in poor condition throughout. See applicable condition report sections for recommendations.

03 STRUCTURAL

Procter Leiber House
Steam Pump Ranch
10901 N. Oracle Rd.
Oro Valley, Arizona



DESCRIPTION:

Original Construction:

The existing single-story building was originally constructed as a residence in the late 1930's or early 1940's. A master suite addition was added on the east end of the building at a later date (possibly the 1970's). An enclosed 2nd story room above the central living room of the building was also added around the same time.

The building is constructed with wood-framed roofs supported by adobe walls. Much of the existing roof framing was not visible at the time of our visit, but is believed to be framed with wood decking over 2x wood joists. At the roof over the central living room, roof framing consists of wood decking over exposed 4 x 8 rough-sawn wood beams at approximately 48" o.c. At the entry porch, roof framing consists of wood decking over 2 x 6 wood joists at 16" o.c. supported by the exterior adobe wall and 6 x 8 wood beams and round wood columns. At the Arizona room at the back of the building, the roof is framed with wood decking over 2 x 6 rough-sawn joists at 24" o.c.

Condition of Existing Structure and Recommended Repairs:

Duecker Structural Engineering visited the site on May 8, 2025 to observe the existing conditions. The existing building appears to be in fair condition, however hidden structural deficiencies may be obscured by existing ceilings and wall finishes. The following structural deficiencies were observed at the time of our visit:

- The concrete slab on grade was constructed without control joints and exhibits extensive cracking throughout (see photo 1, page 5). We recommend demolishing the existing slab on grade and pouring a new concrete slab on grade.
- Differential settlement of the existing foundation was observed on the north side of the building at the sitting room and the adjacent bedroom (see reference plan, page 4 for locations). We recommend adding helical piers and jacking the existing foundations to alleviate the differential settlement.
- The 2 x 6 roof joists at the Arizona room exhibit excessive deflection and had been shored prior to our visit (see photo 2, page 5). We recommend reinforcing the existing joists with new framing. In the meantime, we recommend jacking up the existing joists to remove as much sag as possible prior to adding reinforcing members (exercise caution so as not to use excessive force and damage existing adobe).
- The headers above the exterior windows at the Arizona room exhibit visible deflection and plaster cracks (see photo 3, page 6). We recommend removing the existing finish from the headers so that the size and condition of the existing headers can be evaluated.
- A notable depression was observed in the slab on grade along the exterior wall of the Arizona room (see reference plan, page 4 for location). We recommend replacing the existing concrete slab on grade, which will address this issue.

- Stucco cracking and signs of water intrusion were visible on this inside face of existing adobe walls in multiple locations throughout the building, which could indicate possible hidden deterioration of the adobe (see reference plan, page 4 for locations; see photo 4, page 6 and photo 5, page 7 for examples). We recommend removing existing plaster wall finishes where indicated on the reference plan so that the condition of the existing adobe walls can be evaluated.
- Water damaged wood and possible adobe damage due to a roof leak were observed at the roof along the north side of the building at one of the existing bedrooms (see photo 6, page 7 and reference plan for location). We recommend removing more of the ceiling and wall finish in this area to further evaluate the condition of the roof framing and the existing adobe wall.
- Wood rot was visible in the existing wood beams at the entry porch (see photo 7, page 8). We recommend removing or rebuilding this porch.
- The existing adobe patio site wall and barbecue are in poor condition (see photo 8, page 8). We recommend rebuilding the patio wall with CMU and we recommend removing the barbecue or reconstructing it with CMU.

STRUCTURAL SCOPE OF PROPOSED NEW WORK:

If possible, roof access to the roof over the central living room will be restored (this will require reinforcement of the existing roof structure or the addition of new framing above the existing roof to support floor loading). The access stair for this area will also need repairs due to the inappropriate slope of the stair treads.

There is a sunken floor at the master suite on the east end of the building. This sunken floor will be filled with compacted soil and a new concrete slab on grade to match the surrounding finished floor elevation.

The kitchen fireplace/chimney and the stone fireplace/chimney will be removed (the main fireplace/chimney and the former fireplace/chimney at the junction of the original building and the east addition will remain as-is). Minor infill framing will be required where the demolished kitchen and stone fireplace chimneys penetrate through the roof.

STRUCTURAL CODE REVIEW:

We anticipate that Town of Oro Valley will be adopting the 2024 I-codes during the course of this project. Therefore, structural design will conform to the 2024 International Existing Building Code (IEBC) and for new structural elements, the 2024 International Building Code (IBC). The structural work on this project will consist of 'repairs' and 'alterations' as defined by the IEBC. The IEBC defines repair as "the reconstruction, replacement or renewal of any part of an existing building for the purpose of its maintenance or to correct damage." The IEBC considers "any construction or renovation to an existing structure other than a repair or an addition" to be an alteration.

Alterations are classified as Level 1, Level 2, or Level 3. Please note that this building meets the definition of a 'historic building' as defined by the IEBC because the building is listed in the

National Register of Historic Places. Therefore, the provisions of Chapter 12 of the IEBC, 'Historic Buildings' apply.

The proposed alterations to this building are considered 'Level 3 Alterations' because the work area exceeds 50% of the aggregate area of the building. Since the floor and roof areas being altered do not exceed 30% of the total, the proposed work is not considered a 'substantial structural alteration.' Furthermore, none of the alterations are expected to increase the load in any of the existing shear walls by more than 10%. This means that the building does not need to be checked for wind loads per the 2024 IBC nor reduced IBC-level seismic forces.

The building is in Seismic Design Category 'C.' Therefore, retrofit seismic wall separation anchors will be required at the roof line of bearing walls per IEBC section 906.5.

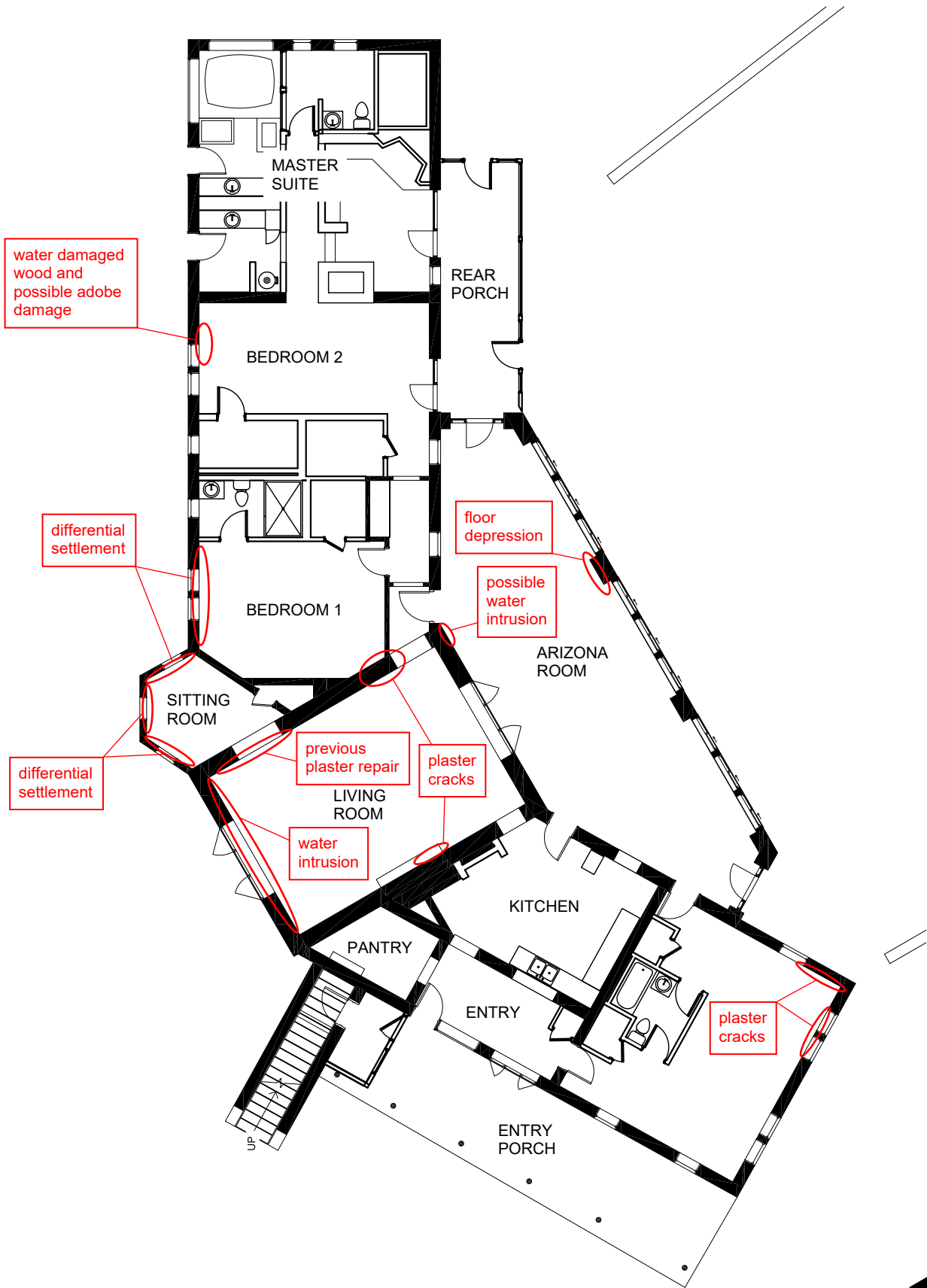
The proposed roof deck over the central room requires design for floor live loading per the IBC. With restricted access, it may be possible to design for 40 psf live loading as a minimum (this approach would need to be approved by the building official). If the roof deck is open to public access, it must be designed for 100 psf live load. The existing roof structure will need to be reinforced or a new structure will be added above the existing roof. This will be determined during the design phase of the project.

CONCLUSIONS:

Upon review, the existing building appears to be in fair condition overall, with structural repairs and upgrades required as described above. Hidden conditions may exist, requiring additional repairs beyond those described above. The proposed alterations are structurally feasible, although the extent of work required to upgrade the roof over the central living room for use as a roof deck is unknown at this time (and will be clarified during the design phase of the project). Other than retrofit wall separation anchorage at bearing walls, we do not anticipate that any other upgrades to the lateral force resisting systems will be required.

REFERENCE PLAN:

(remove plaster finish in areas noted to assess condition of existing adobe)



PHOTOS:



Photo 1: Typical cracking at slab on grade (note lack of joints)



Photo 2: Shored deflected roof joists at Arizona room



Photo 3: Deflected headers at Arizona room (note deflection in roof)



Photo 4: Typical cracked plaster at interior of existing adobe wall



Photo 5: Water intrusion and plaster cracks at adobe walls



Photo 6: Water intrusion and water damaged wood framing



Photo 7: Wood rot at entry porch



Photo 8: Deterioration of existing site wall and barbecue

04 MECHANICAL / PLUMBING



June 30, 2025

Mr. Charles Pifer
Poster Mirto McDonald
317 N Court Ave.
Tucson, Arizona 85701

Re: Procter Leiber House at Steam Pump Ranch – Mechanical & Plumbing Existing Conditions
KC Mechanical Project Number 25-228

Dear Charles,

The following is a brief description of the mechanical and plumbing systems at the building in question based on a site visit on May 8, 2025.

EXISTING CONDITIONS

MECHANICAL

This building is currently unconditioned. The former mechanical systems seem to have included two air conditioners. One unit served the west wing of the building, and another served the master bedroom areas in the east wing. Both AC units have already been removed from the building. The remaining elements of these systems include:

West System:

- Ductwork above the existing kitchen, with supply grilles in the main living room, the bedroom at the southwest end of the house, the enclosed porch, and the kitchen.
- A return grille located in the main living room.
- Thermostats located in the enclosed porch.

East System:

- Ductwork above the existing bathroom and laundry area, with supply grilles in the master bedroom, master bathroom, small bathroom / laundry room,
- A return grille located in the master bathroom.
- Thermostat located in the sitting area adjacent to the master bedroom.

Other remaining mechanical elements:

- Flue pipe from a gas water heater up through the roof to a roof cap. The water heater has previously been removed.
- Ceiling exhaust fans in each restroom, and the laundry room.

Recommendations-

- Recommend removing all of the existing ductwork, and providing new mini-split AC units in each room. New ceiling exhaust fans shall be provided for each new restroom.

PLUMBING

There are currently no water, sewer, or gas connections to the building. All of these original services have been disconnected, leaving the existing fixtures inoperable.

Plumbing Equipment:

- West water heater closet previously had a natural gas water heater. It has been removed.
- Laundry room includes an existing electric 4.5 kW 50 gallon GE water heater manufactured in 2006.

Kitchen Fixtures:

- Kitchen sink

West Restroom Fixtures:

- Tank type water closet
- Lavatory
- Bathtub

East Restroom Fixtures:

- Tank type water closet
- Lavatory
- Shower

Laundry Room Fixtures:

- Washer Box
- Lavatory

Spa Room Fixtures:

- Jetted Bathtub (spa)
- Lavatory

Master Bathroom Fixtures:

- Tank type water closet
- Lavatory
- Shower

Rainwater:

- Combination of sloped roofs with sheet flow to grade, and scuppers.

Gas:

- Some gas piping to the previously removed water heater remains in the water heater closet.

Fire Sprinkler:

- None

Recommendations-

It is recommended that all existing plumbing fixtures and equipment be removed. A new water connection shall be provided from the private main serving the site. A new sewer connection to the existing 4" private sewer shall be provided at each end of the building to serve new plumbing fixtures. Two new

electric water heaters shall be provided, one serving each wing. These may be small tank type water heaters, or point of use tankless, depending on the configuration of the new design.

Sincerely,
KC Mechanical Engineering, LLC

A handwritten signature in black ink, appearing to read 'Nathan Henry', with a long horizontal flourish extending to the right.

Nathan Henry, PE



I. SCOPE OF WORK

- A. Provide an electrical condition assessment and concept electrical design for an approximate 4,323 square feet restoration of the historic Proctor Lieber House. The building is located at the Steam Pump Ranch, 10901 N Oracle Rd, Oro Valley, Arizona.

II. DESIGN STANDARDS

- A. Basis of Design:
 - 1. 2018 International Building Code
 - 2. 2018 International Fire Code
 - 3. 2017 National Electrical Code
 - 4. Town of Oro Valley Amendments
 - 5. Pima County Outdoor Lighting Code

III. EXISTING CONDITIONS

- A. Existing Power System
 - 1. The building currently does not have an electrical feeder serving the building. It was observed that at some point there was an electrical service on the north side of the exterior stairs. There are (2) conduit stub ups at this location, (1) previously served by the utility company and (1) conduit stubbed into the building to serve a panelboard. It could not be determined where the utility conduit emanated from. Inside the building there is (1) panelboard installed in a closet within the pantry space. Any labeling on the panelboard has faded or withered off over the years. Based on size and type it is estimated to be a 100A, residential type, 16 pole, flush mount load center. This panel would be serving all existing devices and lighting in the building. The existing panelboard is aged, a discontinued series/manufacture and would make any compatible components obsolete.
 - 2. There are duplex receptacles throughout the interior of the building. All of the receptacles observed were of the ungrounded type and very aged. Receptacles observed at the exterior of the building were not in weatherproof covers and not of the GFCI type. All receptacle devices observed are aged, would not meet current building code, or industry standards.

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B. Existing Lighting System

1. The existing interior lighting mainly consists of incandescent lamps in surface mount ceiling and wall sconce fixtures, ceiling fans with incandescent fixtures and surface mount strips with fluorescent fixtures in the kitchen. Most of the existing fixtures appear aged and damaged. The existing fixture types are not energy efficient and would not pass current energy efficiency codes.
2. All areas that have lighting control have manual switch controls only. All light switches are aged with many in poor condition. The existing lighting control device types would not be compliant with current energy efficiency codes.
3. The observed exterior building lighting was incandescent lamp in a wall sconce. The existing fixture appears aged and not in working order. The existing fixture is not dark sky friendly listed and would not be compliant the Pima County Outdoor Lighting ordinance.

C. Existing Special Systems

1. It was observed that the building was at some point served by a telecommunications utility line by way of an approximately 3" conduit stubbed into a closet that contains a telecommunications back board. There was no telecommunications equipment observed installed in the building. The existing telecommunications back board appears aged and in poor condition.
2. Smoke detectors were observed in some spaces of the building. The observed smoke detection devices appeared very aged and not in working condition.

IV. PROPOSED NEW ELECTRICAL CONCEPT

A. New Power System

1. A new electrical feeder to serve the building could be supplied from the existing 800A, 120/240V, 1Ø, 3-wire service entrance switchboard. The existing switchboard currently has space available for the addition of a new circuit breaker to serve the Proctor Lieber House Project.
2. Per the preliminary square footage load calculation below, it is recommended to provide a new 600A, 240V, 1Ø, 3-wire distribution panel as the electrical service for the Proctor Lieber House. This distribution panel could serve building loads as well as any required sub-panels. Location of electrical equipment is to be determined.