GELOTTE HOMMAS DRIVDAHL
ARCHITECTURE

ACUP Submittal Report

3028072-LU
2500 W. Marina Pl.

May 10, 2019

Table of Contents:

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Project Introduction

The site proposed for development is a parcel of land in the Magnolia/Interbay area on which the Admiral's House is situated. The site extends uphill to the boundary of Ursula Judkins Viewpoint Park, which overlooks it from above. To the east, the neighboring property is Smith Cove Park, which is currently slated for additional development by the city.

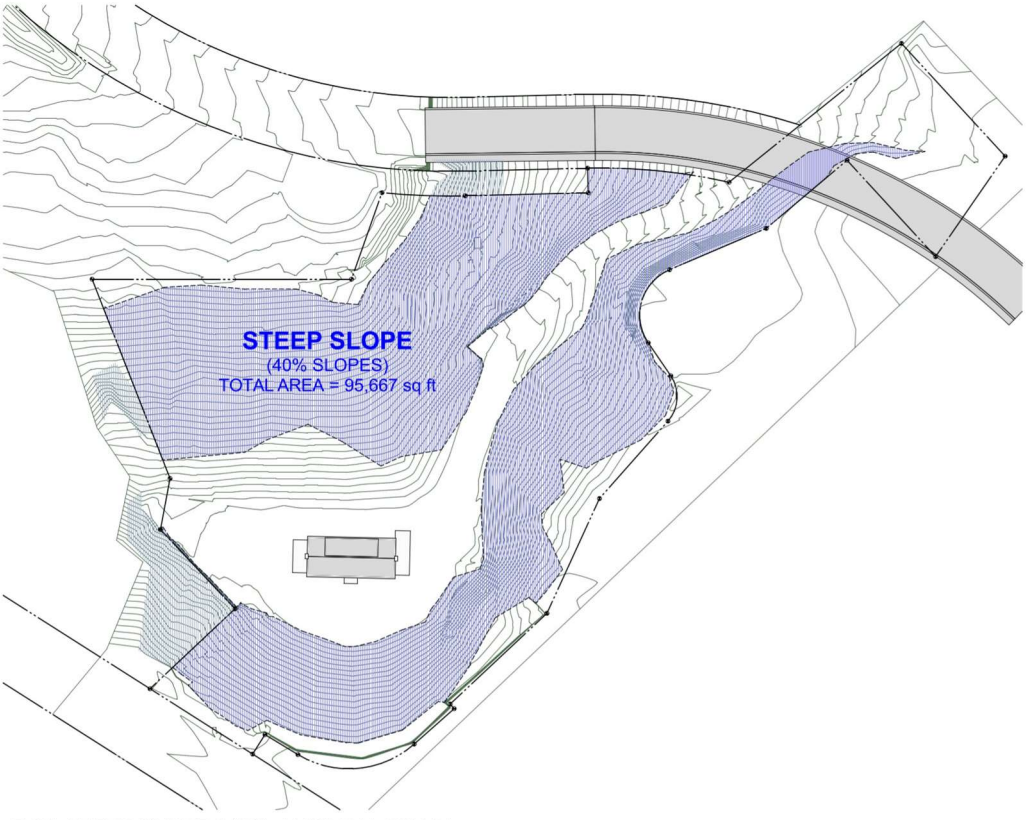
The proposed development consists of building two custom residences on the slope above the Admiral's House, along with the necessary driveway access. These houses would be for the owners of the property, not speculative construction for profit.

This is a complex building site with several major challenges, outlined below. Correctly addressing these issues will require a well-coordinated team of disciplines.

1) *Steep Slopes:*

The most prominent challenge is that of steep slopes. A major portion of the site consists of steep slopes with a history of slide activity. The proposed development, properly planned and constructed, will improve slope stability through a combination of shoring walls and planting mitigation. This will be discussed in more detail later in the narrative.

The steep nature of the site also significantly limits options for driveway access. A connection from Galer Street downhill to the site is not possible, due to the park separating the lot from the street. The only option is to branch off from the existing driveway to the Admiral's House.



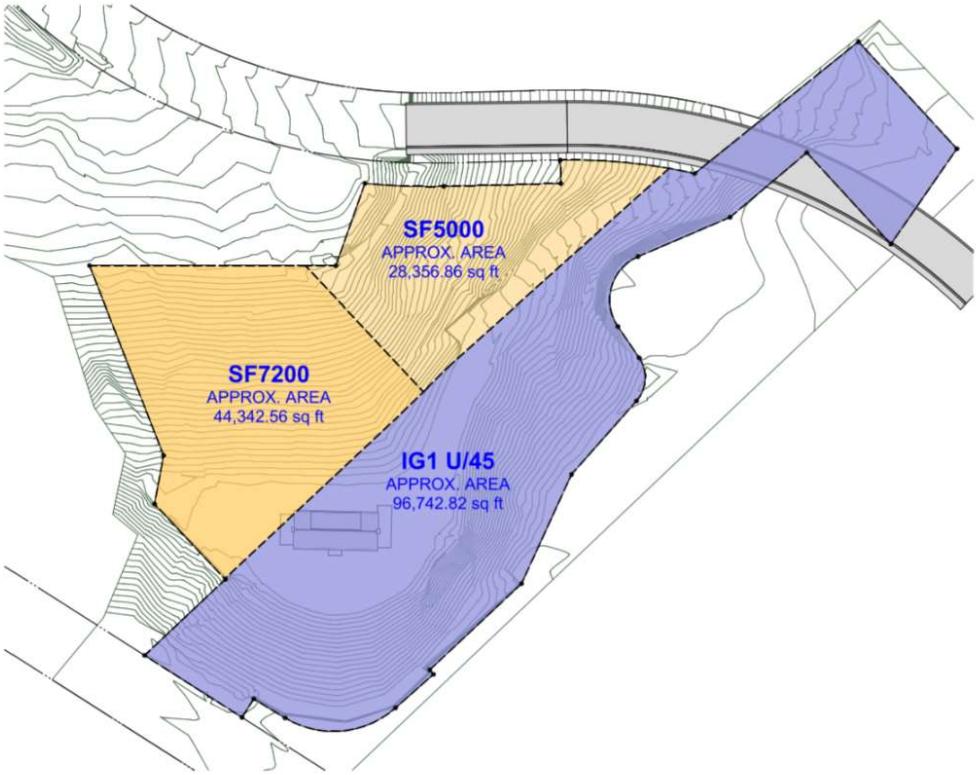
ECA STEEP SLOPE (40% AVG) DIAGRAM

Code section SMC 25.09.260.B.1.c governs our response to the steep slope challenge. Because our lot was in existence as a legal building site prior to October 31, 1992, and is predominantly characterized by steep slope erosion hazard areas, the code requires us to

meet the criteria of section 25.09.260.B.1.c.1-3. Provided that we can meet those requirements, the code allows development on the site. In theory, based on lot area, code would allow as many as 10-11 residences. In practice we would not be able to achieve that density, but we might be able to place 6-8 residences on the residential portion of the lot if the owner were interested in maximizing the development of the property for sale. The proposed development of 2 residences is well below the maximum allowable and minimizes the total potential impact of allowed development for this property.

2) Multiple Zones:

Roughly the upper half of the site is zoned residential. The lower half of the site is mostly industrial, as shown in the diagram below. There are portions on the southwestern end of the lot which include a UI or UR shoreline overlay, but no work is taking place in or near these overlays.



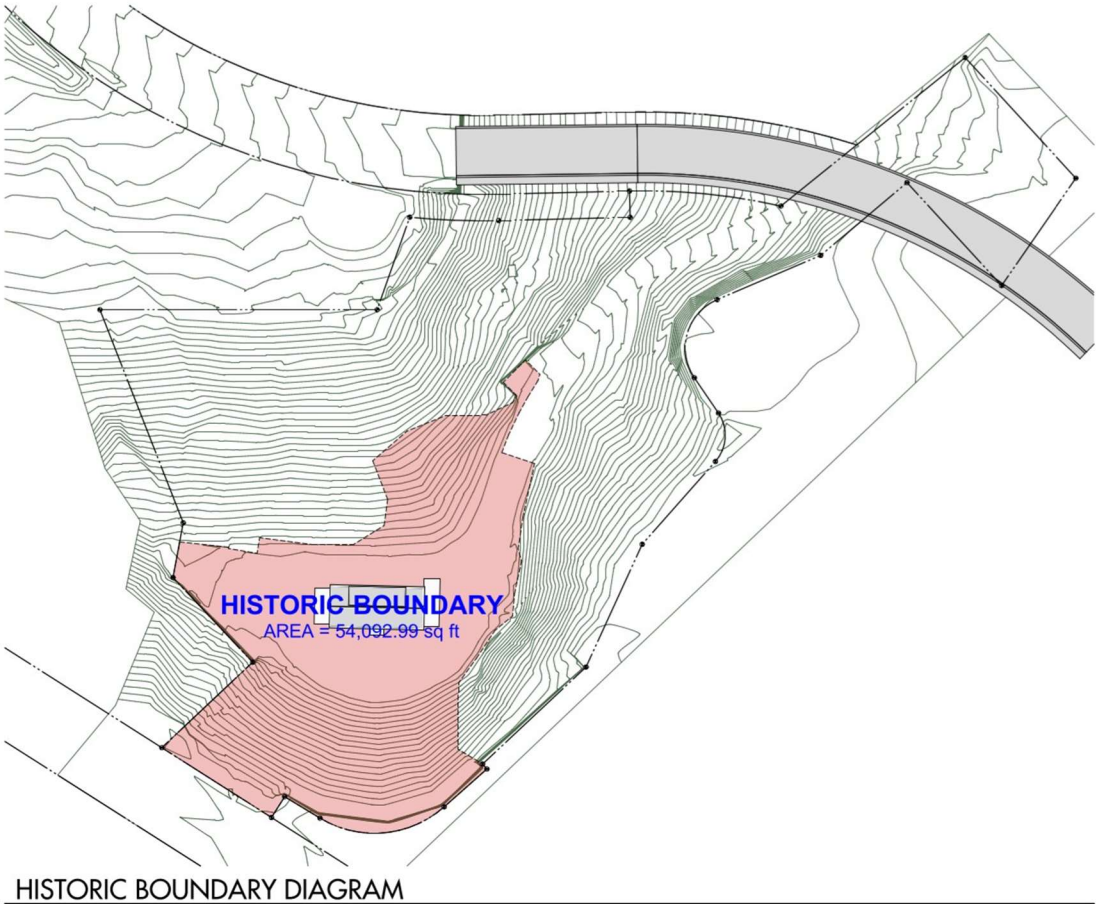
SITE ZONING DIAGRAM

NOT TO SCALE

The proposed work falls entirely within the residentially zoned portion of the site, with the exception of some utility connections. Therefore we believe standard ECA zoning should govern on the site.

3) *Landmark Zone:*

The Admiral's House, former residence of US Navy admirals and their families, is now an event venue used most frequently for weddings. The house and a portion of the surrounding lot is designated as a historic landmark. All proposed work on the site falls outside the historic landmark boundary. The historic boundary and the desire to minimize alteration of the landmark portion of the site imposes additional limits on the development area and its driveway access.



HISTORIC BOUNDARY DIAGRAM

4) Adjacent Park:

The presence of Ursula Judkins Viewpoint Park precludes any potential connection to West Garfield Street from the top of the slope. At the same time, the view from the park overlooking downtown, the bay, and Mount Rainier is a significant neighborhood amenity. For this reason we proposed design of the tallest roof portions of the residences to remain below levels that would obstruct views from the park of Downtown Seattle, Elliott Bay and Smith Cove. We also submit that the proposed landscaping at the top of the slope and immediately adjacent and down slope from the park, will improve the appearance of the subject property from the park and improve the enjoyment of the park by park visitors by replacing a dense thicket of blackberry vines, view blocking alder trees and heavy undergrowth.

5) Conditions of SMC 25.09.260.B.1.c :

No development is on a steep slope erosion hazard area or its buffer unless either the proposed development meets the criteria of subsections 25.09.090.B.2.a, 25.09.090.B.2.b, or 25.09.090.B.2.c or the property is a lot in existence as a legal building site prior to October 31, 1992, is predominantly characterized by steep slope erosion hazard areas, and the following criteria are met:

1) *The proposed development shall be located away from steep slope erosion hazard areas and buffers to the extent practicable.*

   Almost the entire residentially zoned portion of the site consists of steep slopes. The small portion of the site that is not considered steep slope is further restricted by the presence of a landmark area. It would be impossible to locate these residences outside the steep slope area.

2) *The Director shall require clear and convincing evidence that the provisions of this subsection 25.09.260.B are met if development is located on steep slope erosion hazard areas and buffers with these characteristics:*

a. *A wetland over 1,500 square feet in size or a watercourse designated part of a riparian corridor;*

Not applicable

b. *An undeveloped area over 5 acres characterized by steep slope erosion hazard areas; or*

Not applicable

c. *Areas designated by the Washington Department of Fish and Wildlife (WDFW) as biodiversity areas and corridors, or areas identified by the Director with significant tree and vegetation cover providing wildlife habitat.*

Not applicable

3) *If the application includes a proposal to develop in a steep slope erosion hazard area or buffer, the development in the steep slope erosion hazard area or buffer shall be the minimum necessary to achieve the number of single family dwelling units that would be allowed on the original entire parcel according to the calculation for subdivision required under subsection 25.09.240.G in the following order of priority:*

a. *The proposal reduces the front and/or rear yards pursuant to subsection 25.09.260.B.3.b.1 and complies with the building separation standards of subsections 25.09.260.B.3.b.2 and 25.09.260.B.3.b.3;*

Reduction of yards will not have a significant impact on steep slope intrusion. Further, reduction of the rear yard would result in moving the proposed residences nearer to Ursula Judkins Park and raising their elevation, which could have a negative impact on views from the park. It could also push the proposed driveway slope past the 20% code limit.

b. *The proposal reduces the steep slope erosion hazard area buffer; and*

The buffer is irrelevant since the proposed residences are already in the steep slope area.

c. *The proposal intrudes into not more than 30 percent of the steep slope erosion hazard area.*

The proposal limits total intrusion for all site development to less than 30% of the steep slope erosion hazard area.

Landscape Architecture

1) *Summary of Existing Conditions:*

The proposed development is located on a south east facing slope between Ursula Judkins Viewpoint Park and The Admiral's House, an historic landmark property. Ursula Judkins Viewpoint is located at the top of the slope. Park users and adjacent home owners enjoy views of Elliott Bay and the Seattle skyline. Existing tree communities on the subject property and adjacent Ursula Judkins property limit those views to a degree. An extensive invasive species infestation on the subject property has diminished pedestrian views of Elliot Bay from the ground level of Ursula Judkins. (refer to the field report prepared by Gilles Consulting for detailed tree and vegetation information)

2) *Tree Retention:*

There are 204 trees on the subject property. 14 trees qualify as 'exceptional' using (*DR) 16-2008-Exceptional Tree Definitions*. The proposed location of the homes, access drive and utilities has been coordinated to minimize disturbance and displacement of all trees including those meeting exceptional status. Of the exceptional trees, 3 trees will be removed in association with development. Exceptional tree replacement will comply with SDCI regulations. Replacement trees will be selected to provide the same canopy coverage at maturity.

There are a number of trees that will be impacted by development but will not require removal if special attention is directed toward proper tree protection measures. In addition to the typical tree protection measures required for permit, we propose additional maintenance measures. Soil samples will be gathered from the root zones of trees impacted by construction. A 3 year monitoring and soil amendment schedule will be prepared by a professional soil scientist. The condition of the subject trees will be re-evaluated every spring

during that period and the amendment program adjusted as necessary to ensure the continued health of the subject trees.

3) Mitigation Goals:

The mitigation plantings address several goals:

- Stabilize existing steep slope and landslide prone areas.
- Stabilize areas disturbed during construction.
- Minimize stormwater concentration and encourage on site infiltration.
- Coordinate with geotech and civil to provide planting that supports grading and stormwater design.
- Reduce invasive species cover.
- Protect and retain existing native vegetation and tree cover.
- Provide habitat for wildlife.

The general strategy to achieve these goals is to retain existing trees and native vegetation to the greatest extent possible and to protect against slope instability by replacing invasive species with a thriving native understory and groundcover plant community. Given the total area of the site and the considerable amount of invasive species observed in the field. It would be wise to initiate the invasive species removal ASAP before construction begins. This will help to establish a healthy plant community around the construction perimeter and minimize construction impacts on adjacent properties.

4) Invasive Removal/Mitigation Planting Approach:

- Properly identify invasive species. Develop a site map identifying species type and density.
- Divide the site into control areas that can be addressed in stages. Soil type, aspect, exposure and construction access will factor into how the control areas area sequenced for amelioration.
- Mark all native vegetation in and around the control area ensuring that no native plants are removed or damaged.
- Remove invasive species per King County Noxious Weed Control Program guidelines. Develop a specific Integrated Pest Management (IPM) for each invasive species to maximize effective control and to minimize negative environmental impacts. Select the best control methods appropriate for the project timing and site conditions.

- When the control area has been cleared of invasive species, bare areas need to be stabilized immediately and revegetated with native or non-invasive adaptive vegetation.
- Mitigation plantings will be native species selected for their vigorous root establishment.
- Site appropriate species will be selected based on soil type, exposure and light availability.
- The plant palette will consist of a wide variety of species, evergreen and deciduous, to ensure a stable and diverse vegetative community.
- Shrub and groundcover plants will be pit planted to minimize soil disturbance. In areas beneath drip zones of existing trees, holes should be carefully hand dug to avoid root damage.
- Move to the next control area only after vegetation in the adjacent area is established.
- Timing can be a critical aspect of invasive species removal. Work should be scheduled to minimize soil exposure during the winter rainy season.

5) Screening Goals:

Consideration has been given to the location of the proposed homes relative to the Ursula Judkins Viewpoint and the Admiral's House. The homes are sited high enough on the slope to provide a distinct visual and architectural separation from the historic Admiral's House. Rooflines area held below Ursula Judkins' average grade to maintain views from the park into Elliot Bay and beyond to the Seattle skyline. With the removal of the invasive species, a small margin of the homes' roof lines will be visible from within Ursula Judkins. We propose to replace the invasive screen with a planting buffer.

The goal of the buffer plantings is:

- Establish a clean, well maintained boundary between the homes and park.
- Obscure views of the proposed homes from within the park and from adjacent residential sites.
- Maintain current views to Elliot Bay and Seattle skyline for park users and nearby homeowners.
- Incorporate buffer plantings with existing trees and parklike atmosphere.

6) Screening Approach:

- An analysis of the existing view corridor and average vegetation heights will be conducted.
- We propose to install a mixed evergreen buffer along the border between the homes and the park.
- Buffer plantings will be designed to maintain visual continuity with existing vegetation and tree canopies.
- Species will be selected with an average mature height not to exceed the average pre-development vegetation heights.

Civil Engineering

1) Temporary Erosion and Sediment Control (TESC):

TESC will be installed to prevent transport of sediment-laden runoff from entering adjacent properties and public ROW. Construction stormwater will be managed through a variety of best management practices to be determined during construction permitting. At a minimum, these will include stabilized construction entrance, silt fence, staking of clearing limits, inlet protection, and slope protection.

2) Earthwork and Grading:

Earthwork and grading has been planned to minimize disturbance of land area and stabilize steep slopes through the extensive use of soldier-pile walls. The residential building is tiered to match existing grade at each tier, and the driveway is cut into the slope on an alignment that meets driveway geometry requirements while minimizing impact to trees and following site contours.

3) Utilities:

The existing Admiral's House is currently served by all typical basic public and private utilities. Existing sewer, storm, water, power, and steam lines cut through the upper tier of the subject property and crossing through Ursula Judkins Viewpoint serving surrounding properties. Existing steam lines through the development area are believed to be already

abandoned, but their status will be verified once development proceeds. Utility services to the proposed development are summarized as follows:

- Overhead **power** and **telecommunications** from Ursula Judkins Viewpoint to the existing Admiral's House will be replaced with an underground service to the proposed development. The underground service will extend from the proposed development to a pole at the northern edge of the historic boundary and then will continue overhead to re-feed the Admiral's House as in the existing condition.
- **Natural gas** will not be provided to the new development.
- **Domestic water and fire** services will be extended from an existing 8-inch main in Ursula Judkins Viewpoint. The services will take the most direct route perpendicular to the contours to minimize site disturbance. Approval will be required from Seattle Parks and Recreation for connection to the watermain on their property.
- **Sanitary sewer** will connect through a new service to the existing service with the driveway to the Admiral's House. SPU has a policy of requiring new development to connect to sewer mains in public ROW, and is discouraging shared services; however, given limited access and ECA's, in our opinion an exception is warranted in this case.
- **Storm drainage** will be conveyed along the new driveway alignment connecting to an existing private main in the existing driveway.

Geotechnical Engineering

1) Slope Stability:

The results of geotechnical studies (HWA GeoSciences Inc. 2018) indicate that most of the sliding that has occurred on the Admiral's House property has been relatively shallow, and was associated with the loosened, weathered soils within 3 to 5 feet of the ground surface. Over-steepening due to site grading for the Admiral's House and driveway contributed to instability on the upper portion of the property. The extreme western portion of the site may have experienced deep-seated sliding, as did the properties to the west of the site before the Elliott Bay Marina was constructed. The marina construction included placement of a large fill along the toe of the hillside which buttressed the slope and prevents wave action from eroding the toe of the hillside. No deep-seated sliding has occurred since the marina fill was placed, although minor sliding has occurred above the buttressing fill as the slope attempts to reach equilibrium.

Deep seated sliding may also have occurred on the east side of the property below the driveway. This deep-seated movement appears to have been stopped by the buttressing effect of fill placement in the Interbay tidelands. Relatively shallow sliding and soil creep

continues to occur from time to time below the driveway and under the Magnolia Bridge. The driveway itself appears to be relatively stable.

2) *Proposed Development:*

In our opinion, development of the Admiral's House property is feasible, and the proposed design includes features which will increase the stability of the hillside. The proposed retaining walls, drainage and grading will improve the stability of potential slide areas and support cut slopes and retain fills. Most of the retaining walls will consist of soldier pile and lagging walls, with permanent tiebacks to provide additional lateral support, where needed.

In most areas, soldier piles will be installed before excavation in order to provide support for the excavation and placement of lagging.

The proposed construction will increase the stability of the site and will not result in damage to adjacent properties.