



June 20, 2019

Job No.1359-001-007

Ms. Kim Claussen, Program Manager III
King County DPER
Single-Family Division
35030 SE Douglas Street, Ste #210
Snoqualmie, WA 98065

**RE: PLAT18-0007 Gunshy Manor, Proposed Preliminary Plat
Response to Notice of Request for Additional Information or Studies, Submittal #3**

Dear Ms. Claussen:

On behalf of The Estate of Barbara J Nelson and the WCN GST Non-Exempt Marital Trust #2, ESM Consulting Engineers, LLC is pleased to provide King County with the additional and/or updated application materials that address comments received from the Department of Local Services, Permitting Division, dated March 21, 2019, involved with the review of the Gunshy Manor Preliminary Plat.

Please find the following enclosed materials as part of this resubmittal.

1. Request for Additional Information Response Letter (this letter, 8 copies);
2. Response to City of Redmond Comments (8 copies);
3. Geotechnical Correction Notice Response Letter (8 copies);
4. Update Certificate of Water Availability provided by UHWA (8 copies);
5. Update Title Report (3 copies);
6. Updated Assessor Maps (8) and Public Notice Documents (1 copy);
7. Copy of Safe School Access Exhibit and Lake Washington School District Correspondence (3 copies);
8. Copy of Sight Distance Clearing and Mitigation Plan (8 copies);
9. Revised Road Variance Request Letter and attachments (3 copies);
10. Revised SEPA Checklist and Greenhouse Gas Worksheet (10 copies);
11. Revised Residential Density Worksheet (3 copies);
12. Revised Critical Areas Delineation and Mitigation Report (8 copies);
13. Revised TIR and Level One Drainage Analysis (8 copies);
14. Revised Preliminary Plat Drawings (10 copies).

In an effort to provide concise and direct responses, we have copied the review comments below in *italics* and our responses are in **bold**.

DRAINAGE – Please review the preliminary Technical Information Report (TIR), conceptual drainage plan(s), etc., as necessary as a result of the following comments.

Floodplain – Show the 100-year floodplain boundaries. Boundaries identified should be the more conservative between the effective FIRM and preliminary FIRM boundaries.

The 2013 Preliminary FIRM boundaries provided by King County are now indicated on the revised preliminary plat plan set. The boundaries are depicted from the King County '100-Year Floodplain' GIS layer.

Groundwater Protection – The proposal is within a Critical Aquifer Recharge Area (CARA) denoted as "Medium to Highly Susceptible to Groundwater Contamination". As a result, additional groundwater protection treatment measures may be required.

- a. *The geotechnical report, by Associated Earth Sciences, revised Nov. 26, 2018 (page 25) indicates the lowest field measured infiltration rate to be 5.1 inches per hour, which fails to meet the soil properties required within groundwater protection areas (infiltration rate less than 2.4 inches per hour). Please re-evaluate the drainage proposal and provide an alternative design which complies with the SWDM. Note, treatment liner may be required.*

The storm drainage design has been updated to direct storm drainage runoff to cartridge filters and detention and infiltration ponds that provide water quality and flow control, respectively. The proposed infiltration rate has also been lowered, due to the location of the infiltration ponds.

- b. *Presettling is required for water quality (WQ) treatment facility proposed within CARA. Per SWDM, Section 5.2.1, treatment liners may be required if water in the WQ facility or presettling facility is in direct contact with the soil. Refer to Section 6/2/4 for facility liner design requirements. Please redesign as necessary.*

The storm drainage design has been to provide water quality treatment using PerkFilter cartridges in advance of the proposed infiltration pond as well as after the proposed detention pond.

Outfall – Please identify outfall location(s) from proposed drainage facilities. If the proposed design presents any deviations from Core Requirement #1: Discharge at the Natural Location, wetland hydrology analysis will be required.

Three emergency overflow spillway outfalls have been identified on the plans for the proposed infiltration pond and the two proposed detention ponds.

NE Union Hill Road frontage improvements – Please indicate drainage controls (i.e. flow control and water quality treatment) associated with the NE Union Hill Rd frontage improvements.

The frontage improvements along NE Union Hill Road total 0.04 acres of impervious bypass (including sidewalk and road). Per Section 1.2.3.2.E Mitigation of Target Surfaces that Bypass Facility, the frontage improvements qualify for compensatory mitigation by a flow control facility. The increase in flow is less than 0.15 (see the WWHM hydrology model output in Appendix A of the preliminary TIR) and no flow control BMPs are feasible for this target surface as detailed in Appendix C of the SWDM. Therefore, the frontage

improvements are proposed to be unmitigated bypass and are not included in the hydrology model.

ROADS & TRAFFIC –

Entering Sight Distance (ESD) – Based upon site access analysis and County field investigation, ESD for the proposed private road with NE Union Hill Road is currently obstructed by existing vegetation, including trees located within the NE Union Hill road right-of-way. Please identify the extent of clearing necessary to meet the KCRDCS.

The applicant submitted “NE Union Hill Road Sight Distance Clearing Update – Mitigation” memorandum with mitigation and planting plans prepared by Raedeke Associates in November 2018. This was to address work proposed with GRDE16-0105. County staff advised this proposal to be included with the preliminary plat file and voided the grading permit. Additional copies of the memorandum and plans are included with this submittal.

Road surfacing/pavement – please identify and clarify type and location/extent of pavement type(s) on the plans. Please note, permeable asphalt is not an acceptable surface material, as KCRDCS 4.06 limits surface to 9 lots or less and private, in addition, permeable asphalt does not meet the required load bearing capacity (of 37 tons) requirements for fire vehicles. Please re-evaluate road surfacing material and revise as necessary. Note, drainage information must also be updated/revise as necessary.

Permeable asphalt has been removed from the proposed road surfacing types and storm drainage information has been updated to reflect this change.

Cross-Section NE Union Hill Road – NE Union Hill Road is classified as a rural minor arterial. Per KCRDCS, required frontage improvements consist of an 11-foot travel lane, 8 foot paved shoulder and roadside ditch/appropriate drainage. Currently, NE Union Hill Road does not appear to meet KCRDCS. Please provide a cross-section of NE Union Hill Road depicting the proposed half-street improvements necessary. Note, frontage improvements will only apply to the frontage along NE Union Hill Road from the east boundary parcel 082506-9022/19907 NE Union Hill Rd to the existing Gunshy Manor driveway.

Required frontage improvements have been incorporated into the updated preliminary plat plan set. Additionally, the proposed improvement details were provided to the Lake Washington School District for review – the included email documentation with the district shows their agreement with the improvements to support safe school access for students.

Roadway Section A-A – Section A-A (plan sheet PP-05) depicts curb and gutter for the boulevard section. Please clarify if this is asphalt curbing and provide justification for the use of curbing instead of thickened edge as shown on Section B-B (sheet PP-05).

The curbing within the boulevard section is used to reduce impacts to the Martin Creek critical area. The curbing requires less width than thickened edge or shoulders and discourages drivers from idling on the boulevard section. The Road Services engineer approved this section in an email received on May 1, 2019.

Road Variance – A draft variance was previously submitted and placed on hold, while the applicant “finalized” aspects of the proposal. Based upon preliminary review of the variance and revised site plan, the following items have been identified for inclusion in the variance request –

- a) *Intersection spacing between 199th Ave NE and plat road intersection w/NE Union Hill Rd*
- b) *Length of cul-de-sac for private road contained within Tract G*
- c) *Allowance of private road to access plat*
- d) *Thickened edge design for Tract G roadway*

A revised Road Variance Request was submitted along with this Preliminary Plat revision, with these items added:

- "Curb" type roadway on rural road in the boulevard section;
- Thickened edge design for Tract G, Cross-section C-C roadway;
- Concrete sidewalk on one side of the boulevard section with a new crosswalk;
- Use of extruded curb on NE Union Hill Rd for safe school access.

FIRE -

Water Availability & Fire Flow - The certificate of water availability certificate from Union Hill Water Association, dated November 14, 2017 indicates that water is available, flows of 1000 gpm or more for 2 hours or more, to serve the proposed lots. However, various proposals have been sent to Permitting Division Fire Marshal with multiple alternatives related to fire flow. Please clarify what the current proposal is for water supply (Union Hill, existing wells, etc.) and fire flow. Provide updated documentation (i.e. revised water certificate, well date, etc.) as necessary, which demonstrate water availability and fire flow.

Water mains provided by Union Hill Water Association will be the primary source of domestic and fire protection water source for the subdivision. Water rights associated with the well and spring will be retained and are not proposed to supplement the fire protection system.

Fire Access - please note, approved fire apparatus access is a minimum 20-foot wide all-weather driving surface that is not over 150 feet in length without a turn around and no roadway gradient in excess of 15%, this includes joint use driveways.

Noted.

Parking - If parking is proposed on both sides of the roads, roads must be 36 feet wide. Parking on one side roads shall be minimum 28 feet wide. No parking will be permitted on roads 20 feet in width. Parking plan and marking of fire lane(s) may be required.

The main internal road system (along Tract G, section C-C) that abuts the proposed lots provides 28' paving for roadway, thickened edge on both sides and parking on one side. The northern side of Tract G will be marked with no-parking signs. The entry way within the Martin Creek buffer area provides minimum pavement and will not allow parking - no-parking signs and fire lane markings will be provided in this section (Section B-B and A-A).

Road Surface - Roads must be an all-weather surface capable of supporting 37 ton, meet HS-20 and a point load of 45,000# for an 18" x18" outrigger.

Permeable asphalt has been removed from the proposed road surfacing types and replaced with typical asphalt pavement.

CRITICAL AREAS – Wetland/Stream/Aquatic Area

Union Hill Entrance – Currently, a boulevard section, gate, entrance sign and turn-around area are proposed at the entrance and extending into the plat. These proposals do not appear to meet KCC 21A.24.125 (avoiding & minimizing impacts). Please provide further analysis of these proposed impacts and demonstrate how the proposal will comply with KCC 21A.24.125.

The NE Union Hill entrance has been revised to minimize impacts to critical areas. Please review the latest Critical Area Report and Mitigation Plan provided by Talasaea. The proposal complies with KCC 21A.24.125 according to the following:

A. An applicant for a development proposal or alteration, shall apply the follow sequential measures, which appear in order of priority, to avoid impacts to critical areas and critical area buffers:

1. Avoiding the impact or hazard by not taking a certain action:

Due to extensive critical area presence on the site and existing road conditions, providing ingress and egress within the Martin Creek buffer is the only viable option for this project. Avoiding the impact is infeasible for the proposal.

2. Minimizing the impact or hazard by:

a. Limiting the degree or magnitude of the action with appropriate technology; or

Approved stream crossing materials will be used in the bridge design.

b. Taking affirmative steps, such as project redesign, relocation or timing:

The project previously proposed an entryway farther east along NE Union Hill Rd. Since the original proposal was presented to King County, the applicant has purchased parcel #082506-9067. The proposed entry was relocated farther west onto the acquired parcel. With this new entry and the proposed mitigation of the crossing, in addition to removal of existing structures within the buffer, Martin Creek and its buffer will be significantly improved compared to the original alignment and existing conditions of the acquired parcel.

3. Rectifying the impact to critical areas by repairing, rehabilitating or restoring the affected critical area or its buffer

Mitigation with planting is proposed for the impact to the critical area. Please refer to the revised Critical Areas Report and Conceptual Mitigation Plan prepared by Talasaea. Measures #6 and 7 of this code section are also met through the proposed mitigation.

Mitigation Plan – Please revise mitigation plan(s) as follows –

Sight triangle clearing is discussed within the text of the mitigation plan, but is not shown on the mitigation plan figure or calculations. Please revise plans, etc. to depict the area of impact and include calculations

Sight distance clearing is proposed within the NE Union Hill right-of-way to support the proposed project and is not within the project boundary. To clarify, Talasaea misidentified the proposed entryway landscaping (Tract H) as a sight triangle and has revised their report

as necessary. The analysis and mitigation plan for the sight distance clearing are separate from the internal mitigation of critical areas. Please refer to the Mitigation and Planting Plans prepared by Raedeke for NE Union Hill Sight Distance.

Bridge – installation is discussed, but not shown on the mitigation plan figure. Please include impacts to the figure. Note, removal of the existing bridge should be shown and may be considered for partial mitigation of the new bridge.

The Mitigation Plan shows the removal of the existing bridge and the mitigation proposals for the new bridge placement. The bridge removal and the new bridge are discussed in the text of the Critical Areas report.

If any impacts are proposed within the southern portion of the site, these will need to be addressed and included in the mitigation plan.

No impacts are proposed within the southern portion of the site with this project. The existing trails will be used for occasional pedestrian and equestrian access, and as access by Union Hill Water Association to reach their water system improvements. Should UHWA propose impacts in the future, it will be at their discretion within the proposed access and utility easements.

The southern portion of the site (vicinity adjacent to the plat of Gunshy Manor) was not evaluated/included in the critical area designation or subsequent critical area reports.

If there are impacts proposed within this area, the impacts must be identified, shown on the site and mitigation plans. In addition, addendum critical areas reports will also be required to further address impacts.

Critical areas, vegetation and amenities within the southern portion of the site have been surveyed and are now shown in the updated preliminary plat plan set and addressed in the revised Critical Areas Report and Conceptual Mitigation Plan. No impacts to the critical areas in this portion of the site are proposed.

Fencing/Critical Area Tract(s) – All critical area tracts are required to be fenced. Please indicate the proposed location of fencing for tracts and along trails.

Fencing for critical area tracts and along trails is now shown on the preliminary plat plan set.

Shoreline Management zone – please clarify reference to “shoreline management zone”. Is this area identified within Shoreline jurisdiction?

The 2016 King County Comprehensive Plan’s “Shorelines of the State 2016” map depicts as a shoreline of the state with a “Conservancy” shoreline designation for the segment of Evans Creek on the east side of 196th Avenue that extends and flows generally from south-to-north through the south part of proposed Lot A of BLAD18-0056. Although Evans Creek does not flow through any portion of the preliminary plat site, pursuant to King County Code Section 21A.06.1081 the Evans Creek-associated shorelands located within the preliminary plat site include the following three areas:

- (1) The area extending landward two hundred feet from the ordinary high water mark along the east side of Evans Creek;
- (2) The 100-year floodplain associated with Evans Creek; and

- (3) All the wetlands that extend into the west part of proposed Parcel 3 and slightly into the west edge of the north part of Existing Parcel 5 that are hydraulically associated with Evans Creek.

No work is anticipated to be performed within these shorelands.

Landslide/Steep Slope Geologic Hazard Areas

Please see the *Correction Notice Response* letter provided by Associated Earth Sciences, Inc for responses to the two geotechnical-related questions.

Steep Slope Hazard Area- Please provide a field-surveyed map/plan showing staked locations of either the toe of steep slope (40% or steeper) or the proposed lot/tract boundary. A field confirmation inspection will occur prior to preliminary plat approval.

The field-verified location of the toe of the steep slope is now shown on the Existing Conditions sheet (EX-01) of the preliminary plat plan set. The geotechnical engineer was involved in determining and verifying the toe of the critical area slope and survey stakes are available for verification by County staff.

TRACT F- Please clarify/indicate the purpose of Tract F.

The purpose of Tract F is to provide an amenity to the subdivision. That includes preserving the existing water reservoir pond with an aesthetic fountain. This will be maintained through the Homeowners Association.

Union Hill Water Association Access - please provide verification/clarification from Union Hill Water Association, if access, including width, surfacing, etc. will be required to any improvements or structures within the open space or critical area tracts. Additional critical areas information may be required as a result.

Although UHWA has requested access and utility easements on the site, no improvements within those easements are required outside of the internal roadway. The existing trails on the southern portion of the property, and the existing gravel road from central to the west edge of the property will be used for utility access and will not require improvements with this project. UHWA will be responsible for permitting and installation of any future improvements within the proposed utility easements. Please refer to the updated Certificate of Water Availability provided with this submittal.

WATER RIGHTS - The letter from the Cascadia Law Group (dated December 10, 2018) refer to water rights certificates and claims. Please provide copies of the water rights (certificates) and preliminary correspondence from Dept. of Ecology which acknowledges the current use of water rights and claims and verifies water rights and claims may be utilized for proposed purposes - i.e. fire flow, landscape irrigation for future homes, etc.

The project is no longer proposing to use any of its water rights for fire flow or domestic supply. The existing exempt well located on parcel 082506-9067 is proposed to be used for irrigation of the small landscaping tract (Track H) at the project's entry. This tract is 2,041 sf and coincides with a portion of the existing lawn area on this property. Tract H encompasses only a small portion of the existing lawn area of the existing residence and is significantly less than the ½ acre area allowed for landscape irrigation for exempt wells.

Ms. Kim Claussen, Program Manager III
June 20, 2019
Page 8

We hope these responses and the revised documents suitably address your comments. Please let me know if you have any other questions or comments.

Sincerely,

ESM CONSULTING ENGINEERS, LLC



ERIC G. LaBRIE, A.I.C.P.
President

Enclosures: Noted.

cc: Buff Nelson, representative of The Estate of Barbara J. Nelson and of the WCN GST
Non-Exempt Marital Trust #2

David Halinen, Halinen Law

\\esm81engr\esm-jobs\1359\001\007\document\letter-081.docx