

May 18, 2026

Elk Ridge City Council & Planning Commission

RE: Highlands sight distance concerns at Canyon View Dr. and Meadowlark Lane

Dear Representatives of Elk Ridge City,

This memo is written in regard to the sight distance challenges at the above-named intersection in the Highlands Development. With the proposed second phase of the Highlands subdivision, there are concerns about safely navigating the intersection with sight distance limitations. These concerns stem from a switchgear in the northeast corner of the intersection that blocks view to Canyon View Dr, and a combination of street sags and crests that limit sight distances. The sags and crests were intentionally designed to flatten the intersection for improved cross traffic travel when the intersection design included a 4-way connection to Mountain View Dr. Given the challenges that are presented with the topography in the area, we removed the connection to Mountain View Dr. with the Phase 1 installation.

On 5/12/2026, I met with Mayor Rob Haddock, and Planning Commissioners Lisa Graham and Andy May, and other members of the Elk Ridge City Staff. We had a productive conversation discussing the design challenges with the given topography, the safety concerns of limited sight distances, and some of the remediation strategies we could employ to improve the safety of the intersection. There was a consensus among all of us that the concerns are valid and we all desired to find the best alternative to improve safety. Lisa brought up the poignant concern of a wreck injuring a young adult or “high school driver” and the desire to avoid that if possible. My findings are as follows:

I analyzed the intersection based on the 7th Edition of the AASHTO (American Association of State Highway and Transportation Officials) A Policy on Geometric Design of Highways and Streets. I analyzed the sight distances using the as-built design of the improvements and then personally confirmed the findings in the field using cameras, drones, and other measuring devices. I analyzed the road based on 30 MPH speeds for the following scenarios: Case B1-Left turns from a minor road; Case B2-Right turns from a minor road; and Case F-Left turns from a major road. As designed, future Case B1 will not meet AASHTO recommendations for a 30 MPH road in the future installation of Meadowlark Lane. This is due to the crest in the road just east of the intersection and the power switchgear box mentioned above.

The following mitigations were discussed:

- a) Design the grade of Meadowlark Lane (instead of the current design which grades down from Canyon View Dr.) to increase the vertical height of the driver and improve the sight distance. This is a low impact proposal that will improve the sight distance of the driver for Cases B1 and B2.
- b) Remove the crest to the east of the intersection. This would require the removal and replacement of approximately 200-250 linear feet of roadway. This will change the vertical profile of the crest and will remove approximately 12-16" of the vertical sight obstruction of the crest. The rideability of the road will be impacted. For this to successfully meet the AASHTO recommendations, Mitigation 'a' would be required as well. This is a very high impact proposal to an existing roadway that would produce marginal improvement compared to the impact.
- c) Removal of the Switchgear box. This is a high impact proposal that would be required to meet the AASHTO requirements. This would be required for both mitigations 'a' and 'b'.
- d) Stop controlling the entire intersection in lieu of allowing through movements on Canyon View Dr. This is a low impact proposal that avoids the requirement of any other mitigation discussed. Given the safety concerns presented, this is my recommended approach.
- e) Reduce the design speed of the road. For every 5mph change, you can reduce the recommended sight distance by 55'. This would still require mitigations 'a' and 'c.'

Recommendation: Install three-way stop control at the intersection of Meadowlark Lane and Canyon View Dr.

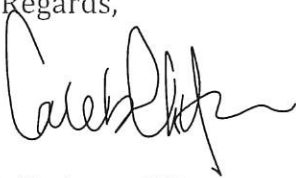
I am able to meet the design by AASHTO standards if I recommend mitigations a, b, and c. My concern is we are still nearing the limits of the recommendations laid forth in the manual. In the Preface of AASHTO it reads, "In some locations, especially constrained locations, designing to the criteria recommended herein simply is not feasible. Adaptive, flexible, and cost-effective designs customized to each project context are encouraged. Flexibility in the application of design criteria herein is recommended to encourage a sustainable approach to highway design decision making by weighing and balancing choices among the environmental, economic, and social aspects while meeting the project's performance objectives." While I can prove on paper we meet design intent with mitigations, I am applying strict speed criteria that I have observed are not followed by commuters travelling down Canyon View Dr. These concerns, and those presented by the Planning Commission members, provide reasonable grounds for using judgement above the narrowly met criteria in AASHTO.

Given my years as a municipal engineer for Springville City and now as a principal in my design firm, and the justified concerns coming from commission members, I am compelled to use my engineering judgement and recommend a stop-controlled intersection (stop signs on all three legs). High impact mitigations b and c provide, in my opinion, marginal

safety and visual improvements to the roadway. These mitigations leave the design too close for comfort given the nature and use of the observed road.

I would welcome the opportunity to discuss the work that has been involved in coming to this conclusion. It is not one that has been reached lightly. This recommendation comes from many hours on site observing, measuring, surveying, droning and capturing data. Hours have been spent in the office on as-built design and computer analysis. I understand the political pressures and feelings that come from stop signs – I have experienced the push back personally. I appreciate your concern, time, and care in looking into these issues to provide a safe and functioning place to live in Elk Ridge City.

Best Regards,



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