This Detail Drawing may not be altered or changed in any manner except by the City Engineer. It is the responsibility of the user to acquire the most current version.

## Vegetated Swales Operations & Maintenance Plan

What to Look For	What to Do
Structural Components, including inle	ets and outlets/overflows, shall freely convey stormwater.
Clogged inlets or outlets	-Remove sediment and debris from catch basins, trench drains, curb inlets and pipes to maintain at least 50% conveyance capacity at all times.
Cracked Drain Pipes	-Replace/seal cracks. Replace when repair is insufficient.
Check Dams	-Maintain 4 - 10 inch deep rock check dams at design intervals.
Vegetation	
Dead or strained vegetation	-Replant per original planting plan, or substitute from Appendix A. -Irrigate as needed. Mulch banks annually. DO NOT apply fertilizers, herbicides, or pesticides.
Tall Grass and Vegetation	-Cut back to 4-6 inches, 1-2 times per year. Remove cutting
Weeds	-Manually remove weeds. Remove all plant debris.
Growing/Filter Medium, including soi	il and gravels, shall sustain healthy plant cover and infiltrate within 72 hours.
Gullies	-Fill, lightly compact, and plant vegetation to disperse flow
Erosion	-Restore or create outfalls, checkdams, or splash blocks where necessary.
Slope Sippage	-Stabilize Slope.
Ponding	-Rake, till, or amend to restore infiltration rate.

## Annual Maintenance Schedule:

*Summer*. Make any structural repairs. Improve filter medium as needed. Clear drain. Irrigate as needed. *Fall*. Replant exposed soil and replace dead plants. Remove sediment and plant debris.

*Winter*. Monitor infiltration/flow-through rates. Clear inlets and outlets/overflows to maintain conveyance. *Spring*. Remove sediment and plant debris. Replant exposed soil and replace dead plants. Mulch. *All seasons*. Weed as necessary.

*Maintenance Records*: Record date, description, and contractor (if applicable) for all structural repairs, landscape maintenance, and facility cleanout activities. Keep work orders and invoices on file and make available upon request of the inspector.

Access: Maintain ingress/egress to design standards.

Infiltration/Flow Control: All facilities shall drain within 72 hours. Record time/date, weather, and site conditions when ponding occurs.

*Pollution Prevention*: All sites shall implement best management practices to prevent hazardous or solid wastes or excessive oil and sediment from contaminating stormwater. Contact \_\_\_\_\_\_ for immediate assistance responding to spills. Record time/date, weather, and site conditions if site activities contaminate stormwater.

*Vectors (Mosquitoes & Rodents)*: Stormwater facilities shall not harbor mosquito larvae or rats that pose a threat to public health or that undermine the facility structure. Monitor standing water for small wiggling sticks perpendicular to the water's surface. Note holes/burrows in and around facilities. Call Clackamas County Vector Control for immediate assistance to eradicate vectors. Record time/date, weather, and site conditions when vector activity observed.

Vegetated Swale O & M Plan			CITY OF	
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