2/4/2026

Client: Client Doe
123 Main St, Your City, CO, 12345

Engineer: Philip W. Bullock Jr., M.E., M.B.A., P.E. (CO)
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Executive Summary

Report V1.0

This executive summary statement provides an abreviated and shortened overview of the key takeaway from the full report and is not intended to convey all details or complexities. It should not be the sole basis for decision making and is only provided as a courtesy for the purpose of clarity. For complete information and thorough analysis, refer to the full report.

This evaluation indicates clear and localized damage to primary roof framing members that have compromised the continuity of the load path. Therefore, remedial measures are required to restore full load-carrying capacity and member continuity. It is recommended that structural repairs be completed as soon as practicable, preferably within the next month, and executed by a qualified truss/roofing contractor. After repairs, a follow-up inspection and documentation should be completed to confirm alignment, bearing, and absence of deflection. Due to the structural implications of the observed damage, please review the full report in detail for the complete basis of these conclusions, repair scope, and any limitations of this assessment.

Engineer's Damaged Truss/Timber Evaluation

1.0 - Background and Purpose

On 11/12/2025 a Damaged Truss Evaluation (DTE) was performed at the property located at address 123 Main St, Your City, CO, 12345, which consists of a 2600 square-foot single family no garage structure built in 2007 with a truss roof framing.

As shown in the attached inspection report, a visual condition assessment of the damaged truss area(s) was performed on-site by inspector Inspector Doe (Ridgetop Home Inspection LLC) for the purpose of this desktop engineering evaluation completed by Engineer Philip W. Bullock Jr., M.E., M.B.A., P.E. (CO) (Noble Engineering Services, LLC (CO)). This letter is written to document and memorialize the findings of both the field investigation and desktop evaluation focused on providing a clear performance analysis for the client.

The purpose of this evaluation is to investigate and provide, to the extent possible, conclusions and repair recommendations (if required) about the damaged truss area of the structure. Our evaluation involved collecting data and photographs of the structure to assess its performance and identify any signs of distress. Based on our findings, we will provide recommendations for repairs to ensure the long-term stability and safety of the structure. We understand that roof framing issues can be a cause for concern for property owners, and we aim to provide clear and concise information to help you make informed decisions about any repairs needed for your property. The data and photographs presented in this report are intended to provide a representative sample of the types of distress observed throughout the structure, and are not a comprehensive catalog of all the distress present.

A Note on Photo Captions: This report, including the inspection report attached, will use photo captions that indicate locations such as right, left, front, and back. These directions refer to how a person standing at the front of the property looking at it would see it. For example, the "front left" would be located on the front left side of the structure, as person would reference if standing at the front of the property looking at the structure.

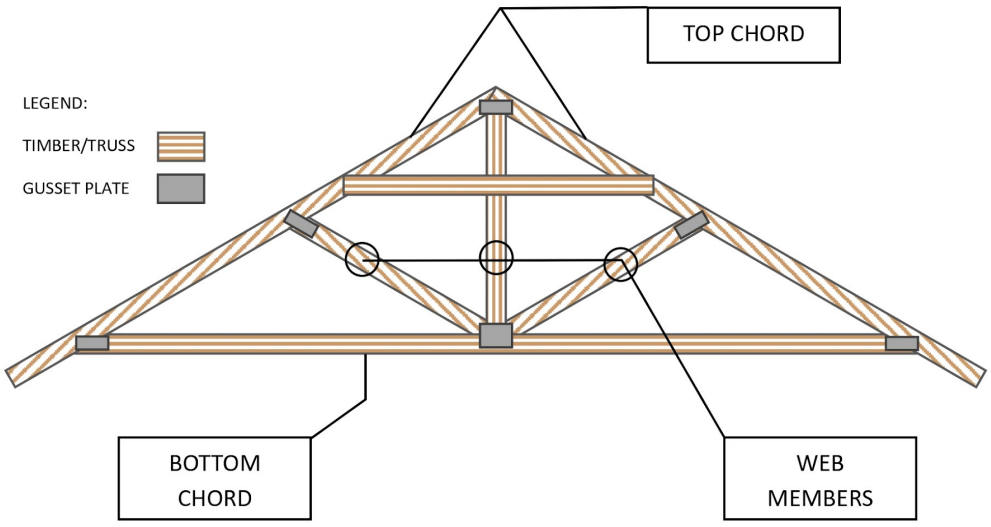
2.0 - Observations and Repairs

The attached inspection report documents visual observations made during a physical walkthrough of this investigation by the inspector. Herein are the discoveries of the visual condition assessment of the damaged truss area aimed at assessing its structural integrity, stability, and performance. The structure's framing serves as the fundamental support system, playing a pivotal role in ensuring its longevity and safety. Through industry accepted analysis and examination, this evaluation delves into the key aspects of the structure's overall condition around the general area of the damaged framing member(s). By scrutinizing the visual condition assessed factors this portion of the evaluation aims to elucidate any existing visual deficiencies or potential risks that may compromise the stability of the structure. The findings presented herein are crucial for informing decision-making processes regarding necessary repairs, maintenance interventions, or further investigations to uphold the structural reliability and safety of the structure.

The attached inspection report dated 11/12/2025 and completed by Inspector Doe should be reviewed in detail and should stand as the visual condition documentation of the framing-related deficiencies discovered at the time of the site-visit inspection.

Below is a graphic of the identified truss/timber roof framing system used.

ELEVATION VIEW



Framing Type: FULL TRUSS

This engineering statements below provide a general overview of the visual condition assessment findings documented in the home inspection report. The purpose of this section is to acknowledge and generally agree with the inspector's classification of severity for each observed deficiency based on visual indicators. Right after each deficiency, the recommended repairs are described and explained in detail. Visualization of the repairs are in the exhibits. That final summary reflects the engineer's overall assessment and any necessary guidance based on the totality of visual evidence.

Member Deflecting/Bowing: We agree with the findings of the inspection report that the observed bowing of the king post of two truss members should be considered significant (See Exhibit A). The affected members exhibit noticeable bowing along their span, suggesting overstress, insufficient lateral restraint, or deformation due to sustained loading or moisture-related movement. The deflection indicates localized loss of stiffness and potential redistribution of loads within the truss system. While the overall roof structure remains generally intact, the bowed members may have a reduced capacity to maintain proper alignment and resist design loads.

Replacement of Member: For timber or truss member/s showing signs of deflection or bowing, remove the affected member/s and replace it with new dimensional lumber of the same grade and species, but constructed as a triple-laminated member (three 2× members fastened together) for increased capacity (see Exhibit B). Cut the replacement member/s to match the existing configuration and ensure tight bearing at connection points. Secure the new member/s using approved truss plates, gusset plates, or structural screws/bolts consistent with industry standards and truss repair guidelines. Verify that all connections are tight and properly aligned to maintain the original configuration and load path. Add collar ties as necessary, confirming proper connection to the king post, and fasten each collar tie using four (4) 10d common framing nails installed in a standard rectangular pattern, with two nails per row and two rows.

Visual discovery of previous repair work: We agree with the findings of the home inspection report that there exists signs of previous roof framing repair that were completed to the structure. Multiple scabs are observed throughout the truss/timber framing. Additionally, two A-frames placed end-to-end of the attic sitted with a thick joist is found that appears to provide additional support to the roofing system. A review of the attic framing indicates that the prior alterations and installations were completed with substandard workmanship and do not conform to typical industry quality standards. However, aside from the noted deficiencies at the identified king posts, the additional framing does not appear to be structurally compromising based on current conditions. No invasive or destructive structural investigation were performed to confirm the material properties of the lumber used.

3.0 Interviews

No interviews were conducted as part of this evaluation. It is highly recommended that the client contact any builders/owners/occupants/agents to confirm no relevant knowledge of previous defects and/or repair work was performed at the structure. Historic knowledge of the roof is important to the overall assessment of the roof framing; when none exists the evaluation is limited to existing conditions only.

4.0 - Pertinent Documents

No pertinent documents were provided as part of this evaluation; our company has not received any previous roof framing reports from the builder, owner, occupant, client and/or agents. It is outside the scope of this evaluation to determine if roof framing repairs were permitted/required at a municipal level and to what extent they were documented. It is highly recommended that the client contact any owners/occupants/agents to confirm no relevant documentation of previous defects and/or roof framing work that may have been performed on the structure. Obtaining pertinent documentation is important to the overall assessment of the roof framing; when none exists the evaluation is limited to existing conditions only.

5.0 - Conclusion

There are many factors that weigh into the Engineer's overall statement of opinion about the existing stability of the foundation. These various factors are all considered when applying overall conclusive statements about the existing condition of the foundation and the future likelihood of foundation fatigue/failure.

Based on field observations of the roof framing, as documented in this report, the structure should be considered habitable and safe for occupancy at this time.

This evaluation indicates clear and localized damage to primary roof framing members that have compromised the continuity of the load path. Therefore, remedial measures are required to restore full load-carrying capacity and member continuity. It is recommended that structural repairs be completed as soon as practicable, preferably within the next month, and executed by a qualified truss/roofing contractor. After repairs, a follow-up inspection and documentation should be completed to confirm alignment, bearing, and absence of deflection. See Exhibits A/B/C/D/E/F for the full detail of observed and evaluated damage/s and recommended repair method/s.

Upon review of the existing attic framing conditions, several instances of substandard workmanship and nonconforming installation practices were observed. While these deficiencies reflect poor construction quality, they do not appear to pose immediate structural concerns or compromise the overall integrity of the roof framing system. The primary exception involves the inadequately constructed king posts, which require corrective action as noted. Aside from the issues identified with the king posts, the remaining observed deficiencies are considered non-structural in nature.

6.0 - Limitations

This report documents a limited engineer's truss/timber evaluation scope inspection only. The company has only been hired to report deficiencies of the elements that are within the agreed-upon roof framing-related scope, and will not perform an inspection of the entire property (if not hired to do-so).

This report has been assembled by a team, each member bringing specialized expertise to ensure a comprehensive evaluation within the scope of our project. The team comprises a field-inspector, responsible for conducting thorough on-site examinations; a reviewer, who reviews and consolidates the findings; and an engineer, who applies a desktop evaluation and calculations to the field data collected. The structuring of our team and the distribution of roles have been strategically designed to optimize both the quality and cost-efficiency of the provided services. The team may (or may not) be comprised of individuals working for different companies. The Engineer did not perform a site visit.

Verification of permitted construction activities through the correct jurisdictional authority is not part of the scope of this report. Photos here of permit-related documents and stickers are for informational purposes only.

7.0 - Liability

The contents of this report supersede any verbal communication regarding the subject foundation during or after the inspection. This report was prepared for the exclusive use of the client listed above. There is no obligation or contractual relationship to any party other than our client and their agents in regards to the subject property. The opinions and recommendations contained in this report are based on the visual observation of the then current conditions of the structure and the knowledge and experience of the inspector/engineer.

Engineer/inspector is not responsible for concealed conditions where a visual observation was not possible or any other areas that are not readily available to the engineer or inspector for evaluation during the site visit. The evaluation was limited to visual observations and areas not visible or accessible were not included in the evaluation. The evaluation did not include any soil sampling or testing, nor any assessment of the existing plumbing or auxiliary structures and no implication is made on the compliance or non-compliance of the structure with old or current building codes. No verification was made of the existing lumber strength, dimensions, reinforcement (if any), nor capacity to support any load.

Limits of liability for any claims with respect to this report is limited to the fees paid for services and anyone relying on the content of this report agrees to indemnify the company for all costs exceeding the fee paid.

Engineer's Seal:

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Sealed:
2/4/2026

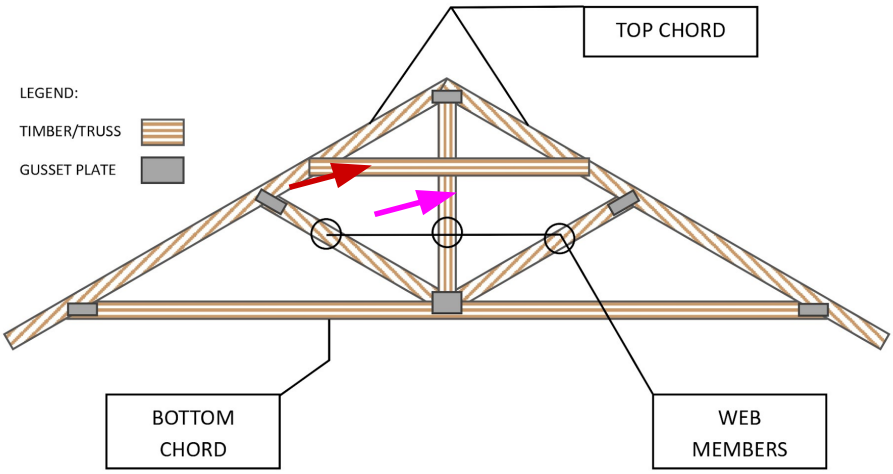
Possible Attachments:

√ - Provided	Exhibits A & B	Damaged King Post (for Replacement of Member)
√ - Provided	Appendix A	On-Site Inspection Report with photos dated 11/12/2025

Exhibit A - Damaged Area 1 (Damaged King Post)

123 Main St, Your City, CO, 12345

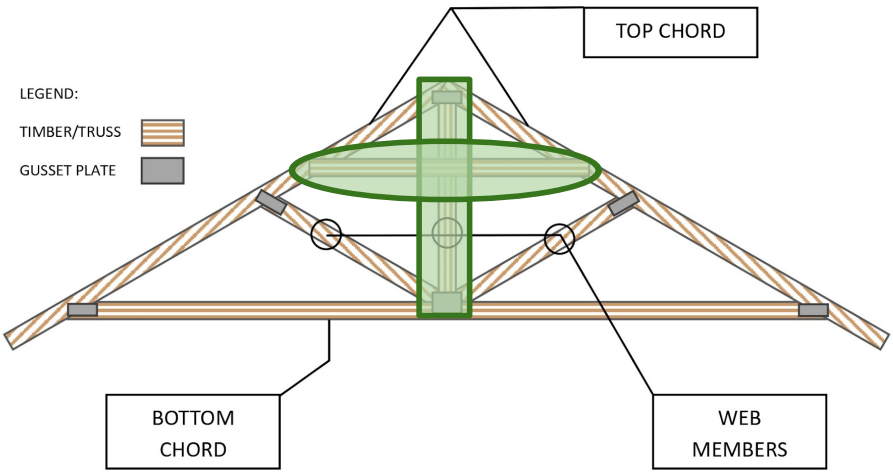
ELEVATION VIEW



LEGEND

- Missing or inadequate bracing
- Cracked or split truss/timber members
- Roof or ceiling deflection (sagging)
- Missing or damaged gusset plates
- Moisture damage, termite, or wood rot
- Field modifications or cut members

ELEVATION VIEW



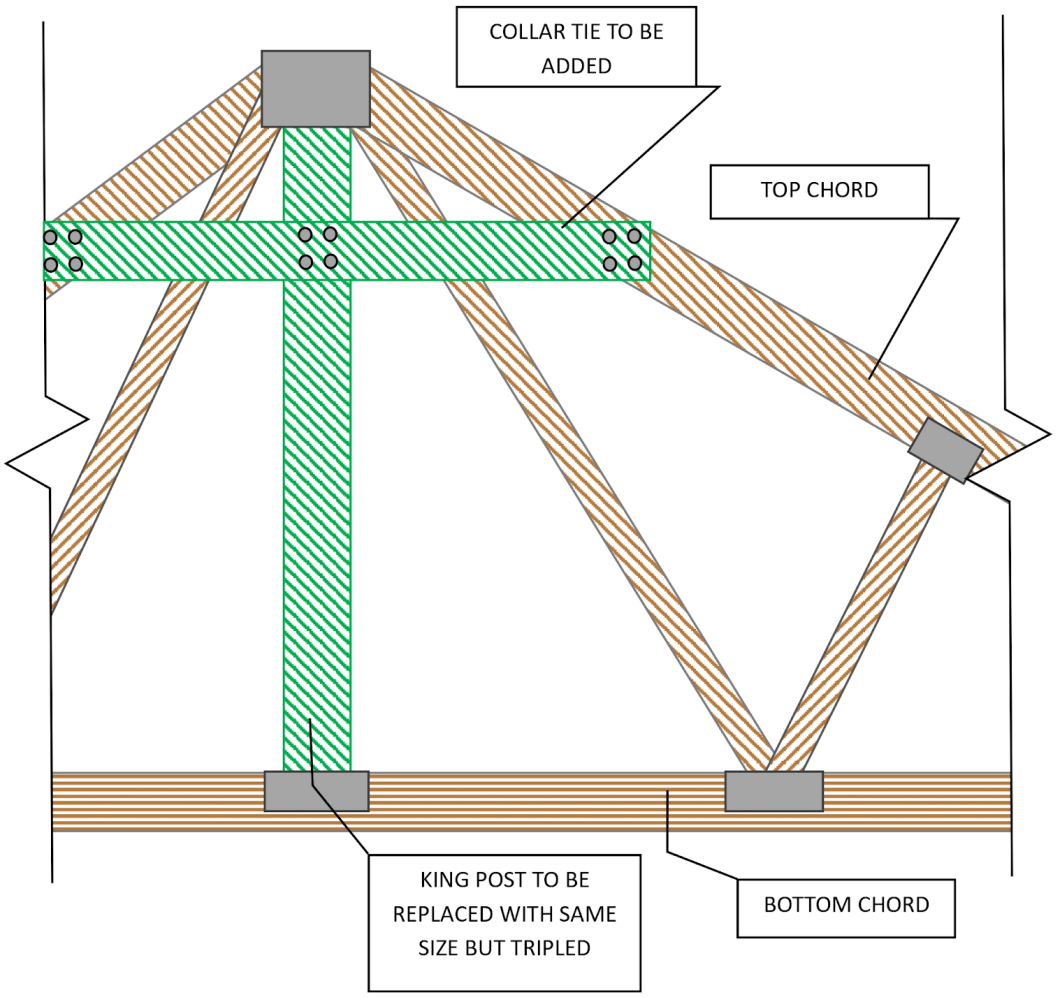
LEGEND

- Replacement of member
- Sister or scab the damaged member
- Reinforce and/or add support brace
- Install or replace gusset plates
- Replace wood / solve moisture source
- Add supplemental member supports

Exhibit B - Repair 1 (Replacement of Member)

123 Main St, Your City, CO, 12345

ELEVATION VIEW



NOTES:

1. ON DRAWING DETAILS - THE TIMBER/TRUSS MEMBER FOR REPAIR CAN EITHER BE THE TOP CHORD, BOTTOM CHORD OR A WEB MEMBER. THIS DRAWING IS JUST MEANT TO PROVIDE GENERAL REPRESENTATION FOR THE REPAIR METHOD SPECIFIED.

2. ON REPAIR - BEFORE REMOVING THE DAMAGED MEMBER, PROVIDE TEMPORARY SHORING/SUPPORT ON OR BELOW OTHER NEARBY MEMBERS. ONLY AFTER THE REPAIR CAN THE TEMPORARY SHORING/SUPPORT BE REMOVED.

3. REPLACE KING POST MEMBER WITH THE SAME SIZE, BUT INSTALL THREE (3) MEMBERS TOTAL BY TRIPLING UP THE 2 PINE BOARDS.

4. ADD COLLAR TIE AS NECESSARY, CONFIRMING PROPER CONNECTION TO KING POST.

5. USE FOUR 10D COMMON FRAMING NAILS, INSTALLED IN A STANDARD RECTANGULAR PATTERN WITH TWO NAILS PER ROW AND TWO ROWS.

Appendix A

On-Site Inspection Report with Photos Dated 11/12/2025

123 Main St, Your City, CO, 12345

The on-site inspection report may be too lengthy to include in the Appendix A herein. This can occur with lengthy reports, particularly if they contain other specialties. If a full copy is not here, we recommend contacting the inspector.

Inspector: Inspector Doe

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