

Estes Residence

CSWPPP

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Prepared for
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SECTION 1 - 12 Elements Discussion

This Construction Stormwater Pollution Prevention Plan consists of 13 elements. The following explains how each element is addressed. In some cases, the element is not applicable. It is advised to also refer to the project geotechnical report for further site preparation and earthwork recommendations.

Element #1: Preserve Vegetation/Mark Clearing Limits

The clearing limits shall be marked per the approved plans. Prior to beginning land disturbing activities, including clearing and grading, all clearing limits will be clearly marked. Silt fence will be placed on downstream property boundaries as indicated on the project plans.

The duff layer, native topsoil, and natural vegetation should be retained in an undisturbed state to the maximum extent practicable. If it is not practicable to retain the duff layer in place, it should be stockpiled on site, covered to prevent erosion, and replaced immediately upon completion of the ground disturbing activities.

Limit the site clearing and grading activities to the relatively dry months if possible.

BMPs Used:

C233 - Silt Fence

BMP Performance Management:

The project shall not clear beyond the marked clearing edges. Damaged silt fences shall be repaired as needed. The fence should not be removed until the conclusion of the project.

Element #2: Establish Construction Access

Entry to the site will be from Webster Way from a public right-of-way. One stabilized construction entrance should be adequate. The Construction entrance shall be to the house as needed.

All sediment that is tracked onto the roadway due to construction activities should be cleaned at the end of each working day. Should sediment tracked onto the street become excessive, operations shall cease until the tracked material has been removed by street sweeping or shoveling.

if the stabilized construction entrance is not effective in preventing sediment from being tracked onto the roadways, wheel wash or tire baths should be located on site.

BMPs Used:

C105 - Stabilized Construction Entrance/Exit

C107 - Construction Road/Parking Stabilization

BMP Performance Management:

The BMPs are to be reviewed regularly by the CESCL. Where the vehicle travel paths are failing, new rock should be placed to avoid erosion.

Element #3: Control Flow Rates

Due to the size of the site and area of disturbance, controlling flow rates are not anticipated to be necessary for this project.

BMPs Used:

None.

BMP Performance Management:

The TESC systems shall be reviewed weekly at a minimum and daily during storm events for stability and effectiveness and repaired/replaced as needed by the site contractor.

Element #4: Install Sediment Controls

All disturbed soils surrounding the site should be seeded to avoid erosion and control sediment. To manage sediment, a silt fence around the perimeter of the site is recommended. Additionally, sediment control such as straw wattles should be provided within the adjacent roadside ditch along the front side of the project.

BMPs Used:

C233 - Silt Fence

C235 - Straw Wattles

BMP Performance Management:

The TESC systems shall be reviewed weekly at a minimum and daily during storm events for stability and effectiveness and repaired/replaced as needed by the site contractor.

Element #5: Stabilize Soils

Disturbed areas surrounding the proposed residence should be seeded and covered with straw mulch as necessary. Stockpiles should be covered with plastic and held down with staked sandbags. Erosion control blankets are to be provided as necessary.

BMPs Used:

C120 - Temporary and Permanent Seeding

C121 - Mulching

C122 - Nets and Blankets

C123 - Plastic Covering

BMP Performance Management:

All unworked soils areas are stabilized. Soil areas in working areas are managed by limiting vehicle traffic. From October 1 through April 30, no soils shall remain exposed and unworked for more than 2 days. From May 1 to September 30, no soils should remain exposed and unworked for more than 7 days. This condition will apply to all soils on site whether at final grade or not.

Element #6: Protect Slopes

Clearing limits are to be established and silt fence provided to protect the neighboring areas from sediment runoff during construction.

Disturbed areas surrounding the proposed residence should be seeded and covered with straw mulch as necessary. Stockpiles should be covered with plastic and held down with staked sandbags. Erosion control blankets are to be provided as necessary.

BMPs Used:

C120 - Temporary and Permanent Seeding

C121 - Mulching

C122 - Nets and Blankets

C123 - Plastic Covering

BMP Performance Management:

The TESC systems should be reviewed weekly at a minimum and daily during storm events for stability and effectiveness and repaired/replaced as needed by the site contractor.

Element #7: Protect Drain Inlets

All installed storm drains inlets on the project site shall be protected so that stormwater runoff does not enter the conveyance system without first being filtered or treated to remove sediment.

All approach roads to the project site shall be kept clean.

BMPs Used:

C220 - Storm Drain Inlet Protection

BMP Performance Management:

The TESC systems shall be reviewed weekly at a minimum and daily during storm events for stability and effectiveness and repaired/replaced as needed by the site contractor.

Element #8: Stabilize Channels and Outfalls

There are no channels either existing or proposed nor are there any existing or proposed outlets to channels.

BMPs Used:

None.

BMP Performance Management:

Not applicable.

Element #9: Control Pollutants

Control of pollutants are the responsibility of the construction superintendent. Maintenance and repair of heavy equipment and vehicles involving oil changes, hydraulic system drain down, solvent and de-greasing cleaning operations, fuel tank drain down and removal, and other activities that may result in discharge or spillage of pollutants to the ground or into stormwater runoff must be conducted using spill prevention measures, such as drip pans. Contaminated surfaces should be cleaned immediately following any discharge or spill incident. The superintendent should be

expected to use his best judgment in addressing any and all conditions that are potentially damaging to the environment. Emergency repairs may be performed on-site using temporary plastic placed beneath and, if raining, over the vehicle.

All pollutants, including waste materials and demolition debris that occur on-site during construction will be handled and disposed of in a manner that does not cause contamination of stormwater. Cover, containment, and protection from vandalism will be provided for all chemicals, liquid products, petroleum products, and non-inert wastes present on the site.

The contractor should provide a centralized area for the storage, maintenance, and refueling of construction equipment and for washing of concrete truck drums. All runoff from the area shall be intercepted by a trench around the downslope side of the area and detained until it can be removed by a 'Vactor' truck and properly disposed of in an approved facility.

BMPs Used:

C151 - Concrete Handling

C152 - Saw cutting and Surfacing Pollution Prevention

C153 - Material Delivery, Storage and Containment.

BMP Performance Management:

The TESC systems shall be reviewed on a weekly basis for stability and effectiveness and repaired/replaced as needed by the site contractor.

Element #10: Control De-Watering

No requirement for de-watering is anticipated. However, if necessary, de-watering shall be discharged into a closed conveyance system for discharge from the site. Highly turbid or otherwise contaminated dewatering water, such as from construction equipment operation will be handled separately from stormwater.

BMPs Used:

None.

BMP Performance Management:

Not applicable.

Element #11: Maintain BMPs

All temporary and permanent erosion and sediment control BMPs shall be maintained and repaired as needed to assure continued performance of their intended function. All maintenance and repair shall be conducted in accordance with standard procedures for the BMPs.

Sediment control BMPs should be inspected weekly or after a runoff-producing storm event during the dry season and daily during the wet season.

All temporary erosion and sediment control BMPs should be removed within 30 days after final site stabilization is achieved or after the temporary BMPs are no longer needed. Trapped sediment shall be removed or stabilized on site. Disturbed soil areas

resulting from removal of BMPs or vegetation will be permanently stabilized with mulch, grass planting or other approved erosion control treatment.

BMPs Used:

C150 - Materials on Hand

C160 - Certified Erosion and Sediment Control Lead

BMP Performance Management:

In the event TESC systems are deemed ineffective based on turbidity measurements, the on-site systems must be adjusted by the site contractor.

Element #12: Manage the Project

Site construction should be performed after the erosion and sediment control measures have been constructed.

From October 1 through April 30, clearing, grading, and other soil disturbing activities shall only be permitted if the transport of sediment from the construction site to receiving waters should be prevented through a combination of favorable site and weather conditions, limitations on extent of activity, and proposed erosion and sediment control measures. The Contractor and/or owner should stop the permitted activity if sediment leaves the construction site causing a violation of the surface water quality standard or if erosion and sediment control measures are not adequately maintained.

Trenches should be opened only immediately prior to construction and the trenches should be backfilled immediately after any required testing or inspections of the installed improvements. Trenching spoils should be treated as other disturbed earthwork and measures should be taken to cover or otherwise stabilize the material, as required.

All BMPs shall be inspected, maintained, and repaired as needed to assure continued performance of their intended function. The construction SWPPP shall be retained on site or within reasonable access to the site.

The SWPPP shall be modified whenever there is a change in the design, construction, operation, or maintenance at the construction site that has, or could have, a significant effect on the discharge of pollutants to water of the state.

BMPs Used:

C150 - Materials on Hand

C160 - Certified Erosion and Sediment Control Lead

BMP Performance Management:

The TESC systems shall be reviewed on a weekly basis by the CESCL for stability and effectiveness and repaired/replaced/revised as needed by the site contractor.

Element #13: Project BMPs

Project all permanent stormwater BMPs from sedimentation through installation and maintenance of erosion and sediment control BMPs on portions of the site that drain onto the BMPs. Restore all BMPs to their fully functioning condition if they accumulate sediment during construction. Restoring the BMPs shall include removal of all sediment.

BMP Performance Management:

The TESC systems shall be reviewed on a weekly basis by the CESCL for stability and effectiveness and repaired/replaced/revised as needed by the site contractor.

SECTION 2 - Project Description

The proposed Estes Residence is located on approximately 0.31 acres within the City of Mukilteo on Webster Way. More particularly, the project is within the Northeast Quarter of Section 20, Township 28 Northwest, Range 4 East, W.M. and the parcel number is 00408600400300. The proposal of the project is to construct a new single-family residence associated utilities and landscaping.

SECTION 3 - Existing Site Conditions

The site is currently undeveloped with trees and an understory of vegetation. The site has about 38 feet of grade change and steep slopes exceeding 100 percent. The limit of disturbance is in the west portion of the site where there are moderately steep slopes that are less than 40 percent.

SECTION 4 - Adjacent Areas

Parcels surrounding the project site have been developed with single-family residences.

SECTION 5 - Critical Areas

Steep slopes are located in the northeast portion of the property. These steep slope areas are outside of the project limits.

SECTION 6 - Soils

A geotechnical engineering study was completed by GeoSpectrum Consultants, Inc., dated November 27, 2017. Four test pits were logged and sampled where slopes were less than 40 percent on site. In summary, the onsite soils encountered consisted of very fine silty sand/sandy silt that was generally underlain by silt and sandy silt at depths of about 2 to 3 feet to the maximum depths of the test pits. No active surface seepage or springs were observed on the site and no free ground water was observed in any of the test pits. The upper subsoils were generally classified as moist to very moist and the deeper subsoils generally became less moist with increasing depth.

SECTION 7 - Potential Erosion Problems

Onsite materials are expected to be moderately erodible when exposed to concentrated water flow in slope areas. No excavated material should be wasted on the slopes. Siltation fences or other suitable detention devices should be provided around soil stockpiles and around the lower sides of exposed soil areas during construction to control the transport of eroded material.

No cutting and clearing should be performed in the steep slope areas and should be minimized in the non-steep slope areas. Pruning or cutting back of trees with a minimum of disturbance to the existing slope vegetation is recommended as opposed to felling. If felling is required, stumps should be left intact where possible to reduce disturbance to the shallow soils.

SECTION 8 - Construction Phasing

The project will be phased in accordance with the needs of the project and the environmental conditions. The construction stages and/or sequencing is expected as follows:

1. Stake and flag clearing and construction limits
2. Install Construction Entrance(s)

3. Install silt fabric fence where indicated or as directed by the inspector
4. Install any other erosion control facilities that may be necessary
5. Call for Erosion Control Inspection
6. Clear, grade, and construct site improvements
7. Remove erosion control facilities only after site is stabilized
8. Request Final site development inspection

All storm drainage facilities shall be protected in place from construction activity via brightly flagged stakes or, if necessary, temporary construction fencing.

SECTION 9 - Construction Schedule

The project is expected to commence early summer 2022. It is estimated project will be completed by the end of 2022.

SECTION 10 - Financial/Ownership Responsibilities

The property owner will be responsible for bonds and other required securities for this project.

SECTION 11 - Engineering Calculations

No calculations were required during the construction of this SWPPP plan.

SECTION 12 - CESCL

The contractor will be required to manage all TESC systems and facilities and file reports as required under the issued Construction Stormwater Discharge Permit. Due to the site of this project, a state Certified Erosion and Sediment Control Lead (CESCL) will not be required.