November 18, 2021
W&G #S21288

FIELD INVESTIGATION REPORT

Silver Spurs Stables
1900 Riverside Drive
Glendale, CA 91201

INTRODUCTION

This report was made at the request of the Richard Dell of RED Architectural Group to review and evaluate visible portions of the existing stable buildings and offer an opinion as to the condition of the subject structures and possible damage.

DESCRIPTION OF FACILITY

The subject facility consists of the following:

Building A – A one story residence type V framed residence built in 1942 and supported over a raised foundation (see photo #1).

Building B - One story wood framed horse stable structures built from 1939-1957. the buildings are composed of the following

Central Stable and Office:

The structure is a type V framed long narrow building approximately 28 ft. in width and consists of a central hallway with horse stableson each side of the hall. There is a continuous monitor over the hallway (photo #2). Roof framing consists of 1x straight sheathing supported by 2x4 rafters spaced at 24”o.c.

West Side Stable and Shed:

The westside building has a shed roof (photo #3 & #4). The roof framing consists of 1x sheathing supported by 2x rafters. The walls are covered with 1x sheathing.

East Side Stable:

The eastside building has a shed roof (photo #4). The roof framing consists of 1x sheathing supported by 2x rafters. The walls are covered with 1x sheathing. There is a concrete block wall on the east wall.

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Building C - A one story building consisting of a wood framed roof and masonry shear walls. The building appears to have been constructed in the late 1950's.

Building D – A tall one-story barn structure approximately consisting of a wood framed roof supporting corrugated steel roof sheets and 1x exterior sheathing and 2x Rafters. The original portion of the building is approximately 28'x31' in plan dimensions with additions on the north and east sides (photo #8).

INVESTIGATION

Our investigation is preliminary and consisted solely of a cursory visual walk through the areas of the buildings that were accessible and preliminary. No tests or exact measurements were made and the only alternate information reviewed was the Historic Resource Assessment by Jenna Snow of Historic Preservation Consulting.

FINDINGS

Based on the site visit the following items were noted:

Building A – Residence

1. The foundation consists of a typical raised floor system with exterior walls are supported on a continuous concrete footing. The raised floor consists of plywood sheathing over 2x6 floor joists that span approximately 8 ft. and a 4x girder running through the middle of the structure.

2. The building siding and framing shows signs of dry wrought deterioration where grade is too close to sill plate.

3. Roof framing consists of 2x6 rafters spanning 7 ft to a 1x ridge board. There are only minimal collar ties running transversely across the building.

4. The building sill plate is anchored to the foundation stem with anchor bolts.

Building B – Central Stable and Office

1. The exterior walls appear to be supported on a continuous concrete footing. In some areas the top of the footings are flush with the interior and exterior grades which does not protect the walls and posts which makes them susceptible to dry wrought (see photo #6).

2. Concrete footing shows signs of exposed aggregate and therefore concrete quality is below minimum standard and is deteriorating.

3. The interior posts each side of the hall appear to be supported on the soil only with no signs of footings.

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4. The roof diaphragms are not supported laterally or longitudinally by shear walls and there are no signs of foundation sill anchor bolts (see photo #6).

5. Roof framing appears to be undersized based on the spans (photo #7).

6. There is no lateral transfer from monitor diaphragm structure to the lower roof (photo #2).

Building B – Westside Stable and Shed

1. The exterior walls appear to be not supported on a continuous-footings but are supported on a sill plate on the soil with no anchor bolts.

2. The interior posts each side of the hall appear to be supported on the soil only with no signs of footings.

3. The roof diaphragms are not supported or minimally supported laterally or longitudinally by shear walls.

4. The wood framed wall on the west side of the structure is supporting two to three feet of soil.

5. The roof framing is undersized with 2x6 rafters spanning over 10 ft. and spaced at 3 ft. o.c.

6. There are no wall top plates per normal type V construction (photo #4).

Building B – Eastside Stable

1. The wood stud walls appear to be not supported on a continuous-footings but are supported on a sill plate on the soil with no anchor bolts.

2. The interior posts are supported on the soil only with no signs of footings.

3. The masonry wall on the east wall is not positively anchored to the roof diaphragm (photo #5).

4. The roof diaphragms are not supported or minimally supported laterally or longitudinally by shear walls and there are no signs of foundation anchor bolts.

5. The roof framing is undersized with 2x6 rafters spanning over 15 ft. and spaced at 16”o.c.

Building C – Stable

1. The exterior walls consist of wood framing and masonry walls.

2. The building appears to be in good condition with no signs of distress.

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Building D – Barn (Photo #8)

1. The exterior walls are supported on a continuous-footings but there are only minimal sill anchor bolts found.

2. The interior posts each side of the hall appear to be supported on the soil only with no signs of footings.

3. The roof diaphragm, which consists of inadequate corrugated steel sheets, is not minimally supported laterally and longitudinally by shear walls.

4. The north wall of the structure is supporting approximately 3 ft. of soil.

5. The tall east and west wall studs are undersized based on their spans.

6. Roof framing (2x4 rafters spanning 9 ft. and spaced at 24”o.c.) are undersized.

7. The east and west walls studs are not continuous to the top of the gable roof but are interrupted by 2-2x plates at the 10 ft. height. This condition creates a hinge point in the wall and therefore the wall is inadequate for wind loading.

8. The foundation sill plates are not redwood or pressure treated material and therefore are susceptible to deterioration.

CONCLUSIONS AND RECOMMENDATIONS

To provide a code minimum level of **“Life Safety”** based on the findings of the visual walk-through the following items are to be addressed;

Please note that due to the extensive deterioration of the noted structural systems and existing building materials along with the lack of lateral resistance, the existing buildings should be considered a danger for use and occupancy. If the following noted retrofit items are not installed or implemented, we recommend that the structures be demolished for Life Safety purposes. The proposed retrofitting of the structures will require additional shoring, supportive bracing, new footings, additional framing and other structural elements to be employed once the final studies and calculations have been formally designed and engineered. Because of the extreme deterioration of the existing structural elements of the buildings the retrofit may result in removal and replacement of most of the structural systems. The retrofit will more than likely cause more retro fitting work than as outlined in this initial study. Our experience with retrofitting utilitarian structures like this, generally leads to more in-depth structural work and retrofitting than planned and anticipated as the structures additional weakness are revealed during construction. Demolition of these minimally designed and altered structures should be highly considered due to the above stated reasons, the following retrofit items and current fire , life, safety concerns.

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Building A – Residence

1. Provide a retrofit foundation sill anchors at the top of the foundation stem wall.

2. Strengthen roof framing by addition collar ties from top plate to top plate at a minimum of 24”o.c.

3. Remove and replace deteriorated siding and sill plates.

4. Provide plywood shear panels to seismically retrofit the building. Retrofit consists of a continuous load path from roof diaphragm to shear walls to foundation stem. These items include continuous blocking between rafters and floor joists, framing anchors at blocking and holdowns at ends of plywood sheathed shear panels.

5. Regrade surrounding area to provide proper distance from grade to foundation sill.

6. Add foundations at the east side porch to support posts as seen in photo #1. Posts are to be knee braced to add lateral support for porch extension.

Building B – Central Stable and Office

1. Entire roof is to be sheathed with plywood.

2. Scab new 2x rafters to undersized existing 2x rafters.

3. Add continuous collar ties between monitor cripple wall plates and sheath cripple walls with plywood to create a continuous load path from roof diaphragm to foundations. This will include continuous blocking between rafters with added framing anchors at each block.

4. To seismically retrofit the structure, add new shear panels to all exterior walls, interior longitudinal hallway walls and selected interior cross walls (A minimum of two interior transverse locations). The seismic retrofit consists of a continuous load path from roof diaphragm to shear walls to foundation stem. These items include continuous blocking between rafters, framing anchors at all blocking and holdowns at ends of plywood sheathed shear panels.

5. Shore entire building and provide a new-foundations with curbs to all continuous walls, posts and added shear panels.

6. Remove and replace all deteriorated wood framing.

Building B – Westside Stable and Shed

1. Entire roof is to be sheathed with plywood

2. Scab new 2x rafters to undersized existing 2x4 rafters.

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3. To seismically retrofit the structure, add shear panels to all exterior walls and selected cross walls. The seismic retrofit consists of a continuous load path from roof diaphragm to shear walls to foundation stem. These items include continuous blocking between rafters, framing anchors at all blocking and holdowns at ends of plywood sheathed shear panels.

4. The existing stud walls are inadequate and do not meet typical type V framing requirements (no top plates). All of the stud walls are to be removed and reframed.

5. Shore entire building and provide a new-foundations with curbs to all continuous walls, posts and added shear panels.

6. Remove soil at west wall and regrade.

7. Remove and replace all deteriorated framing.

Building B – Eastside Stable

1. Entire roof is to be sheathed with plywood

2. Scab new 2x rafters to undersized existing 2x6 rafters.

3. To seismically retrofit the structure, add shear panels to all exterior walls and selected cross walls. The seismic retrofit consists of a continuous load path from roof diaphragm to shear walls to foundation stem. These items include continuous blocking between rafters, framing anchors at all blocking and holdowns at ends of plywood sheathed shear panels.

4. The existing masonry wall is to be positively anchored to the roof diaphragm with straps and anchor bolts.

5. Shore entire building and provide a new-foundations with curbs to all continuous walls, posts and added shear panels.

6. Remove and replace all deteriorated framing.

Building C – Stable

Building is in good structural condition with no signs of distress in any structural members.

Building D – Barn (photo #8)

1. Entire roof is to be sheathed with plywood

2. Scab new 2x rafters to undersized existing 2x4 rafters and add roof beams as required.

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7. To seismically retrofit the structure, add shear panels to all exterior walls and selected cross walls. The seismic retrofit consists of a continuous load path from roof diaphragm to shear walls to foundation stem. These items include continuous blocking between rafters, framing anchors at all blocking and holdowns at ends of plywood sheathed shear panels.

3. Shore entire building and provide a new-foundations with curbs to all continuous walls, posts and added shear panels with proper anchor bolts and sill material.

4. Reframe tall and east and west walls with continuous larger studs.

5. Remove soil where finish grade is too close to foundation sill plates.

GENERAL

This report is based on a visual examination of the exposed areas of the structure. No tests, destructive or non-destructive were made. No drawings of the original construction were available and no exact measurements were obtained and no structural analysis on noted roof and shear panels was performed. The cursory inspection was made solely to assist in evaluating the structural integrity of the subject building structures and provide a general list of corrective measures. Neither the investigation nor this report is intended to address architectural features.

The findings and recommendations in this report represent conditions found at the time of the investigation and were prepared in accordance with generally accepted professional engineering principles, practices and judgment. No warranty is expressed or implied.

Respectfully submitted,

WHEELER & GRAY, INC.

Les Schulz, Principal, S.E.

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Photo #1 Building A-Wood Framed Residence Structure

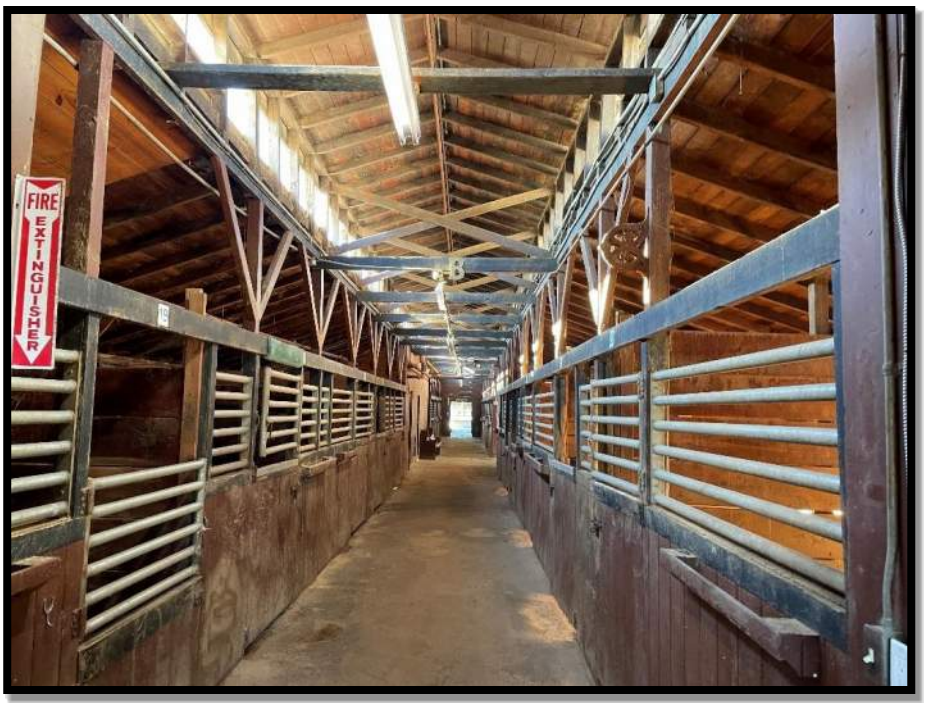

Photo #2 Building B Central Stable

Photo #3 Building B Westside Stable

Photo #4 Building B Westside (east wall)

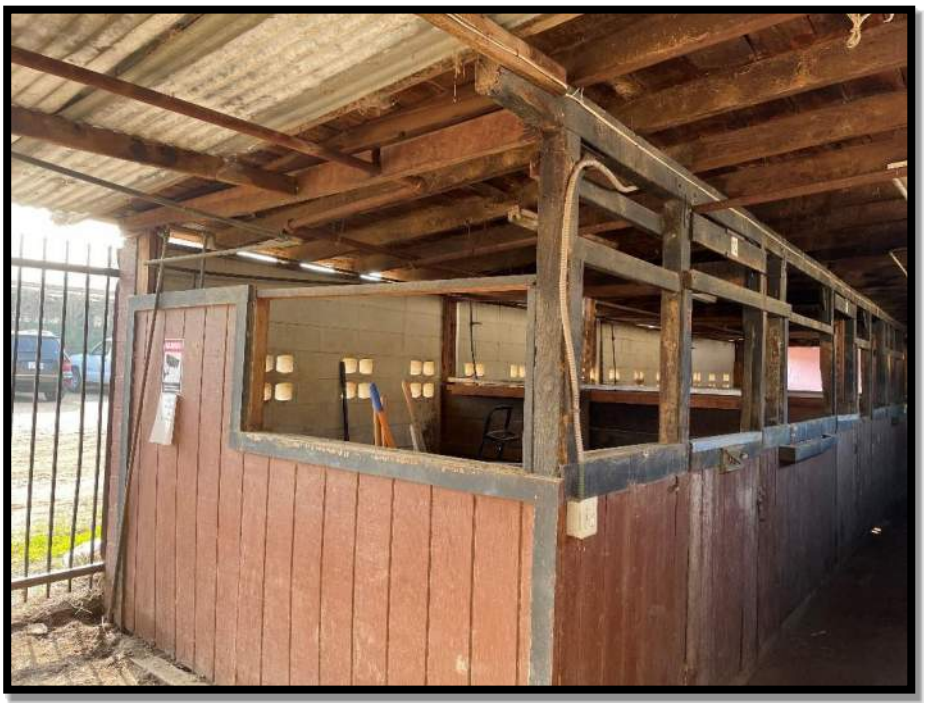

Photo #5 Building B Eastside Stable

Photo #6-Continous footing at longitudinal wall

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Photo #7 Typical Longitudinal wall at Central Stable

Photo #8 Barn East Elevation