



August 25, 2026

Danika McFarland
37 Lincoln Ave
Deadwood, SD 57732

Re: Recommendation of Variance for Proposed Structure
37 Lincoln Ave
Deadwood, SD 57732
I.E. Project #: SD26-04-144

To whom it may concern,

Interstate Engineering has been retained by Danika McFarland (Owner) to provide engineering design services for a home renovation project located at 37 Lincoln Avenue, Deadwood, SD 57732. Interstate Engineering's scope of work includes the design of a garage and retaining wall system that will support a rooftop patio/green roof while retaining a significant volume of soil along the northeast portion of the property.

Currently, the residence does not have any off-street parking. At times, the owner is unable to park adjacent to the property because available on-street parking has already been occupied. As a result, the proposed garage serves two primary purposes:

1. To provide safe and secure off-street parking for the owner.
2. To provide an efficient and structurally sound system for retaining the surrounding soils.

The primary entrance fronts Lincoln Avenue, while garage access will be provided from Taylor Street. Due to the significant grade change between these two streets and the neighboring properties, approximately 14 feet of soil must be retained for approximately 40 feet before tapering down to Taylor Street.

Our proposed design utilizes precast concrete planks to support the rooftop patio/green roof at the existing first-floor elevation, along with a 6-inch reinforced concrete slab on grade spanning between the garage walls. In addition, the northeast garage wall is designed to function as a restrained retaining wall supporting approximately 14 feet of retained soil between the owner's property and the neighboring property to the northeast.

In this configuration, the lateral support provided by both the concrete slab and the precast plank system allows for a significantly more efficient retaining wall design. Preliminary structural analyses indicate that, without this lateral support, a standalone retaining wall would require substantially larger footings and increased reinforcement to adequately resist the soil pressures.

It is our understanding that the owner's property line extends approximately 41.5 feet northwest of the existing structure. This places the property line just beyond the high point of the neighboring ground surface. However, if the garage were limited to the required 10-foot setback, approximately 10 feet of the 14-foot retained soil height would need to be supported by a standalone retaining wall.

Based on our professional engineering judgment, extending the garage approximately 40 feet beyond the existing structure creates a more effective and efficient structural system for supporting and protecting the neighboring property. The proposed design provides a more efficient use of materials and available space than a standalone retaining wall while providing a safer and more practical long-term solution for the property and its neighbors.

For these reasons, Interstate Engineering respectfully recommends that the City of Deadwood grant a variance allowing the proposed garage to extend beyond the standard 10-foot setback, as shown on the attached site plan.

If you have any questions or require additional information, please feel free to contact one of us at garrett.jankord@interstateeng.com or 605-443-8057 or alex.schwarzhoff@interstateeng.com or 218-739-5545.

Sincerely,
INTERSTATE ENGINEERING, INC.



Alex Schwarzhoff, P.E.
AS:as



Garrett Jankord, EI