



Midpeninsula Regional
Open Space District

Memorandum

DATE: March 14, 2018

MEMO TO: MROSD Board of Directors

THROUGH: Ana Ruiz, Acting General Manager *AR*

FROM: Lisa Bankosh, Planner III

SUBJECT: Deer Hollow Farm White Barn Renovation Project at
Rancho San Antonio Open Space Preserve

SUMMARY

A historic and structural assessment of the White Barn at Deer Hollow Farm concluded that the structure is eligible for listing in the California Register of Historic Resources, and that significant structural improvements are required to ensure its long-term stability. Pending Board Committee review and Board of Directors approval, a combination of funds from donations, Measure AA, and the City of Mountain View are available for the renovation. Implementation is targeted for late 2019.

BACKGROUND

The District and the City of Mountain View (City) jointly operate Deer Hollow Farm, with financial support from Santa Clara County and the Friends of Deer Hollow Farm (FODHF). In 2016, the Walter Tindall Estate gifted approximately \$165,000 each to the District and FODHF to fund improvements at the Farm. District, City, and FODHF staff determined that renovation and structural stabilization of the White Barn is the highest priority improvement. Staff solicited proposals from four pre-qualified historic architecture firms to evaluate the historic significance and perform a conditions assessment of the White Barn. District and City staff evaluated proposals and selected Page and Turnbull Inc., to perform the work. Conclusions of the Historic Structure Report are presented below.

DISCUSSION

The White Barn, located prominently near the center of the Deer Hollow Farm homestead, is currently used to process milk, house the Farm's goats, and for storage. Constructed prior to 1948, the barn is a wood frame building about 30-feet wide by 58-feet long and 25-feet tall at its highest point. The roof is clad with corrugated metal panels. The barn has a concrete slab foundation in the northwest corner and otherwise supported by low brick piers. In the northwest extension, there is a milk room and a goat pen. The center section is dedicated to hay storage, with a hay loft in the gable above that is accessed by a steep wood staircase. In the southeast extension, horse stalls are used for storage. The majority of the barn is closed to the public. When staff are present, there is limited public access into the milk room. The project proposes no change in use.

Historic Significance

The White Barn and Deer Hollow Farm are not currently listed on Federal, State, or local historic registers. However, the Historic Structures Report concludes that the White Barn is historically significant. It is eligible for listing in the California Register of Historic Resources under Criterion 1 (Events), Criterion 2 (Persons), and Criterion 3 (Architecture). The Barn retains integrity of its location, setting, design, materials, workmanship, and feeling. As such, repairs to the barn should be designed to minimize impacts on features that define its historic character.

Conditions Assessment

The White Barn is in fair and serviceable condition due to regular use and maintenance. However, the preliminary structural analysis indicates inadequate capacity in the roof structural supports, siding, and foundation connections to brace the roof and walls during seismic and wind events. In addition, the existing brick foundation piers do not have adequate capacity to resist their code-required load without replacement or additional strengthening. These structural deficiencies threatens its long-term stability. Furthermore, a number of hazards and minor deficiencies exist at the barn. Insect damage is present in wood materials throughout the building, and the vertical siding that terminates at grade is in poor condition. The supporting wood frame posts are also degraded and damaged, resulting in posts moving and creating a pronounced sag in the northwest corner. While the metal roof is in fair condition, many rafter ends show pronounced rot. Finally, the interior stair to the hay loft, which is used for storage, is unstable.

Stabilization Recommendations

The Historic Structures Report includes recommendations and conceptual designs for a number of treatment measures to ensure the long-term stability of the White Barn (Attachment 1). Major treatment measures include improved site drainage, foundation replacement, and strengthening the roof and wall structural supports. Staff would design these measures to meet the Secretary of the Interior's Standards for the Treatment of Historic Properties and the following project goals:

1. Mitigate hazardous and structurally unsound conditions.
2. Allow for safe and accessible public access into the first floor (milk room).
3. Replace degraded materials for maximum longevity.

Project Funding

The cost estimate for the Deer Hollow Farm White Barn Renovation Project is between \$350,000 and \$500,000. The District, FODHF and City of Mountain View would jointly fund the repairs, with the work executed by the District. Partnership agreements with FODHF and City of Mountain View are currently under development and will be considered by the District's Legislative, Funding, and Public Affairs Committee on March 27, 2018. The Mountain View City Council will consider project funding as part of their annual FY2018-2019 budget process.

NEXT STEPS

Tasks	Tentative Timeline
LFPAC review of funding and partnership agreements	March 27, 2018
Board review and approval of the FY2018-2019 Action Plan, which will include the White Barn Renovation Design and Implementation Project	April – May 2018
Board review and approval of funding and partnership agreements	June 2018
Design and Permitting	July 2018 – January 2019
Construction (tentative)	Fall 2019

ATTACHMENT 1. DEER HOLLOW FARM WHITE BARN PRELIMINARY RECOMMENDATIONS

TASK	Minimum Stabilization Measure	Recommended Preservation Measure - in lieu of minimum stabilization	Recommended Preservation Measure - add-on task
ACCESSIBILITY & EGRESS			
Make the interior ground floor spaces ADA accessible: lower the threshold at the main entry door. Ensure that the path of travel into milking area and other public areas is to current ADA code.	X		
Modify the existing wood stair so that it complies with the requirements of a ladder per Section 304.3 of the California Mechanical Code.	X		
Evaluate the code requirements for sprinklering or egress exits for the barn use.	X		
GENERAL			
Clean and repair existing gutters along the south façade and extend the north façade gutter and drainpipe.	X		
Install gutters and drainpipes to direct water away from the building and livestock yards.			X
Provide overall site and foundation drainage to keep site water away from the existing or new foundations and to prevent infiltration and accumulation of surface water near the foundations.	X		
Provide more obvious and numerous signage for areas of hazards, including stair ladder access, floor openings, and overhead dangers in the hay loft.	X		
Verify electrical components are protected from weather and pests. Replace as necessary to mitigate fire hazards.	X		
INSECT & RODENT INFILTRATION			
Fumigate the barn so as to kill all insect infiltrations within the wood members of the structure.	X		
Remove rat droppings or any other pest feces. Sanitize and repair areas following required governmental regulations and best practices for historic buildings.	X		
FOUNDATIONS			
Provide new reinforced concrete stem walls and foundations under all of the exterior walls (and any interior walls, where applicable) as well as new reinforced concrete pad footings under all interior support posts, except where previously improved at the perimeter of the existing Milk Room.	X		
ALT 1: Provide new stem walls and foundations, including restoring the appearance of the historic footings with a brick veneer using the existing bricks.			X
ALT 2: Design Alternative to Required Stabilization Measure above: Install concrete slab under entire structure (except where existing) with footings and concrete stem wall as described above.			X
ALT 3: Recommended Preservation Measure (for Design Alternative): Restoring the appearance of the historic bricks at former footing locations			X
STRUCTURE			
Provide proper, code required, wood-earth separation between the bases of the existing interior and exterior vertical wood support posts and the existing or new interior and exterior wall wooden sill plates and vertical siding and the adjacent soil grades	X		
Strengthen existing roof framing at the innermost higher roof area, vertical post method	X		
Strengthen existing roof framing at the innermost higher roof area, truss method			X
Improve roof diaphragm capacity with the addition of new 19/32-inch plywood sheathing throughout over the existing 1x skip sheathing at both the high and low roof areas. Replace all roofing materials.	X		
ALTERNATE: Install new plywood sheathing as noted. Retain reusable skip sheathing and corrugated roofing and reinstall.			X

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TASK	Minimum Stabilization Measure	Recommended Preservation Measure - in lieu of minimum stabilization	Recommended Preservation Measure - add-on task
Improve floor - wall - support beam connections with framing clips or nailing. Bolt new exterior wall foundation sill plates to the new foundations.	X		
Add new plywood shear walls for seismic and wind resistance.	X		
WOOD SIDING & EXTERIOR DOORS			
Reattach siding to structurally improved frame. Reuse nails where possible, solidly anchoring all boards in original locations. Where replacements are required, replace boards to match wood type, texture, color, and size.	X		
Re-secure shakes over awning at screened opening on the north façade. Remove moss growth.	X		
Replace or Dutchman repair deteriorated edges of boards near grade.	X		
Prep, prime, and paint the wood exterior to improve weatherproofing and protection.	X		
Anchor hay loft floor where loose.	X		
Remove doors over hay loft floor openings and replace with wood boards (board should differentiate from the rest of the floor in some manner).	X		
Re-secure floor in south storage area (at former horse stalls); reuse historic nails.	X		
Install wire mesh under floor to prevent animal intrusion through gaps in flooring (but maintain historic gaps in flooring). (Applicable only if the wood floor is selected to remain in lieu of a concrete slab)	X		
Re-secure sliding barn doors where needed (replace missing bolts with cast bolts to match).	X		
Clean, prep, and paint all existing hardware to prevent any further corrosion. Tighten all anchors and add reinforcing blocking where necessary.	X		
ROOF			
Replace missing rafter tails and repair those exhibiting deterioration; sistered ends should not extend visually beyond the top plate of the exterior wall.	X		
Install bird netting or other mesh materials to prevent bird access and nesting in the barn rafters.	X		
Remove any existing white rust. Insert gapping material where the sheets overlap to prevent water dwelling at these points of contact causing the white rust.	X		