

MR 1-5 Storm Drainage Summary

2720 Residence
2720 71st Avenue SE
Mercer Island, WA 98040

3,619 SF (NEW & REPLACED Impervious)

September 1, 2017

Prepared by Stephenie Seawall
Checked by Duffy Ellis, PE

General:

This site's new and replaced impervious area is below 5,000 sf, site is subject to minimum requirements MR1-5 identified below.

MR1 = Preparation of Storm Water Site Plans	See C2.0 Drainage Plan
MR2 = Construction Storm Water Pollution Prevention Plan	See C1.0 Erosion Control (TESCP) Plan in plan set.
MR3 = Source Control of Pollution	See C1.0 for erosion control measures recommended to mitigate erosion and sediment discharge from site during construction phase.
MR4 = Preservation of Natural Drainage Systems and Outfalls	Yes. All runoff from significant impervious areas will be tight lined to proposed storm extension in 71 st Ave SE.
MR5 = On-site Stormwater Management	No BMPs are proposed for this project
MR6 = Runoff Treatment	N/A - PGIS 366 sf (less than 5,000 sf)
MR7 = Flow Control	N/A (Fee-In-Lieu is being proposed)
MR8 = Wetlands Protection	N/A
MR9 = Operations and Maintenance	N/A

Background:

A new house is proposed at subject address. Existing structures will be removed. All runoff will be captured and piped to the northwest corner of the property where it will meet a proposed storm drain extension in 71st Avenue SE.

Soils and Infiltration Feasibility:

This site is in a “moderate infiltration potential” area according to the Mercer Island Infiltration Feasibility Map, however we are proposing to tightline all of the stormwater to the proposed storm extension in 71st Avenue SE.

Proposed On-site Stormwater management:

The List Approach (List #1) selection process was applied to site:

Lawn and Landscaped Areas:

- Post-Construction Soil Quality and Depth in accordance with Chapter D5 of Bellevue SWES and BMP T5.13 in Chapter 5 of Volume V of the DOE Manual. Compost-Amended Soil is required.

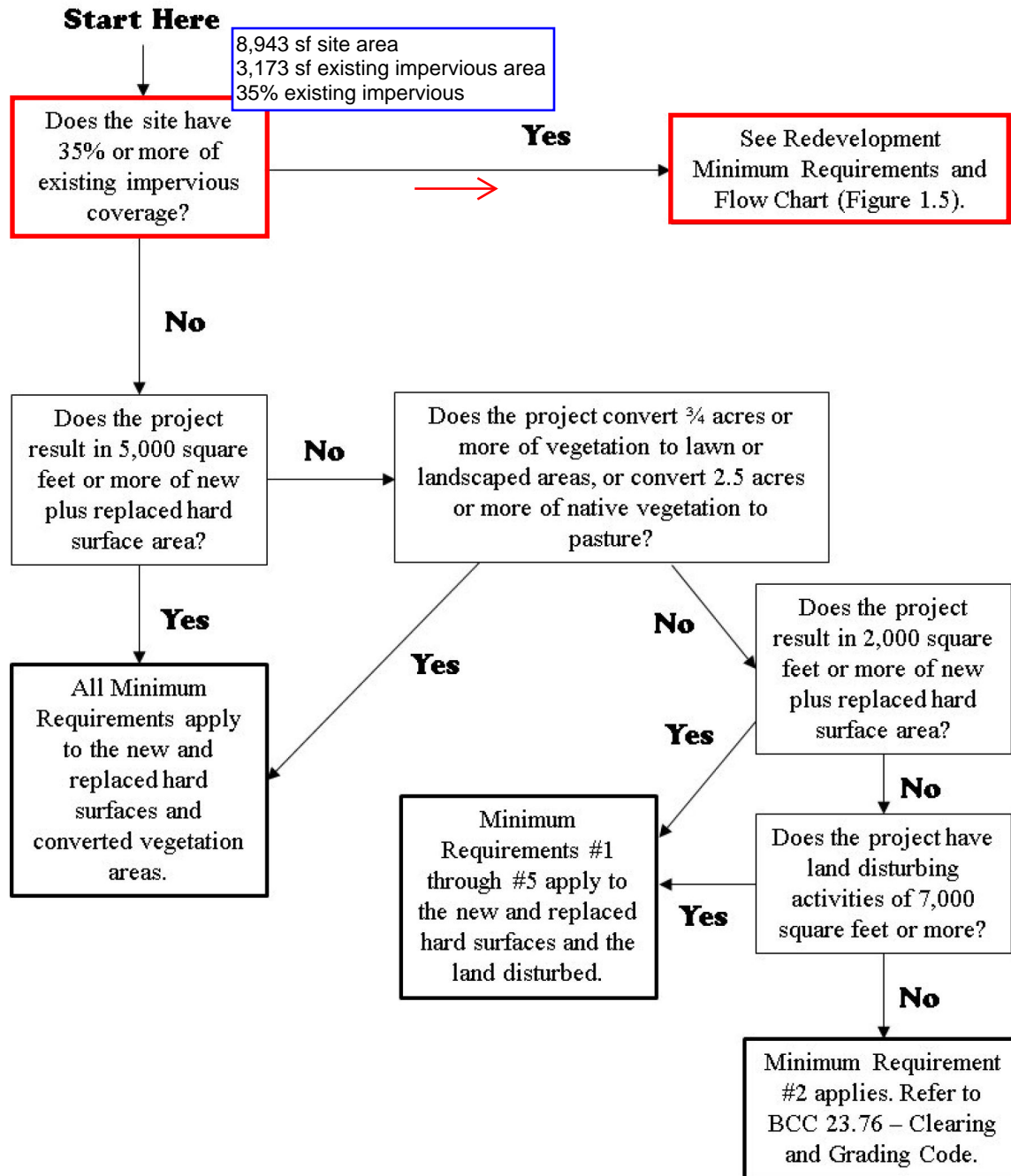
Roofs:

- Full Dispersion:
Infeasible due to lack of 100 LF flowpath
- Downspout Full Infiltration:
Not recommended because there is no room to incorporate this on the low side of the house.
- Raingarden:
Not recommended because there is no room to incorporate this on the low side of the house.
- Downspout Dispersion:
Not recommended because there is no room to incorporate this on the low side of the house.
- Perforated Stub-Out Connection:
Not recommended because there is no room to incorporate this on the low side of the house.

Other Hard Surfaces:

- Full Dispersion:
Infeasible due to lack of 100 LF flowpath
- Permeable Pavement:
Not recommended with driveway sloping towards the new house.
- Raingarden:
Not recommended because there is no room to incorporate this on the low side of the house.
- Sheet Flow/Concentrated Flow Dispersion:
No room given setback requirements.

Impervious Area Spreadsheet		
Sherry Residence - 2720 71st Ave SE, Mercer Island 98040 - CES #1643		
Gross Site area	8,943	sf
	0.205	acres
Existing Impervious Area		
Ex House	2,289	sf
Ex driveway, on-site	884	sf
total existing =	3,173	sf
Proposed Impervious Area (on-site)		
Main house roof	2,609	sf
ADU roof	625	sf
Driveway, on-site	330	sf
total on-site proposed =	3,564	sf
New Impervious Area	1,039	sf
Replaced Impervious Area	2,525	sf
New + Replaced Impervious Area	3,564	sf
Removed Impervious Area	648	sf



Does the project result in 2,000 square feet or more of new plus replaced hard surface area? OR
Does the land disturbing activity total 7,000 square feet or more?

Yes

No

Minimum Requirement #1 through #5 apply to the new and replaced hard surfaces and the land disturbed.

Minimum Requirement #2 applies. Refer to BCC 23.76 – Clearing and Grading Code.

Next Question

Does the project result in 5,000 square feet or more of new hard surfaces? OR
Convert $\frac{3}{4}$ acres or more of vegetation to lawn or landscaped areas? OR
Convert 2.5 acres or more of native vegetation to pasture?

Yes

No

All Minimum Requirements apply to the new hard surfaces and the converted vegetation areas.

Next Question

Is this a road related project?

Yes

No

No

Does the project add 5,000 square feet or more of new hard surfaces?

Yes

Do new hard surfaces add 50% or more to the existing hard surfaces within the project limits?

No

No additional requirements

Yes

Yes

All Minimum Requirements apply to the new and replaced hard surfaces and converted vegetation areas.

Is the total of new plus replaced hard surfaces 5,000 square feet or more, AND does the value of the proposed improvements – including interior improvements – exceed 50% of the assessed value (or replacement value) of the existing site improvements?

No

No additional requirements

MR1-5

2720 71st Ave SE
Mercer Island, WA 98040

8,943 sf site area
3,173 sf existing impervious area
35% existing impervious
986 sf new impervious area
2,984 sf new + replaced impervious area