Preliminary Stormwater Management Report

December 15, 2020

Goldstream Venture Partners

Prepared for:

Goldstream Venture Partners, LLC
PO Box 1727
Bellevue, WA 98009

Prepared by:

12/15/2020

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Consulting Engineers

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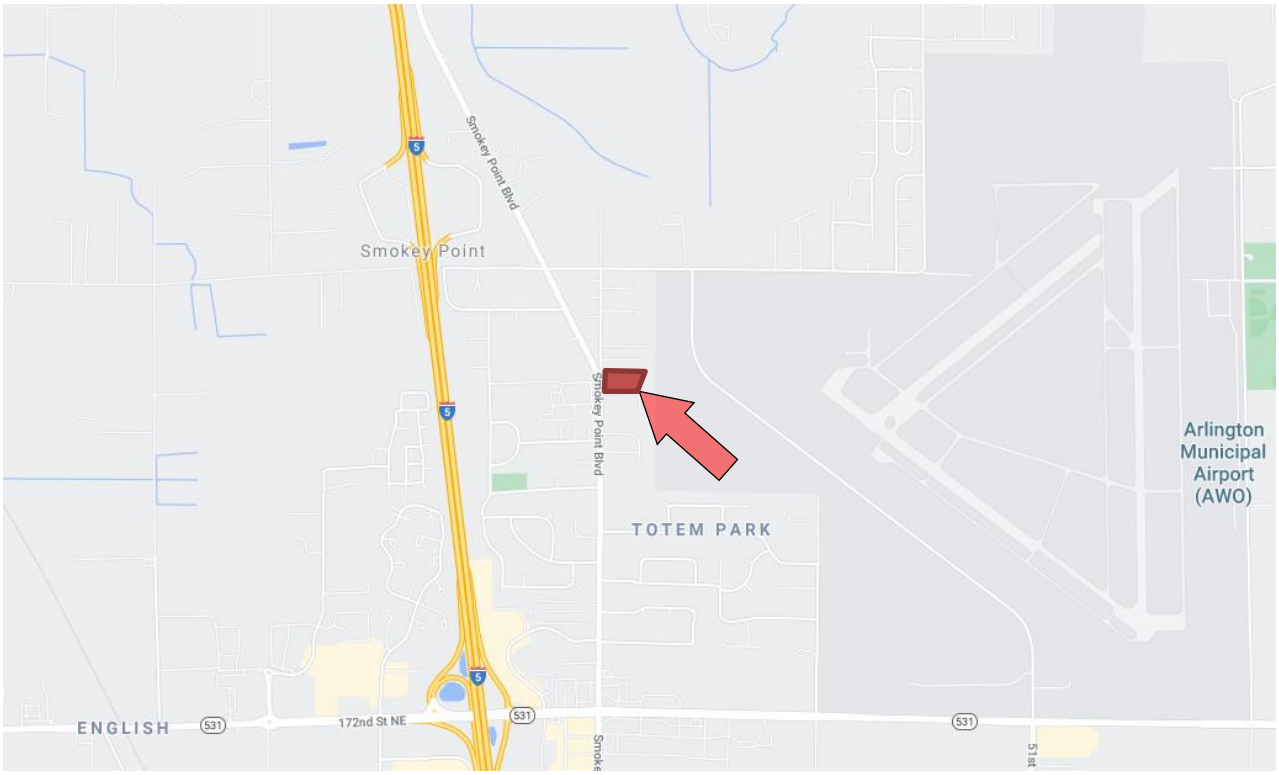
Project Overview

Site Location

The project is located at the northeast corner of the intersection between Smokey Point Blvd and 183rd Pl NE at 18405 35th Ave NE, Arlington.



Code Compliance

The project will comply with:

- [WSDOT] STANDARD SPECIFICATIONS for ROAD, BRIDGE and MUNICIPAL CONSTRUCTION, WSDOT, 2018 Edition with amendments
- [ADCS] Arlington Design and Construction Standards, dated July 2008
- [AMC] Arlington Municipal Code
- [SWMMWW] 2012/14 Stormwater Management Manual for Western Washington

Executive Summary

The proposed mixed-use development will include a mixed use development comprised of apartments, commercial space, and common areas. The project will be constructed in two phases, with the commercial space being in the second phase. There will be approximately 150 parking stalls located throughout the site. The site is composed of both undeveloped land and six parcels of land to be redeveloped, with a total onsite area of 3.35 acres after right-of-way dedication to City of Arlington. Stormwater mitigation will utilize an infiltration system(s). Both roof runoff and onsite pollutant generating surfaces will be combined into a common system(s).

The ground water elevation is expected to be very low, so clearance requirements between the infiltration facility and the groundwater level will be met.

Existing Conditions

The existing site is mostly undeveloped moderate density residential property with commercial corridor and mixed-use overlays. There are six developed parcels currently occupied by manufactured homes. Topography is essentially flat. 183rd Pl NE is to the south and Smokey Point Blvd is to the west.

Soils

The test pits conducted for this study encountered a thin (0.5 to 1.0 feet) layer of sod/topsoil throughout the site. Beneath this soil layer, a native, medium-dense, brown to gray, clean to slightly silty, fine to medium, recessional outwash sand with scattered gravel was encountered to depths of 7 to 8 feet. No groundwater seepage was encountered. The preliminary soils report indicates that the soils are likely suitable for infiltration facilities.

Refer to the preliminary soils report in Appendix B for additional information.

Proposed Conditions

The proposed mixed-use development will include a mixed use development comprised of apartments, commercial space, and common areas. The project will be constructed in two phases, with the commercial space being in the second phase. There will be approximately 150 parking stalls located throughout the site. The site is composed of both undeveloped land and six parcels of land to be redeveloped, with a total onsite area of 3.35 acres after right-of-way dedication to City of Arlington. Stormwater mitigation will utilize an infiltration system(s). Both roof runoff and onsite pollutant generating surfaces will be combined into a common system(s).The ground water elevation is expected to be very low, so clearance requirements between the infiltration facility and the groundwater level will be met.

Pervious/Impervious Areas

For use in determining stormwater mitigation fees the following areas represent the true pervious/impervious area for the entire site.

Existing Onsite Pervious / Impervious Area

Total impervious surface……..……..…0.33 ac

Total pervious surface……..……...…..3.22 ac

TOTAL ONSITE AREA……..……3.55 ac

Proposed Onsite Pervious / Impervious Area

Total impervious surface……..……..…2.27 ac

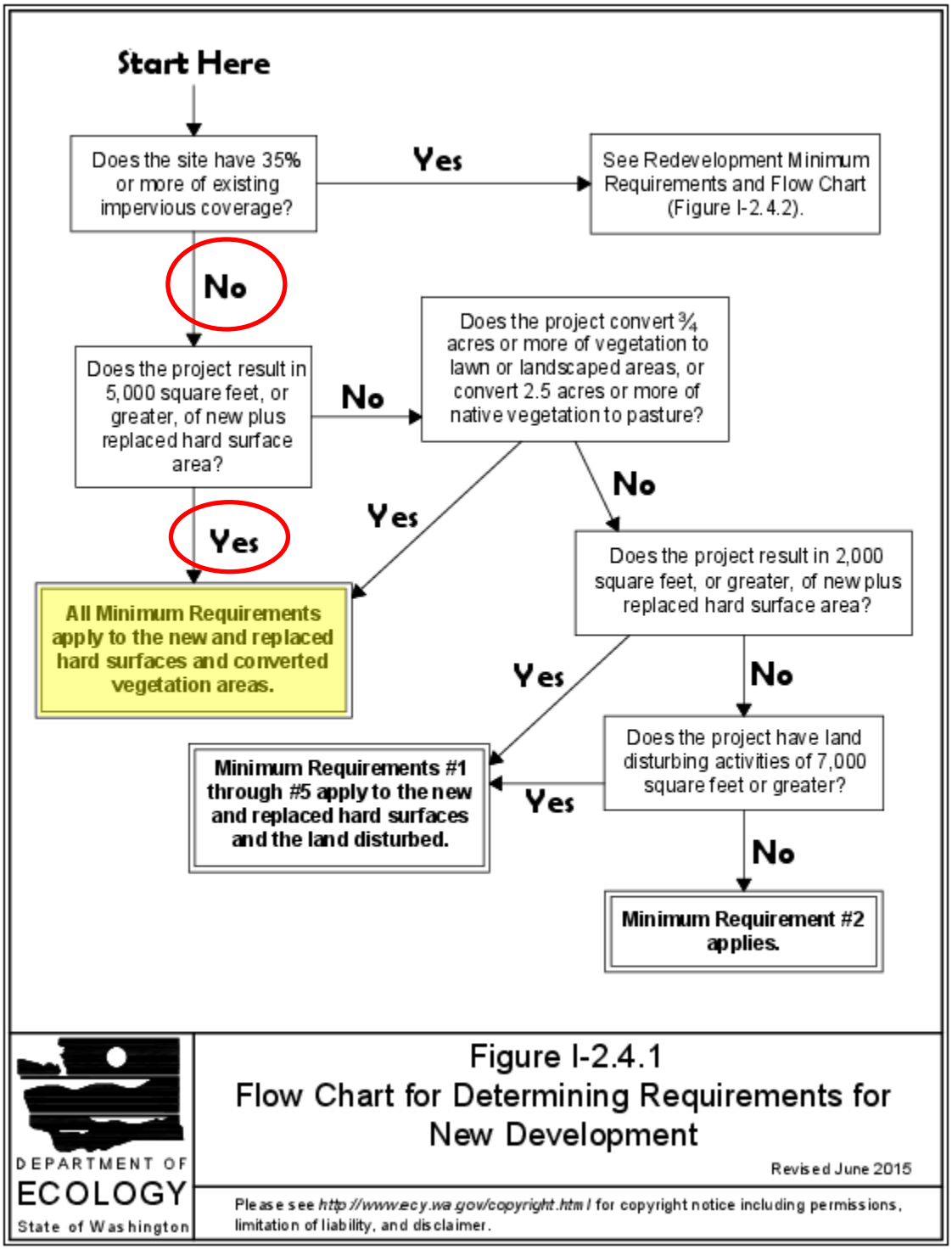
Total pervious surface……..……...…..1.28 ac

TOTAL ONSITE AREA……..……3.55 ac

Minimum Stormwater Management Requirements

Overview of Minimum Requirements

Minimum requirements 1-9 shall apply to the project.



1-Preparation of Stormwater Site Plans

Stormwater site plans will be prepared in accordance with Volume I, Chapter 3 of the SWMMWW.

2-Construction Stormwater Pollution Prevention Plan (SWPPP)

A SWPPP narrative has been prepared and is included in Appendix A. The erosion potential for the site is very low to non-existent. The onsite soils are expected to be highly infiltratable so no runoff during construction is anticipated.

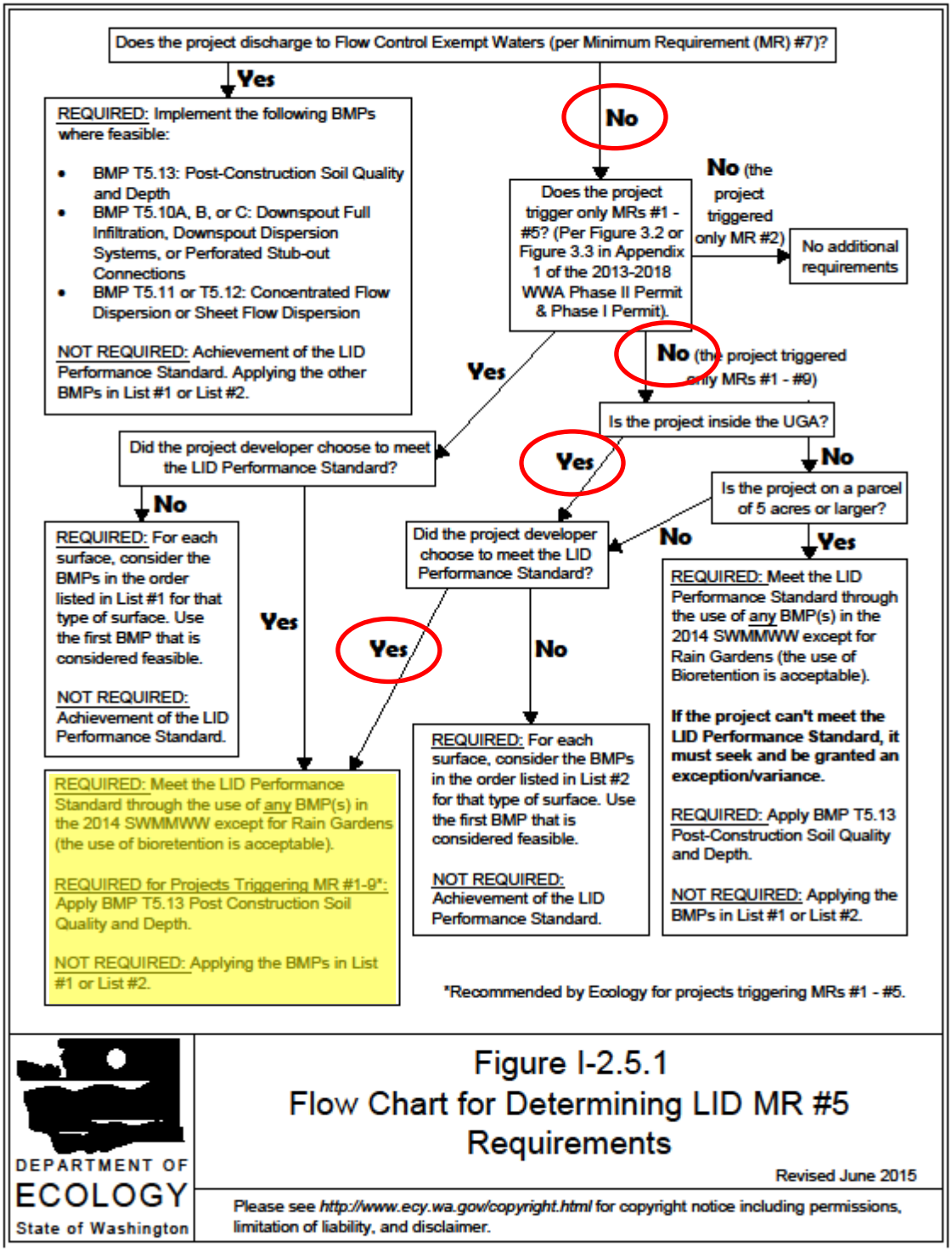
3-Source Control of Pollution

The project will not pose any source of pollution for the site. The site is not considered a high use site, however oil/water separators are proposed for the parking areas. The SWPPP provided will address the source control of pollution during the construction phase.

4-Preservation of Natural Drainage Systems and Outfalls

Existing regional drainage infiltrates into the soils. Proposed drainage system will also infiltrate, therefore, preservation of natural drainage systems and outfall is being met.

5-Onsite Stormwater Management



Both roof runoff and onsite pollutant generating surfaces will be combined into a common infiltration system.

Western Washington Hydrology Model (WWHM) 2012 will be used to calculate the size of the required infiltration facility. A Drainage Summary Sheet will be enclosed in the final report detailing the parameters of the drainage system. The drainage system will be designed to infiltrate 100% of the stormwater therefore meeting and exceeding the LID stormwater requirements including other minimum requirements.

SSC-4 of the SWMMWW requires that infiltration facilities that are utilized for treatment purposes must document that the water quality design storm volume (indicated by WWHM or MGS Flood, or runoff from a 6-month, 24-hour rain event) can infiltrate through the infiltration basin surface within 48 hours. The infiltration facilities will be designed to infiltrate 100% of the stormwater within depth of the storage layer. The water quality storm, which is less than the all storms contained within the model, will also be contained within the storage layer of the infiltration facilities. SSC-4 is therefore met.

Upstream Analysis

The surrounding area has flat topography with high infiltration soils. No stormwater from offsite areas are anticipated to flow onto the project site.

Downstream Analysis

The proposed storm drain mitigation for the project site will infiltrate 100% of the stormwater. Therefore, no impacts to the downstream system are anticipated.

In the event that onsite drainage systems are overwhelmed by excessive rainfall, the stormwater will continue to stay onsite due to the topography of the site. Stormwater will not leave the site nor back up into the buildings.

BMP T5.13: Post-Construction Soil Quality and Depth

BMP T5.13 is required as part of Minimum Requirement #5. The Contractor has the option of stockpiling existing topsoil material or import topsoil material to meet the requirements of BMP T5.13.

6-Runoff Treatment

The site will meet the basic level of treatment, as the project does not meet the thresholds for enhanced treatment, phosphorous removal, or oil treatment as described in Section V-3 of the SWMMWW.

Pollutant generating impervious areas (PGIS) will drain to an infiltration system that utilizes an 18” layer of sand for filtration, as the existing soils do not meet the site suitability requirements of SSC-6. The sand layer will be below the gravel infiltration trench. The system is similar to that used by permeable pavements for treatment, as part of BMP T5.15, whereby stormwater passes through a gravel storage layer, followed by a sand layer, and then final infiltration into the native soil.

Pretreatment for the infiltration system will include the use of standard oil/water separators at each catch basin, in accordance with the City’s standard detail SD-120.

7-Flow Control

This is being met with 100% infiltration of the stormwater onsite.

8-Wetland Protection

No wetlands are present on the site or within the adjacent downstream area.

9-Operation and Maintenance

Operation and maintenance procedures are included in Appendix C.

Appendix A

Construction Stormwater Pollution Prevent Plan (SWPPP)

Appendix B

Geotechnical Report

SONDERGAARD GEOSCIENCE, PLLC
13012 65TH Avenue SE
Snohomish, Washington 98296

October 3, 2020
Revised October 12, 2020
Project No. J-0145

Goldstream Venture Partners, LLC
PO Box 1727
Bellevue, Washington 98009

Atten: Tiffany Brown

Subject: Preliminary Geotechnical Report
18405 35th Avenue NE
Arlington, Washington

Ms. Brown:

Sondergaard Geosciences, PLLC (SGP) is pleased to present our preliminary geotechnical report for the subject site. This study has been prepared for the exclusive use of Goldstream Venture Partners and their agents, for specific application to this project. Within the limitations of scope and schedule, our services have been performed in accordance with generally accepted engineering geology practices in effect in this area at the time our study was prepared. No other warranty, express or implied, is made. Our observations, findings and opinions are a means to identify and reduce the inherent risks to the owner.

SITE AND PROJECT DESCRIPTION

The project site consists of 7 adjacent parcels (Snohomish County Parcels 31052100200100, 0072980000100, 200, 300, 400, 500, 600), with an area of approximately 3.57 acres, located east of Smokey Point Boulevard and 35th Avenue NE, north of 183rd Place NE and south of 185th Place NE in Arlington Washington (Figure 1). The north half of the site (Parcel 31052100200100) is undeveloped while the south 6 parcels contain existing single-family residences. Overall site topography is flat. The site is vegetated by grass and landscape trees and shrubs with some large trees. We understand that current plans involve developing the site with a new apartment building. This report is preliminary because final project plans have not been complete at this time.

SUBSURFACE EXPLORATION

Eight exploration pits were completed at the site by SGP on June 22, 2020. The approximate locations of the explorations are shown on the "Site and Exploration Plan," Figure 2. The pits were completed using a trackhoe and representative samples were collected from the

explorations. The exploration pits were continuously observed and logged by an engineering geologist. Logs of the borings are attached to this report.

Descriptions of the soils encountered at the site are provided below. Detailed descriptions of the sediments encountered in each exploration boring are provided on the exploration logs attached to this report.

Sod/Topsoil

A thin layer of sod and topsoil was encountered at exploration pit locations to a depth of approximately 0.5 to 1.0 feet. The sod/topsoil is not suitable for support of structural loads.

Vashon Recessional Outwash Sand

Soil interpreted to be recessional outwash sand and typically consisting of medium dense, damp to moist, brown to gray, clean to slightly silty fine to medium sand with scattered gravel was encountered directly below the sod/topsoil in all of the exploration pits. The recessional outwash extended to the full depths explored of 7 to 8 feet below the existing grades. The recessional outwash is suitable for foundation support though some preparation and compaction may be required prior to foundation placement. When properly moisture conditioned this material can be reused as structural fill.

Ground Water

Ground water seepage was not encountered in any of the exploration pits completed in June 2020. The quantity and duration of ground water seepage will vary depending upon the season, amount of precipitation and site development. The site is likely suitable for the shallow, on-site infiltration of project generated storm water.

GEOLOLGIC HAZARDS

The following discussion of applicable geologic hazards is based on review of the City of Arlington Municipal Code (AMC) Chapter 20.93 and the geologic, topographic, and ground and surface water conditions as observed and discussed herein.

Landslide Hazard

The subject lot is flat and does not contain any sloping ground. The site does not meet the definition of a Landslide Hazard Area per AMC Chapter 20.93 Part VI. In our opinion, landslide hazard mitigations are not required nor recommended.

Seismic Hazard Area

Based on review of AMC Chapter 20.93 Part VI, the site soils are not of low density. In our opinion, seismic hazard mitigations are not required nor recommended. It is our opinion that earthquake damage to the proposed structures, when founded on suitable bearing strata in accordance with the recommendations contained herein, will likely be caused by the intensity and acceleration associated with the event. Structural design for the project should follow 2015 IBC standards. The 2015 IBC defines Site Classification by reference to Table 20.3.-1 of the *American Society of Civil Engineers* publication ASCE 7, the current version of which is ASCE 7-10. In our opinion, the subsurface conditions at the site are consistent with a Site Classification of "D" as defined in the referenced documents.

EROSION MITIGATIONS

Based on review of AMC Chapter 20.93 Part VI and the USDA Soil Survey, the site is underlain by Lynnwood loamy sand, 0 to 3 percent slopes with a slight erosion hazard and is not classified as an erosion hazard area. To mitigate possible erosion hazards and potential for off-site sediment transport during construction, we recommend the following:

1) The winter performance of a site is dependent on a well-conceived plan for control of site erosion and storm water runoff. It is easier to keep the soil on the ground than to remove it from storm water. The owner and the design team should include adequate ground-cover measures, access roads, and staging areas in the project bid to give the selected contractor a workable site. The selected contractor needs to be prepared to implement and maintain the required measures to reduce the amount of exposed ground. A site maintenance plan should be in place in the event storm water turbidity measurements are greater than the Ecology/City of Arlington standards.

2) All TESC measures for a given area to be graded or otherwise worked should be installed prior to any activity within that area. The recommended sequence of construction within a given area would be to install sediment traps and/or ponds and establish perimeter flow control prior to starting mass grading.

3) During the wetter months of the year, or when large storm events are predicted during the summer months, each work area should be stabilized so that if showers occur, the work area can receive the rainfall without excessive erosion or sediment transport. The required measures for an area to be "buttoned-up" will depend on the time of year and the duration the area will be left un-worked. During the winter months, areas that are to be left un-worked for more than 2 days should be mulched or covered with plastic. During the summer months, stabilization will usually consist of seal-rolling the subgrade.

Such measures will aid in the contractor's ability to get back into a work area after a storm event. The stabilization process also includes establishing temporary storm water conveyance channels through work areas to route runoff to the approved treatment facilities.

4) All disturbed areas should be revegetated as soon as possible. If it is outside of the growing season, the disturbed areas should be covered with mulch, as recommended in the erosion control plan. Straw mulch provides the most cost-effective cover measure and can be made wind-resistant with the application of a tackifier after it is placed.

5) Surface runoff and discharge should be controlled during and following development. Uncontrolled discharge may promote erosion and sediment transport. Under no circumstances should concentrated discharges be allowed to flow over significant slopes.

6) Soils that are to be reused around the site should be stored in such a manner as to reduce erosion from the stockpile. Protective measures may include, but are not limited to, covering with plastic sheeting, the use of low stockpiles in flat areas, or the use of straw bales/silt fences around pile perimeters.

7) On-site erosion control inspections and turbidity monitoring should be performed in accordance with Ecology/City of Arlington requirements. Weekly and monthly reporting to Ecology should be performed on a regularly scheduled basis. TESC monitoring should be part of the weekly construction team meetings. Temporary and permanent erosion control and drainage measures should be adjusted and maintained, as necessary, at the time of construction.

It is our opinion that with the proper implementation of the TESC plans and by field-adjusting appropriate mitigation elements (best management practices) during construction, as recommended by the erosion control inspector, the potential adverse impacts from erosion during construction on the project can be mitigated.

GEOTECHNICAL RECOMMENDATIONS

The medium dense Vashon recessional outwash sand encountered in the exploration pits are suitable for foundation support if the recommendations presented in this report are implemented. The following sections provide our recommendations for foundation support and support of slab-on-grade floors.

Site Preparation

Site preparation of planned structural fill, building, and other areas should include removal of all trees, brush, debris, old foundations and any other deleterious material. Additionally, all fill soils and the upper organic topsoil should be removed and the remaining roots should be grubbed. Areas where loose surficial soils exist due to grubbing operations should be recompacted in place, or if this is not feasible due to either soil composition or moisture content, the loose soils should be removed and replaced as subsequently recommended for structural fill placement.

In our opinion, stable construction slopes should be the responsibility of the contractor and should be determined during construction. For estimating purposes, however, we anticipate that temporary, unsupported cut slopes less than 10 feet tall in the unsaturated recessional outwash sand can be planned at a maximum slope of 1H:1V (Horizontal:Vertical). Temporary cut slopes in wet or saturated soils or greater than 10 feet tall may have to be shored or otherwise supported. As is typical with earthwork operations, some sloughing and raveling may occur, and cut slopes may have to be adjusted in the field. In addition, WISHA/OSHA regulations should be followed at all times. Permanent cut slopes in native sediments or structural fill must not exceed a 2H:1V inclination.

Foundation Support

Conventional Spread Footings

The foundation bearing stratum, consisting of medium dense recessional outwash sand or structural fill placed over these sediments, is relatively shallow and spread footings may be used for foundation support of lightly loaded residential structures. The depth to foundation bearing soils ranged was estimated at about 1 to 1.5 feet in the exploration pits.

If needed, structural fill placed below foundation areas should consist of non-organic soil, free of deleterious materials, placed in maximum loose lift thicknesses of 8 inches with each lift compacted to at least 95 percent of the modified Proctor maximum dry density, as determined by *American Society for Testing and Materials* (ASTM): D 1557. Structural fill placed below footing areas should extend laterally beyond the footing edges a distance equal to or greater than the thickness of the fill. Sediments exposed in footing excavations should be compacted to a firm and unyielding condition prior to footing placement.

For footings founded either directly on medium dense native soil, or on structural fill placed over these materials, we recommend that an allowable bearing pressure of 1,500 pounds per square foot (psf) be used for design purposes, including both dead and live loads. An increase of one-third may be used for short-term wind or seismic loading.

Perimeter footings for the proposed buildings should be buried a minimum of 18 inches into the surrounding soil for frost protection. No minimum burial depth is required for interior footings; however, all footings must penetrate to the prescribed stratum, and no footings should be founded in or above loose, organic, or existing fill soils.

The area bounded by lines extending downward at 1H:1V (Horizontal:Vertical) from any footing must not intersect another footing or intersect a filled area that has not been compacted to at least 95 percent of ASTM:D 1557. In addition, a 1. 5H:1V line extending down from any footing must not daylight because sloughing or raveling may eventually undermine the footing. Thus, footings should not be placed near the edges of steps or cuts in the bearing soils.

All footing areas should be observed by SGP prior to placing concrete to verify that the exposed soils can support the design foundation bearing capacity and that construction conforms with the recommendations in this report. Foundation bearing verification may also be required by the governing municipality.

Structural Fill

Structural fill may be necessary to establish desired grades. All references to structural fill in this report refer to subgrade preparation, fill type, placement, and compaction of materials as discussed in this section. If a percentage of compaction is specified under another section of this report, the value given in that section should be used.

After stripping, planned excavation, and any required overexcavation have been performed to the satisfaction of the geotechnical engineer/engineering geologist, the upper 12 inches of exposed ground should be recompacted to a firm and unyielding condition. If the subgrade contains too much moisture, adequate recompaction may be difficult or impossible to obtain and should probably not be attempted. In lieu of recompaction, the area to receive fill should be blanketed with washed rock or quarry spalls to act as a capillary break between the new fill and the wet subgrade. Where the exposed ground remains soft and further overexcavation is impractical, placement of an engineering stabilization fabric may be necessary to prevent contamination of the free-draining layer by silt migration from below.

After recompaction of the exposed ground is approved, or a free-draining rock course is laid, structural fill may be placed to attain desired grades. Structural fill is defined as non-organic soil, acceptable to the geotechnical engineer, placed in maximum 8-inch loose lifts with each lift being compacted to 95 percent of ASTM:D-1557. In the case of roadway and utility trench filling, the backfill should be placed and compacted in accordance with local codes and standards. The top of the compacted fill should extend horizontally outward a minimum distance of 3 feet beyond the location of the perimeter footings or roadway edges before sloping down at a maximum angle of 2H:1V.

The contractor should note that any proposed fill soils must be evaluated by SGP prior to their use in fills. This would require that we have a sample of the material at least 72 hours in advance to submit to a testing laboratory to perform a Proctor test and determine the soil's field compaction standard. Soils in which the amount of fine-grained material (smaller than the No. 200 sieve) is greater than approximately 5 percent (measured on the minus No. 4 sieve size) should be considered moisture-sensitive. Use of moisture-sensitive soil in structural fills should be limited to favorable dry weather and dry subgrade conditions. The on-site soils contained substantial amounts of silt and are considered highly moisture-sensitive when excavated and used as fill materials. Construction equipment traversing the site when the soils are wet can cause considerable disturbance.

If fill is placed during wet weather or if proper compaction cannot be obtained, a select import material consisting of a clean, free-draining gravel and/or sand should be used. Free-draining fill consists of non-organic soil with the amount of fine-grained material limited to 5 percent by weight when measured on the minus No. 4 sieve fraction and at least 25 percent retained on the No. 4 sieve.

Slab-on-Grade Floor Support

Slab-on-grade floors may be constructed either directly on the undisturbed, medium dense native sediments, or on structural fill placed over these materials. Areas of the slab subgrade that are disturbed (loosened) during construction should be recompacted to an unyielding condition prior to placing the pea gravel, as described below.

In order to control moisture vapor transfer through the slab, slab-on-grade floors should be constructed atop a capillary break consisting of a minimum thickness of 4 inches of washed pea gravel, washed crushed rock or other suitable material approved by SGP. The capillary break should be overlain by a 10-mil (minimum thickness) plastic vapor retarder.

Drainage Considerations

Due to the permeable nature of the foundation subgrade soils, footing drains are considered to be optional. At the owner's discretion, footing drains may be installed to provide additional protection against moisture intrusion under the building. All perimeter footing walls should be provided with a drain at the base of the footing elevation. Drains should consist of rigid, perforated, polyvinyl chloride (PVC) pipe surrounded by washed pea gravel. The level of the perforations in the pipe should be set at or slightly below the bottom of the footing and the drains should be constructed with sufficient gradient to allow gravity discharge away from the buildings. Roof and surface runoff should not discharge into the footing drain system but should be handled by a separate, rigid, tightline drain. In planning, exterior grades adjacent to foundations should be sloped downward away from the structures to achieve surface drainage.

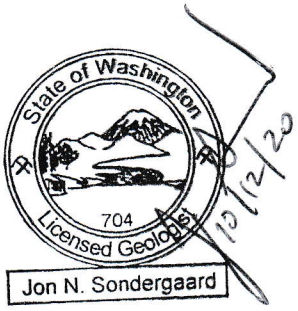
The recessional outwash sand located beneath the site may provide the potential to infiltrate site storm water on the property. The feasibility of on-site infiltration should be evaluated by the project civil engineer once design studies are undertaken.

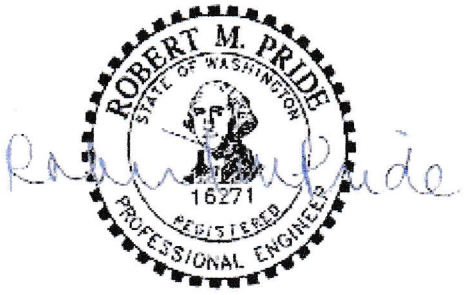
CLOSURE

In our opinion, based upon the information provided by Mr. Brenner and obtained during preparation of this report, the subject site is developable provided the recommendations provided herein are implemented and good construction practices are followed.

We appreciate the opportunity to be of service to you on this project. Should you have any questions regarding this report or other geotechnical aspects of the project, please call us at your earliest convenience.

Sincerely,
SONDERGAARD GEOSCIENCE, PLLC.
Snohomish, Washington





Jon N. Sondergaard, L.G., L.E.G.
Principal Engineering Geologist

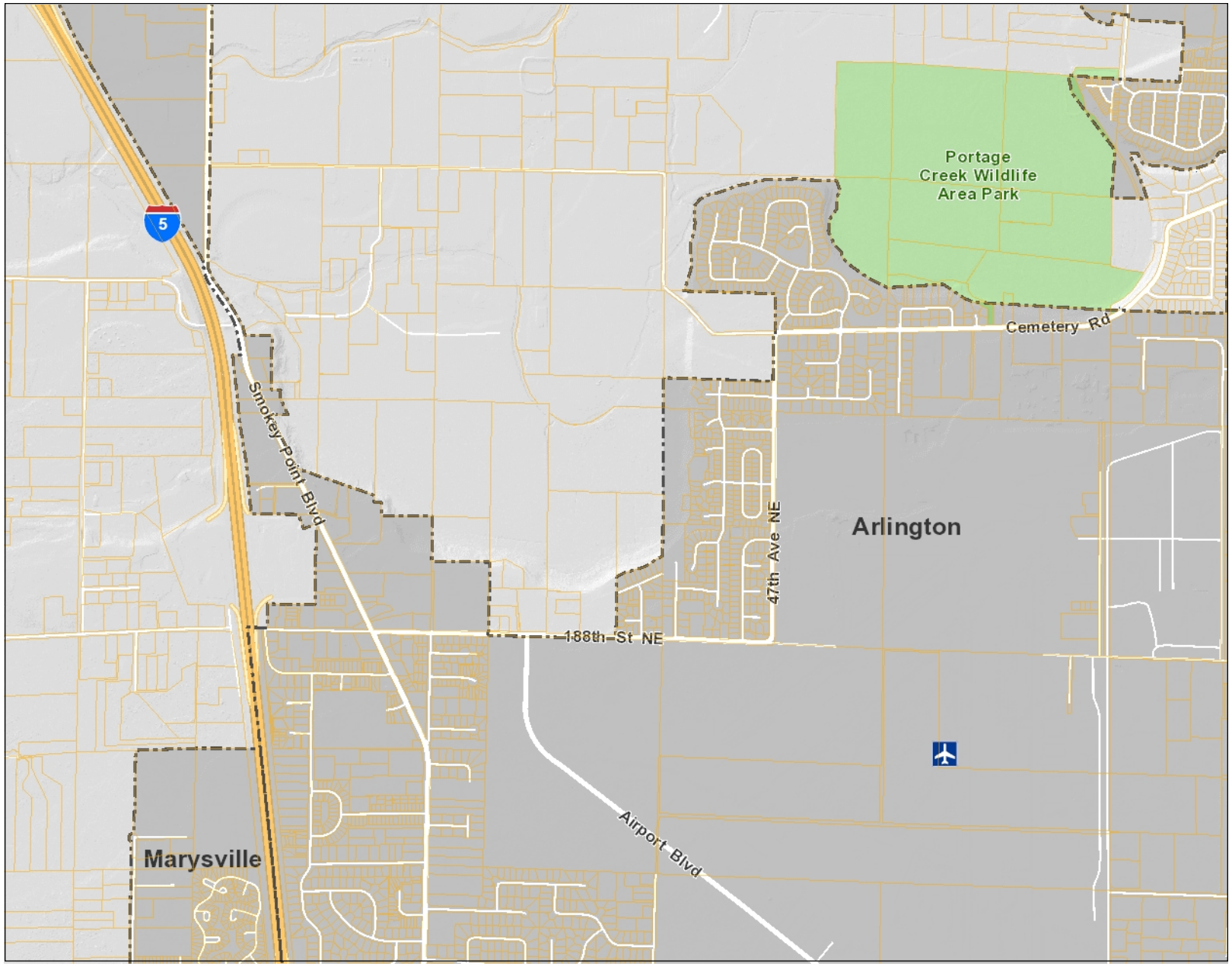
Robert M. Pride, P.E.
Geotechnical Engineer

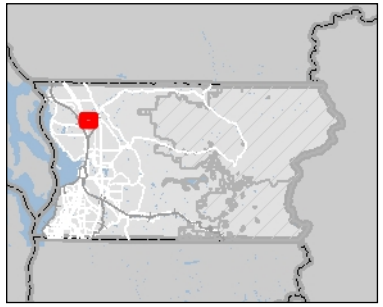
Attachments: Figure 1: Vicinity Map
Figure 2: Site and Exploration Plan
Exploration Pit Logs

PDS Map Portal
Snohomish County Planning & Development Services

Map Title

10/3/2020





Legend

- Snohomish County Tax Parcels

1: 20,000

3,333.3 0 1,666.67 3,333.3 Feet

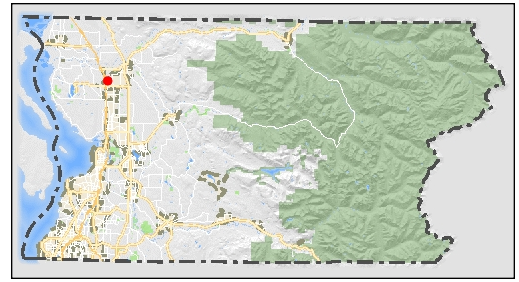
Projection: NAD_1983_StatePlane_Washington_North_FIPS_4601_Feet
Planning and Development Services, Snohomish County

Notes

This map was automatically generated using Geocortex Essentials.

Map Title

Snohomish County Assessor
Washington



Legend

- Parcel
- Recent Sales 2020
- Recent Sales 2019
- Recent Sales 2018
- City Boundary
- County Park
- National Forest
- Water

Street Types

- Interstate
- State Route
- Local Road

0 113 225 Feet

9/18/2020

EXPLORATION HOLE LOGS

18405 35th AVENUE NE

ARLINGTON, WASHINGTON

EP-1

Depth (ft)	Description
0.0 – 1.0	**SOD AND TOPSOL**
	RECESSIONAL OUTWASH
1.0 – 5.0	Medium dense, moist, oxidized brown, slightly silty, fine to medium SAND.
5.0 –7.0	Medium dense, moist, gray, fine to medium SAND with scattered gravel.

T.D. @ 7.0 feet 6-22-20. No ground water seepage encountered. Some sidewall caving below 5 feet.

EP-2

Depth (ft)	Description
0.0 – 0.5	**SOD AND TOPSOL**
	RECESSIONAL OUTWASH
0.5 – 4.0	Medium dense, moist, oxidized brown, slightly silty, fine to medium SAND.
4.0 – 7.0	Medium dense, moist, gray, fine to medium SAND with scattered gravel.

T.D. @ 7.0 feet 6-22-20. No ground water seepage encountered. Some sidewall caving below 4 feet.

EP-3

Depth (ft)	Description
0.0 – 1.0	**SOD AND TOPSOL**
	RECESSIONAL OUTWASH
1.0 – 4.5	Medium dense, moist, oxidized brown, slightly silty, fine to medium SAND. Large root at 2.5 feet; scattered roots to 4 feet
4.5 – 8.0	Medium dense, moist, gray, fine to medium SAND with scattered gravel.

T.D. @ 8.0 feet 6-22-20. No ground water seepage encountered. Some sidewall caving below 4.5 feet.

EP-4

Depth (ft)	Description
0.0 – 0.5	**SOD AND TOPSOL**
	RECESSIONAL OUTWASH
0.5 – 3.0	Medium dense, moist, oxidized brown, slightly silty, fine to medium SAND with scattered roots.
3.0 – 8.0	Medium dense, moist, gray, fine to medium SAND with scattered gravel.
	T.D. @ 8.0 feet 6-22-20. No ground water seepage encountered. Some sidewall caving below 3 feet.

EP-5 .

Depth (ft)	Description
0.0 – 0.5	**SOD AND TOPSOL**
	RECESSIONAL OUTWASH
0.5 – 2.0	Medium dense, moist, oxidized brown, slightly silty, fine to medium SAND with scattered roots.
2.0 – 8.0	Medium dense, moist, gray, fine to medium SAND with scattered gravel.
	T.D. @ 8.0 feet 6-22-20. No ground water seepage encountered. Some sidewall caving below 2 feet.

EP-6

Depth (ft)	Description
0.0 – 0.5	**SOD AND TOPSOL**
	RECESSIONAL OUTWASH
0.5 – 2.0	Medium dense, moist, oxidized brown, slightly silty, fine to medium SAND with scattered roots.
2.0 – 8.0	Medium dense, moist, gray, fine to medium SAND with scattered gravel.
	T.D. @ 8.0 feet 6-22-20. No ground water seepage encountered. Some sidewall caving below 2.5 feet.

EP-7 .

Depth (ft)	Description
0.0 – 0.5	**SOD AND TOPSOL**
	RECESSIONAL OUTWASH
0.5 – 2.75	Medium dense, moist, oxidized brown, slightly silty, fine to medium SAND with scattered roots.
2.75 – 8.0	Medium dense, moist, gray, fine to medium SAND with scattered gravel.
	T.D. @ 8.0 feet 6-22-20. No ground water seepage encountered. Some sidewall caving below 3 feet.

EP-8

Depth (ft)	Description
0.0 – 0.5	**SOD AND TOPSOL**
	RECESSIONAL OUTWASH
0.5 – 2.75	Medium dense, moist, oxidized brown, slightly silty, fine to medium SAND with scattered roots.
2.75 – 8.0	Medium dense, moist, gray, fine to medium SAND with scattered gravel.
	T.D. @ 8.0 feet 6-22-20. No ground water seepage encountered. Some sidewall caving below 3 feet.

Appendix C

Operation and Maintenance