

Aldrich Residence

STORMWATER SITE PLAN
PREPARED BY DWAYNE WALKER
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20/SEP/2025

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Attachment A: Soil Data

Applicant: James and Brooke Aldrich
7448 W Mercer Way
Mercer Island, Wa 98040

Section 1 – Project Overview

The Aldrich Residence project will construct a 560 square foot building addition and add a 316 square foot roof overhang to an existing patio located on King County Parcel #9266400040. The total parcel area is 15,195 square feet. Existing site conditions consist of an existing single family residence, concrete driveway, shed, with areas of lawn, landscape, and trees. Single family residences are located along the north, east, and west property lines and roadway access is located to the south. There are no known steep slopes, wetlands, or critical areas located on site. Existing and proposed surface coverage areas are as follows:

Description	Existing (sf)	Proposed (sf)
Building (with roof)	2,450	849
Driveway	1,151	0
Walkway	307	0
Patio	285	0
Shed	250	0
Total	4,443	849

Section 2 – Site Analysis

Existing site conditions consist of an existing single family residence, concrete driveway, shed, with areas of lawn, landscape, and trees. Site topography generally slopes north between 2-15%. Soils are classified as Kitsap Silt Loam with a hydraulic soil group rating of C. Type C soils have a slow infiltration rate when thoroughly wet. These consist mainly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Downstream analysis

Runoff from the site sheet flows to the northwesterly through lawn/driveway areas for approximately 500' to the stormwater conveyance system located in W Mercer Way. Runoff is likely collected by City of Mercer Island Catch Basin 32a-83 and directed north for 80 feet to catch basin 32a-84. Flows are then routed westerly for 1,140 feet to outfall to Lake Washington at City of Mercer Island Outfall

Upstream analysis

Upstream runoff consists of minor sheet flow runoff from southern single family residences and access drives. These flows are not anticipated to have any adverse impacts to this site.

Section 3 – Minimum Requirements

The Aldrich Residence project will be subject to minimum requirements 1-5 of the 2019 Department of Ecology Stormwater Management Manual for Western Washington (SWMMWW). The following describes how the project will meet these Requirements:

MR #1 Stormwater Site Plan Report – Drainage plans and report will be submitted for this requirement.

MR #2 Construction Stormwater Pollution Prevention Plan (SWPPP) – A TESC plan has been provided with the project plans showing applicable BMPs.

MR #3 Source Control of Pollution – The project is a residential home and will not have any significant commercial or industrial pollution generating activities following construction.

MR #4 Preservation of Natural Drainage Systems and Outfalls – Runoff from this site will continue to flow in its natural direction

MR #5 On – Site Stormwater Management – BMPs from List 3 of the 2019 SWMMWW were evaluated and deemed feasible as follows:

Lawn/Landscaped Areas

BMP T5.13 was deemed feasible and will be applied to pervious areas that were disturbed during construction.

Roof Surfaces

BMP T5.10A: Downspout Full Infiltration was deemed infeasible due to concerns of low infiltration rates.

BMP T5.10B: **Downspout Dispersion Systems was deemed feasible.** The 2019 SWMMWW allows Downspout Dispersion Trenches or Downspout Splashblock Dispersion to meet the requirements of BMP T5.10B. For this project, Downspout Splash Block Dispersion was selected to meet the requirements of BMP T5.10B

Design Requirements

Item	Requirement	Provided
Flowpath	50' Min	50'
Slope	15% Max	5%
Area	700 sf each max	425.5 sf each

Other Hard Surfaces

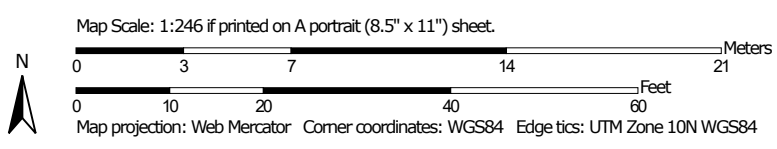
Not applicable

ATTACHMENT A
Soil Data

Hydrologic Soil Group—King County Area, Washington




Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)









 Area of Interest (AOI)

Soils

Soil Rating Polygons





 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines


 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points






 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available


Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: King County Area, Washington
 Survey Area Data: Version 20, Aug 27, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 31, 2022—Aug 8, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
KpD	Kitsap silt loam, 15 to 30 percent slopes	C	0.2	100.0%
Totals for Area of Interest			0.2	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified