

Kalli Biegel

From: Benjamin Sticka
Sent: Wednesday, October 14, 2020 1:54 PM
To: Kalli Biegel
Cc: Cindy Wellborn; Ian Faulds
Subject: AGHA response to Hearing Examiner
Attachments: Garbarino_Comments1_AGHA_Materials_v2_2020-0527.pdf; Approved_Garbarino_AGHA-PeerReview_2020-0709.pdf

Hi Kalli,

Please find the questions, responses and attachments as they pertain to the Hearing Examiner's follow-up questions as they relate to the Alteration of the Geologic Hazard Areas for the Garbarino Hearing held on October 5, 2020. Please let me know if you need anything else? Thanks so much.

1. What portions of the project requiring approval of the alteration of a geologic hazard area were already decided administratively by the City, as a referenced in staff's PowerPoint (Exhibit 3, slide 21, "AGHA exemption was granted...") and Applicant timeline (Exhibit 2, page "7/9/2020 AGHA permit approved")?

Staff Response:

No portions of the alteration of a geologic hazard area were decided/approved administratively by the City or Aspect prior to the Hearing. Aspect Consulting reviewed and "recommended approval" of the Geotechnical Report (Attachment 11, Geotechnical Report) and concurred with the findings of that study. Please see the attachments: "Garbarino_Comment1_AGHA_Materials_v2_2020_00527" and "Approved_Garbarino_AGHA_Peer_Review_2020_07_09". Additionally, Cindy Wellborn, Senior Stormwater Engineer also reviewed and concurred with the review completed by Aspect Consulting. The words "granted" and "approved" were just to acknowledge that the review was essentially ok'd/recommended for approval by both City of Redmond staff and Aspect Consulting and that it could be forwarded onto the Technical Committee as a part of their recommendation to the Hearing Examiner for the Garbarino Plat.

2. What portions of the proposal require hearing examiner approval of the request for AGHA permit.

Staff Response:

The proposed development requires a maintenance access road, associated retaining wall, and culvert and wall drain outfall within a landslide hazard area which is categorized by the Redmond Zoning Code as a Geologic Hazard Area per RZC 21.64.060. Landslide hazard areas are areas potentially subject to significant or severe risk of landslides based on a combination of geologic, topographic, and hydrogeologic factors. They include areas susceptible because of any combination of bedrock, soil, slope, slope aspect, structure, hydrology, or other factors. They are areas of the landscape that are at a high risk of failure or that presently exhibit downslope movement of soil and/or rocks and that are separated from the underlying stationary part of the slope by a definite plane of separation. The plane of separation may be thick or thin and may be composed of multiple failure zones depending on local conditions, including soil type, slope gradient, and groundwater regime.

The existing site slopes from zero to 15% to the east. Additionally, the existing topography of the adjacent parcel to the east, where the access road, retaining wall, and outfall is located, includes steep slopes that exceed 40%. The maintenance access road, retaining wall, and outfall is proposed to be located in a public easement on

the adjacent parcels to the east, which is located in a landslide hazard area and triggers the need for the Alteration of a Geologic Hazard Areas application.

The (AGHA) is a permit that allows construction within the landslide hazard area (steep slopes that exceed 40%). Development is prohibited in landslide areas except for the installation of streets and or utilities per RZC 21.64.060.D.2.b. The subject plat has submitted a separate concurrent land-use application (LAND-2020-00502) due to the retaining walls supporting the utility maintenance access road improvements. The application included a geotechnical analysis to identify and evaluate potential hazards and formulate mitigation measures (Attachment 11, Geotechnical Report).

Pursuant to the Redmond Zoning Code, Alteration of Geologic Hazard Areas RZC 21.64.060.D, the City shall approve, condition, or deny proposals in a geologically hazardous area as appropriate based upon the identification and effective mitigation of risks posed to property, health, and safety.

Development shall be prohibited in landslide hazard areas except as noted below:

1. Pin pilings or footings for decks are permitted provided that they do not impact the stability of the slope, as demonstrated by geotechnical studies; and
2. The installation and construction of streets and/or utilities, subject to the criteria and process set forth in RZC 21.76.070.E, Alteration of Geologic Hazard Areas.

The AGHA permit application is consistent with RZC 21.46.060.D.2 as the proposal is for the construction of a retaining wall that supports the utility maintenance access road. The applicant provided the required Geotechnical studies, which were reviewed by the City's third-party reviewer (Aspect Consulting) and deemed appropriate for approval. Decision Criteria for the Alteration of Geologic Hazard Areas Permit is included in RZC Section XI (AGHA Decision Criteria) of this report.

Pursuant to Redmond Zoning Code 21.76.070.E., Alteration of Geologic Hazard Areas applications must demonstrate the following:

- a. There must be no reasonable alternative to locating in a Landslide Hazard Area. Alternative locations which would avoid impacts to the Landslide Hazard Area must be shown to be economically or functionally infeasible.

Response: Alternatives were evaluated to shift improvements to the west away from the steep slope area and/or reduce the width of maintenance access; however, due to the limited space available for improvements and not having a maintenance vehicle turnaround, including the additional slope constraints to the west; there were no other options that are functionally reasonable or feasible.

- b. A Geotechnical Evaluation must be conducted to identify the risks of damage from the proposal, both on-site and off-site, and to identify measures to eliminate or reduce risks. The proposal must not increase the occurrence of the potential geologic hazard.

Response: An evaluation from the geotechnical engineer was prepared by Rick Wang, Principal Engineer at the Riley Group (Attachment 11, Geotechnical Report). This addendum concludes that there is no increased risk to the area in question. However, a guardrail will be installed with a wider access road where the current gravel road exists. Currently, the access road is extremely narrow, without a guardrail.

- c. Impacts shall be minimized by limiting the magnitude of the proposed construction to the extent possible; any impacts must be eliminated or mitigated by repairing, rehabilitating, restoring, replacing or providing

substitute resources consistent with the mitigation and performance standards set forth in RZC 21.64.010.L and 21.64.010.M.

Response: Disturbance of the steep slope area will be minimized to the extent possible and consistent with the geotechnical recommendation. The retaining wall is proposed to be placed as close to the new access road as allowed by City regulations in-order to minimize the disturbance and wall height. The wall will provide stability and any disturbed areas will be stabilized. In addition, the retaining wall foundation will be stepped if possible, to further reduce alterations.

The project has located public utilities in the only feasible location for the proposed plat. The public utilities require a public maintenance road and due to the steep slopes, a retaining wall will be constructed to support that road. The retaining wall has been located in an area that will minimize impacts to the steep slope. The utilities

3. Please identify the plan sheets and plan notes addressing the requested AGHA permit in Attachment 1, Plan Set.

Staff Response:

Please see plan sheets: T0-02 "Existing Conditions", SR-02 "100 Year Surface Runoff Plan", SP-02 "Site Plan", RD-02 "Grading and Storm Plan", TP-02 "Tree Preservation Plan", UT-02 "Water and Sanitary Sewer Plan" and TR-02 "Transportation Plan". Plan notes are shown on RD-02 "Grading and Storm Plan". Please note that some sheets were included more than once in the plan set.

4. Please confirm in writing that the City's third party geotechnical review is Aspect Consulting, rather than Golder, and please submit for the record any written documentation of their review.

Staff Response:

Aspect Consulting was the third party geotechnical review. Staff has provided Aspect's peer review documents dated May 27, 2020 and their "recommendation for approval" document dated July 7, 2020. Both are attached and labeled "Garbarino_Comment1_AGHA_Materials_v2_2020_00527" and "Approved_Garbarino_AGHA_Peer_Review_2020_07_09".

Ben Sticka (he, him)
Senior Planner, City of Redmond



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May 27, 2020

Ms. Cindy Wellborn, PE
City of Redmond
15670 NE 85th Street
Redmond, Washington, 98073

Re: Geologic Hazard Area Exception Review

Garbarino Plat
10030 and 10042 136th Avenue NE
Redmond, Washington 98052
Project No. 160422, Task 20-06

Dear Cindy:

This letter presents Aspect Consulting, LLC's (Aspect) review comments regarding the proposed geologic hazard area exception for the Garbarino Property project (Project). The Project includes the construction of a cast-in-place retaining wall within a steep-slope environmentally critical area (ECA) located along the east side of 138th Avenue NE north of the intersection with NE 100th Street.

These services were authorized by the City of Redmond (City) on May 5, 2020, as part of our Consultant Agreement for On-Call Geotechnical Engineering Services with the City.

Project Description

The Project is for a small plat approval for residential development of 14 lots in Redmond, consisting of two parcels (#124670032 and 1246700329) that are accessed from 136th Avenue NE to the west. The proposed development also includes improvements for 138th Avenue NE that is upslope of a steep slope area as shown locally in Plan Sheet 7. A cast-in-place concrete retaining wall is located along 138th Ave NE in the vicinity of a mapped steep slope that is considered a potential landslide hazard by the City. The project team is proposing the retaining wall in the steep slope area to protect the slopes while also creating the space required for 138th Avenue NE.

Documents Reviewed

These documents were provided by the City for our review:

- LDC, Garbarino Property Alternative Geohazard Alteration Narrative, dated April 30, 2020.
- Pertee Wetland Reconnaissance, Garbarino Property, dated January 27, 2020.
- Riley Group, Critical Area Evaluation and Geotechnical Engineering Report, Garbarino Short Plat, dated January 22, 2016.
- Riley Group, Geotechnical Report Addendum A – Critical Areas Statement, Garbarino Short Plat, dated February 8, 2016.



- Riley Group, Geotechnical Report Addendum B- Retaining Wall Recommendation Garbarino Short Plat, dated March 25, 2020.

Review Comments

Our review focused on conformance with the Project Geotechnical Report, Redmond Zoning Code (RZC) provisions, and geotechnical engineering standard of practice. Our review comments are summarized in the following table:

Comment No.	Document	Comment
1	Geotechnical Report	The applicant states that, "the wall will provide stability and any disturbed areas will be stabilized." A slope stability analysis should be provided that demonstrates adequate global stability of the wall and slope under static and seismic loading conditions. RZC, Critical Areas Reporting Requirements Appendix 1 section E (c) (iv) https://www.redmond.gov/DocumentCenter/View/4711/Critical-Areas-Reporting-Requirements-PDF
2	Geotechnical Report	The Riley Group's Geotechnical Report Addendum, dated March 25, 2020, refers to very dense glacial till at the wall location along 138th Ave NE. Mapping from the Washington Department of Natural Resources Geology Portal and King County show the area in the vicinity of the wall mapped as Advance Outwash Deposits. Were explorations completed for wall design? RZC Critical Areas Reporting Requirements Appendix 1 section E (c) (iii)

Limitations

Work for this project was performed for the City of Redmond (Client), and this letter was prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. This letter does not represent a legal opinion. No other warranty, expressed or implied, is made.

All reports prepared by Aspect Consulting for the Client apply only to the services described in the Agreement(s) with the Client. Any use or reuse by any party other than the Client is at the sole risk of that party, and without liability to Aspect Consulting. Aspect Consulting's original files/reports shall govern in the event of any dispute regarding the content of electronic documents furnished to others.

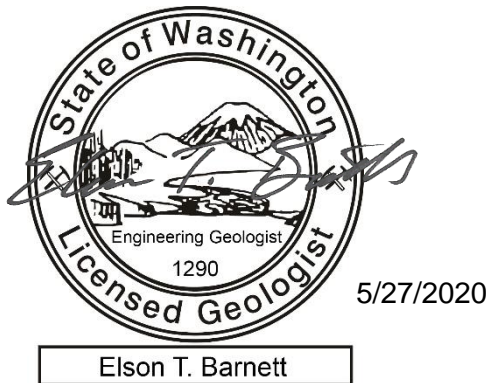
We appreciate the opportunity to perform these services.

Closing

Please contact us if you have any questions concerning our review.

Sincerely,

Aspect consulting, LLC



Elson T. "Chip" Barnett, LEG
Senior Engineering Geologist
ebarnett@aspectconsulting.com



Erik O. Andersen, PE
Principal Geotechnical Engineer
eandersen@aspectconsulting.com

Attachments: Appendix A – Report Limitations and Guidelines for Use

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APPENDIX A

Report Limitations and Guidelines for Use

REPORT LIMITATIONS AND GUIDELINES FOR USE

Geoscience is Not Exact

The geoscience practices (geotechnical engineering, geology, and environmental science) are far less exact than other engineering and natural science disciplines. It is important to recognize this limitation in evaluating the content of the report. If you are unclear how these "Report Limitations and Guidelines for Use" apply to your project or property, you should contact Aspect Consulting, LLC (Aspect).

This Report and Project-Specific Factors

Aspect's services are designed to meet the specific needs of our clients. Aspect has performed the services in general accordance with our agreement (the Agreement) with the Client (defined under the Limitations section of this project's work product). This report has been prepared for the exclusive use of the Client. This report should not be applied for any purpose or project except the purpose described in the Agreement.

Aspect considered many unique, project-specific factors when establishing the Scope of Work for this project and report. You should not rely on this report if it was:

- Not prepared for you;
- Not prepared for the specific purpose identified in the Agreement;
- Not prepared for the specific subject property assessed; or
- Completed before important changes occurred concerning the subject property, project, or governmental regulatory actions.

If changes are made to the project or subject property after the date of this report, Aspect should be retained to assess the impact of the changes with respect to the conclusions contained in the report.

Reliance Conditions for Third Parties

This report was prepared for the exclusive use of the Client. No other party may rely on the product of our services unless we agree in advance to such reliance in writing. This is to provide our firm with reasonable protection against liability claims by third parties with whom there would otherwise be no contractual limitations. Within the limitations of scope, schedule, and budget, our services have been executed in accordance with our Agreement with the Client and recognized geoscience practices in the same locality and involving similar conditions at the time this report was prepared

Property Conditions Change Over Time

This report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time, by events such as a change in property use or occupancy, or by natural events, such as floods, earthquakes, slope instability, or groundwater fluctuations. If any of the described events may have occurred following the issuance of the report, you should contact Aspect so that we may evaluate whether changed conditions affect the continued reliability or applicability of our conclusions and recommendations.

Geotechnical, Geologic, and Environmental Reports Are Not Interchangeable

The equipment, techniques, and personnel used to perform a geotechnical or geologic study differ significantly from those used to perform an environmental study and vice versa. For that reason, a geotechnical engineering or geologic report does not usually address any environmental findings, conclusions, or recommendations (e.g., about the likelihood of encountering underground storage tanks or regulated contaminants). Similarly, environmental reports are not used to address geotechnical or geologic concerns regarding the subject property.

We appreciate the opportunity to perform these services. If you have any questions, please contact the Aspect Project Manager for this project.



July 7, 2020

Ms. Cindy Wellborn, PE
City of Redmond
15670 NE 85th Street
Redmond, Washington, 98073

Re: Geologic Hazard Area Exception Review

Garbarino Plat
10030 and 10042 136th Avenue NE
Redmond, Washington 98052
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These services were authorized by the City of Redmond (City) on May 5, 2020, with additional budget authorized on June 30, 2020, to review response comments, as part of our Consultant Agreement for On-Call Geotechnical Engineering Services with the City.

Documents Reviewed

These documents were provided by the City for our review:

- Riley Group, Response to City of Redmond's Comments Garbarino Short Plat, dated June 10, 2020.

Review Comments

Our review focused on conformance with the Project Geotechnical Report, Redmond Zoning Code (RZC) provisions, and geotechnical engineering standard of practice. In our opinion, the Riley Group response provides sufficient geotechnical evaluation to address our review comments from our May 27, 2020, review letter. We recommend that the City consider project approval.



Limitations

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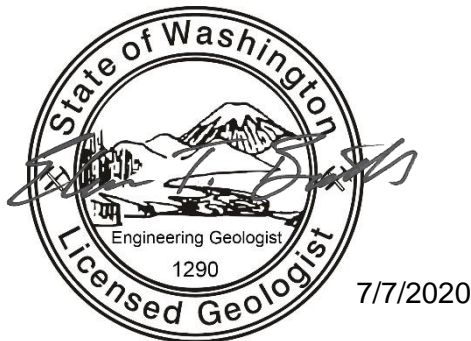
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Sincerely,

Aspect consulting, LLC



Elson T. Barnett

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Senior Engineering Geologist
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