

January 27, 2022



Ms. Cheryl Zakrzewski
CITY OF BELLEVUE
czakrzewski@bellevuewa.gov

Subject: Landslide Damage Assessment
SURDI RESIDENCE
5008 139th Place SE
Bellevue, Washington 98006

*Consulting Services
Since 1960*

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Dear Ms. Zakrzewski:

At the request of the City of Bellevue, we have performed a site visit to review the condition of the subject residence after the recent landslide that occurred at the property and to provide recommendations for stability and/or demolition. Our site visit was performed on January 24, 2022. Present at the site were Mr. Jeff Leer of McBride Construction Resources, Mr. Gregg Schrader with the City of Bellevue, Mr. Kyle Potuzak with the City of Bellevue, and Mr. Christian Juenke, P.E., S.E. and Mr. Michael Smith, P.E., S.E. both with this firm. Photographs taken during the site visit, and those obtained from others, that relate to the discussion are attached in the Appendix.

SUMMARY

A summary of our findings and recommendations is as follows:

- The subject wood structure has been pushed off its foundation to the south, and is currently leaning downhill.
- The wood structure is unstable and presents a safety hazard for people as well as the nearby street and structures.
- Due to the safety hazard and instability, we recommend that the home be demolished as soon as possible.

GENERAL DESCRIPTION

The Surdi Residence is a wood-framed, two-story home with a daylight basement and a concrete foundation located on the north side of 139th Place SE in the Somerset neighborhood of Bellevue, Washington (Photograph Nos. 1 & 3). According to the King County Assessor, the building was originally constructed in approximately 1984. The building is generally rectangular in shape with approximate overall dimensions of 30' by 45' with the long axis of the building oriented in the east-west direction. A 20' by 30' garage extends north from the eastern end of the home. A driveway extends around the west side of the property to the north entry/garage. A deck wraps around the east and south sides of the home. The home is on a site that slopes steeply down to the south (down towards 139th Place SE).

LANDSLIDE EVENT

On January 17, 2022, a landslide occurred above and just north of the home, and the debris from the landslide impacted the residence and pushed it off its foundation and downhill (Photograph Nos. 2, 4 & 5).

OBSERVATIONS

Due to safety concerns, we only obtained limited access adjacent to the home/property, and therefore several of the measurements below are estimates. During our site visit, we observed the following conditions:

1. The north side of the home was impacted by the landslide debris and the wood structure was pushed approximately 15' or more south off its concrete foundation. The south daylight basement wall appears to have collapsed, and the south side of the home and the deck are currently resting upon or adjacent to a rock wall downslope of where the home was originally situated. The entire home has tilted and is leaning down the hill such that the top of the home is more than 4' further downhill than the bottom (leaning approximately 15 degrees to the south). (Photograph Nos. 2, 4, 5, & 6)
2. The north exterior wall of the home that previously supported the roof framing has broken into pieces (Photograph Nos. 5 & 7). The west wall is breaking apart where a chimney had been located adjacent to a two-story tall, vaulted section of the home (Photograph No. 8). Portions of the east wall are buckling along the floor line (Photograph No. 9). Only the south wall is relatively intact.
3. The south and east decks have been pulled down the hill along with the home. Most of the east side deck has broken to pieces and the debris is resting on trees in places (Photographs Nos. 9 & 10).
4. The garage was impacted by the landslide and separated from the home. Debris from the garage (framing, contents, vehicles) extends down towards the road to the south and east (Photograph No. 11).
5. Landslide debris (loose and wet soil/mud/rock and vegetation) has filled portions of the basement as observed from the north side of the home. Two cars and two vans have been pushed into the north walls of the home and are located either up against the home or in the basement of the home (Photograph Nos. 12 & 13). Two additional cars are facing downhill in the middle of the debris at the east end of the home (Photograph No. 9).
6. Landslide debris, wood framing, and personal contents extend around the home and down into the street below the home (Photograph No. 14). Currently, there is no vehicular access permitted up 139th Place SE.

OPINIONS

The subject wood structure is unstable and presents a safety hazard for people as well as the nearby street and structures. The wood structure has come off its foundation and is currently leaning downslope. Another period of heavy rains, or a natural event, such as a windstorm or an earthquake, could cause the home to further displace and break apart.

RECOMMENDATIONS

Due to the instability of the subject wood structure and the ongoing risk that the home poses to the adjacent street and structures, we recommend that the home be demolished as soon as possible. It is our opinion that the safety risks are too great to allow construction personnel to work in close proximity to the home, and therefore, we are unable to recommend the installation of bracing near/for the home prior to demolition. There does not appear to be any portions of the wood-framed sections of the home that are salvageable. After demolition and debris removal, the home's concrete foundation may be evaluated for reuse.

Portions of the home have broken apart or broken into pieces, and there is hanging and loose debris throughout. Therefore, we recommend that no access into the home be granted to anyone as there is a risk of additional movement and possible further collapse. Only the construction personnel experienced in demolition who have control of the site, while taking due care and caution, and wearing the proper protective gear, should be allowed near the site and only during good weather conditions (i.e., only light winds and rain, and no snow accumulation).

Due to the risk of collapse of the home into the street, the street should remain closed until the subject wood structure has been demolished. Access to the homes across the street (directly to the south of the home) as well as the homes in the western portion of the cul-de-sac should not be permitted until demolition is complete.

The remaining hillside should be evaluated and monitored as necessary to determine if there is a risk of additional landslides. Review of the hillside is outside of our scope of services.

Please let us know if you have any questions or require additional information.

Sincerely,

PACIFIC ENGINEERING TECHNOLOGIES, INC.

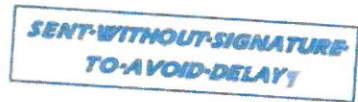
Written by:



Michael P. Smith, P.E., S.E.
Principal



Reviewed by:



Kyle J. Bozick, P.E., S.E.
Principal

01/27/2022

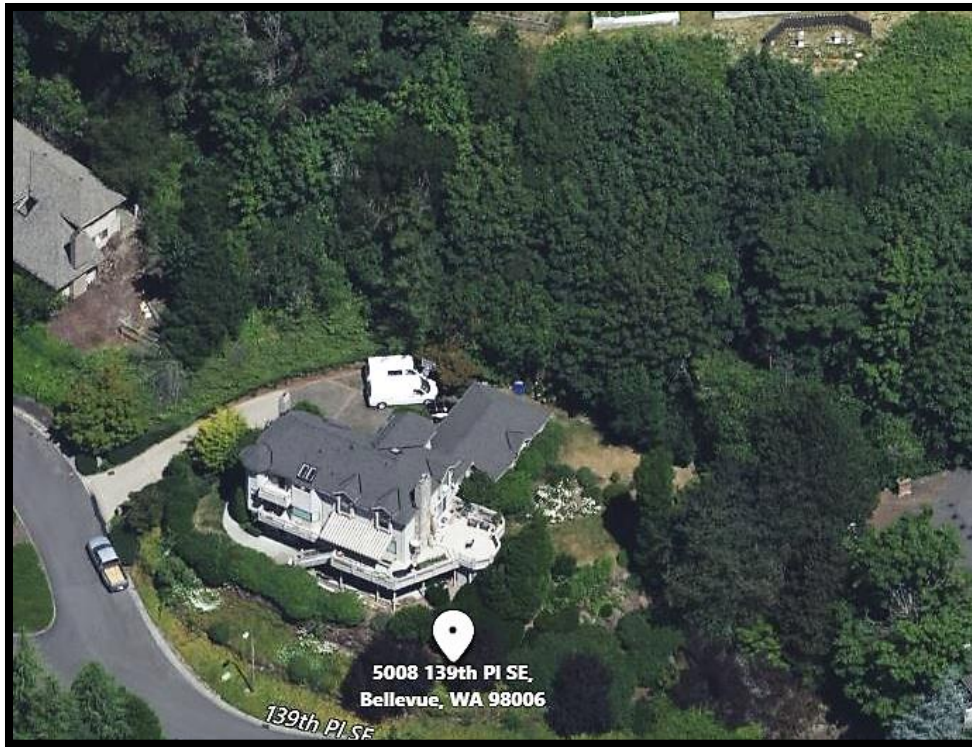
Disclaimer

The information contained in this report is for the exclusive use of the **CITY OF BELLEVUE** and **MCBRIDE CONSTRUCTION RESOURCES, INC.** Pacific Engineering Technologies, Inc. assumes no responsibility or liability for any use of this report by other parties. The conclusions are based on limited visual observations at the site. No destructive testing or monitoring was performed. Review of the condition of the hillside is not a part of our scope of services.

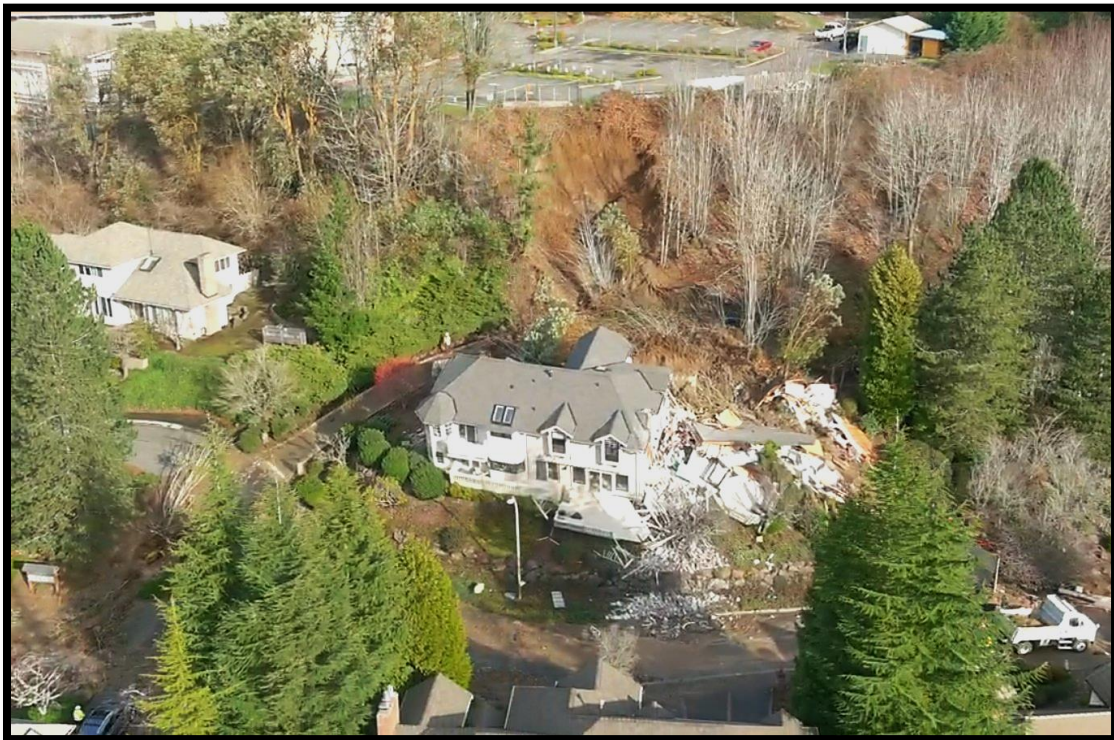
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APPENDIX
PHOTOGRAPHS



1. The Surdi property prior to the January 17, 2022 landslide looking north (bird's eye aerial image courtesy of Bing Maps).



2. The Surdi property after the January 17, 2022 landslide looking north (aerial image courtesy of KIRO 7).



3. The south elevation of the Surdi residence prior to the January 17, 2022 landslide (street view image courtesy of Bing Maps).



4. The home was impacted by the landslide and the structure was pushed approximately 15' or more south off its concrete foundation.



5. The north elevation of the Surdi Residence after the January 17, 2022 landslide (aerial image courtesy of KIRO 7).



6. The east side of the Surdi residence as observed on January 24, 2022. The entire home has tilted and is leaning down the hill such that the top of the home is more than 4' further downhill than the bottom (leaning approximately 15 degrees to the south).



7. The north exterior wall of the home, which previously supported the roof framing, has collapsed.



8. The west wall is breaking apart where a chimney had been located adjacent to a two-story tall, vaulted section of the home.



9. Portions of the east wall are buckling along the floor line (oval). Two cars are facing downhill to the east of the home (arrows). A portion of the deck has also collapsed and is resting upon a tree.



10. Portions of the east side deck have collapsed and are leaning downslope and, in places, are resting upon trees.



11. The garage was impacted by the landslide and separated from the home. Debris from the garage extends down towards the road to the south and east.



12. Two vans have been pushed into the north side of the home.



13. One of the vehicles is now in the basement.



14. Landslide debris extends down into the street below.