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Visual Structural Condition Assessment – Existing Frei Residence:

2920 W Santa Clara Drive – Santa Clara, Utah

Prepared for:
Tresa Frei

Prepared by:
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Utah License No. 181950
Vector Engineering

Date:
September 30, 2026

1. Purpose

At the request of the property owner, a visual structural condition assessment was performed of the existing residential structure located at 2920 W. Santa Clara Drive, Santa Clara, Utah. The assessment included portions of the existing concrete basement foundation system and wood floor framing that were accessible and exposed for observation.

It is understood that the original portion of the residence was constructed approximately in 1935 and that the property is located within the Historical District of the City of Santa Clara.

The purpose of this assessment is to document the observed physical condition of the existing concrete basement foundation system and accessible wood floor framing and to provide an engineering opinion regarding the apparent condition of these elements and the feasibility of continued use or rehabilitation.

The original portion of the residence was constructed over a full basement having an observed minimum head height of approximately 6 feet 4 inches. Several subsequent additions to the residence were constructed on concrete slab-on-grade foundations.

This report is intended to provide information regarding the existing structural condition of the residence for consideration by the Historical Society of the City of Santa Clara in connection with the evaluation of the existing structure within the Historical District.

This assessment is limited to visual observations of accessible and exposed structural elements. No material strength testing, destructive investigation, reinforcement verification, or other subsurface or concealed-condition investigation was performed.

Evaluation of other building components, including architectural, mechanical, electrical, plumbing, environmental, hazardous-material, and other non-structural conditions, is outside the scope of this report.

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2. Scope of Evaluation

The evaluation consisted of a visual inspection of accessible portions of the existing structure, including:

- Visual observation of exposed concrete basement foundation walls;
- Documentation of observed concrete cracking, spalling, surface deterioration, discoloration, and other apparent distress;
- Observation of accessible wood sill plates, floor joists, and floor decking;
- Observation of apparent moisture or water intrusion;
- Observation of visible displacement, settlement-related distress, and cracking;
- Observation of accessible basement and main-floor wall conditions;
- Observation of exterior brick veneer/fascia, chimney, and visible areas of the original structure; and
- Photographic documentation of observed conditions.

The inspection was limited to conditions that could be observed without destructive removal of finishes or concealed building components.

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3. Visual Inspection

A visual inspection of the existing structure was completed on September 25, 2026, by Scott E. Christensen, S.E., Utah License No. 181950.

The inspection included observation of the following conditions where accessible:

- Cracking in existing concrete basement foundation walls;
- Surface deterioration and spalling of concrete;
- Deterioration of concrete cover;
- Apparent moisture or water intrusion through portions of the basement walls;
- Apparent settlement- or movement-related distress;
- Deterioration of accessible wood sill plates;
- Deterioration and decay of accessible wood floor framing and floor decking;
- Cracking and displacement in portions of interior and exterior walls; and
- Deterioration and displacement of portions of the exterior brick and chimney.

Observed conditions are summarized below.

Element	Observed Condition	Notes
Basement Foundation Walls	Deteriorated Condition	Localized cracking and surface spalling were observed at the northwest bedroom, southwest bedroom, storage room, and pantry/mechanical room. Apparent moisture/water intrusion was also observed through portions of the basement walls.
Wood Floor Framing	Deteriorated Condition	Rot and deterioration were observed in an exposed sill plate and associated wood floor framing and decking. The deterioration appears consistent with prolonged moisture exposure.
Basement and Main-Floor Walls	Cracking and Distress	Cracks up to approximately 3/16 inch in width were observed in various locations. Basement wall paneling showed areas of warping. Cracking was also observed at portions of the kitchen and entry, including areas near window and door openings.

Significant surface deterioration was observed in portions of the concrete basement foundation walls. The observed conditions include cracking, spalling, and apparent moisture-related deterioration.

The extent of deterioration within concealed portions of the foundation and floor framing could not be determined during a visual-only inspection. Based on the accessible conditions observed, additional deterioration may be present in concealed portions of the floor framing, particularly near the perimeter of the basement.

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4. Material Testing and Destructive Investigation

No destructive testing, concrete coring, concrete compressive-strength testing, wood strength testing, moisture testing, or other material testing was performed as part of this assessment.

Accordingly, the material strength and remaining structural capacity of the existing concrete and wood structural elements were not directly established by testing.

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5. Reinforcement Verification

No testing or investigation was performed to determine the size, spacing, condition, or existence of reinforcing steel within the existing concrete basement foundation walls.

The existing reinforcement, if present, was therefore not independently verified.

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6. Existing Wood Floor Framing

At the north wall of the existing basement storage room, a portion of the existing floor framing system was exposed and available for visual observation.

The exposed wood sill plate and associated 2x wood floor framing and decking showed deterioration consistent with prolonged moisture exposure. Portions of the accessible wood exhibited apparent rot and loss of material integrity.

Because the majority of the floor framing is concealed by the basement ceiling and floor finishes, the full extent of deterioration could not be determined during the visual inspection.

If the existing residence were to remain in service, additional investigation would be required to determine the extent of deteriorated wood framing and the repairs necessary to restore the framing system to an acceptable structural condition. This investigation would likely require removal of portions of the existing basement ceiling and/or other finishes to expose concealed framing.

Additional investigation would also be required to evaluate the adequacy of the existing floor framing for current gravity and lateral load requirements and its connection to the existing foundation walls.

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7. Foundation Elements and Feasibility of Reuse

The owner reported that several local foundation repair companies specializing in repair and preservation of existing concrete foundations have reviewed the property and indicated that they would not provide a guarantee for proposed repair work. This information was provided by the owner and was not independently verified by Vector Engineering.

Based on the visual inspection, significant deterioration is present in portions of the existing concrete basement foundation system. The observed cracking, spalling, apparent moisture intrusion, and associated deterioration warrant substantial additional investigation before the existing foundation could reasonably be relied upon for continued residential use.

Because reinforcement, material strength, concealed conditions, and the full extent of deterioration were not established during this visual inspection, the extent and feasibility of repairs cannot be reliably determined without additional investigation and testing.

Based on the conditions observed, continued use of the existing foundation and floor framing would require substantial rehabilitation and further structural investigation. The existing structural systems should not be considered suitable for continued residential use without such additional investigation and, if continued use is pursued, appropriate repair or replacement.

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8. Other Observed Conditions

Additional deterioration and distress were observed in portions of the existing residence.

Exterior cracking was observed in the brick fascia around portions of the original residence. Several cracks exhibited apparent vertical and/or horizontal displacement. These conditions are consistent with movement of the structure; however, the specific cause and extent of movement were not established by this visual inspection alone.

Deteriorated mortar joints were also observed in portions of the exterior brickwork. The owner has reportedly performed repairs to portions of the mortar joints over time.

Many window frames exhibited apparent wood deterioration and rot. Based on visual observation, some window assemblies may no longer provide adequate attachment or support; however, the adequacy of the window assemblies was not independently tested.

Deterioration of portions of the existing brick masonry was also observed and appears consistent with age and prolonged weather exposure. Significant deterioration was particularly apparent at portions of the existing fireplace chimney, including areas above the existing roof line.

The conditions described in this section are provided as observations only and were not subjected to a comprehensive architectural, envelope, masonry, or building-code evaluation.

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9. Conclusions

Based on the visual inspection performed on September 25, 2026, significant deterioration and distress were observed in accessible portions of the existing concrete basement foundation system and wood floor framing.

The observed concrete foundation conditions include cracking, surface spalling, apparent moisture intrusion, and localized deterioration. Accessible portions of the wood floor framing include deteriorated and rotted wood at the sill plate, floor framing, and floor decking.

The full extent of deterioration cannot be determined from a visual inspection because significant portions of the foundation, floor framing, connections, and reinforcement are concealed or inaccessible.

No material strength testing, reinforcement verification, destructive investigation, or structural load testing was performed. Therefore, the existing material strengths and remaining structural capacities were not directly established.

In order to establish whether the existing foundation and floor framing could be retained for continued residential use, substantially more investigation would be required. Such investigation

would reasonably include exposure of concealed framing, evaluation of foundation conditions, verification of reinforcement where applicable, material testing, evaluation of structural connections, and structural analysis of the existing systems for applicable building loads.

Based on the extent of deterioration observed in the accessible areas, continued use of the existing foundation and floor framing would require substantial investigation and rehabilitation, with replacement of deteriorated structural components where necessary.

In the opinion of the undersigned, the existing concrete basement foundation and accessible wood floor framing are in poor condition and cannot presently be considered suitable for continued residential use without substantial rehabilitation and additional structural investigation.

Given the observed deterioration and the extent of concealed conditions requiring investigation and potential replacement, retention and rehabilitation of the existing structural systems would involve substantial reconstruction of portions of the existing residence.

If demolition and replacement of the existing residence is being considered, the observed structural deterioration documented in this report provides engineering information regarding the physical condition of the existing structure and the extent of structural rehabilitation that would be required to evaluate continued use.

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10. Limitations

This report is based solely on visual observations of accessible portions of the existing residence made on September 25, 2026.

No destructive investigation or material testing was performed. No testing was performed to determine the compressive strength of the existing concrete, the strength or remaining capacity of existing wood framing, or the size, location, or condition of reinforcing steel within the concrete foundation walls.

Concealed conditions were not evaluated. Conditions within concealed portions of the foundation, floor framing, wall framing, connections, and other structural elements may differ from the conditions observed.

This report does not constitute a comprehensive evaluation of all building components or systems. Architectural, mechanical, electrical, plumbing, environmental, hazardous-material, geotechnical, and other non-structural evaluations are outside the scope of this assessment unless specifically noted herein.

No opinion is expressed regarding the historical significance of the residence or the appropriateness of demolition under applicable historic-district requirements. The purpose of

this report is limited to documenting observed structural conditions and providing an engineering assessment of the apparent condition of accessible structural elements.

Very truly yours,

VECTOR ENGINEERING



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1. Existing Exposed Concrete Basement Wall – Surface Spalling



2. Existing Basement Wood Panel Wall at Window w/ Surface Warping



3. Existing Basement Window w/ Deteriorated Frame



4. Existing Concrete Cracking & Spalling in Basement Wall



5. Existing Concrete Cracking & Spalling in Basement Wall



6. Existing Concrete Surface Spalling in Basement Wall



7. Existing Wood Framing in Basement



8. Existing Wood Framing in Basement



9. Existing Crack in West Wall of Kitchen



10. Existing Crack in West Wall of Entry



11. Existing Crack Repair in Exterior Brick



12. Existing Exterior Brick in Deteriorated Condition



13. Existing Crack Repair in Exterior Brick



14. Existing Exterior Brick Displacement & Deterioration



15. Existing Exterior Brick Joint Displacement



16. Existing Chimney Above Roof



17. Existing Chimney Base



18. Existing Joint Between Original Home & Addition