Mercer Island Mixed-Use
Landscape Maintenance Guidelines
October 2023

Overall Objectives

- Ensure a healthy, thriving and beautiful landscape throughout the year.
- Provide regular and thorough maintenance of all landscape areas.
- Proactively address horticultural issues such as nutrition, drainage, irrigation, pests and weeds before they become problems.
- Keep all landscape areas free of trash, litter and weeds.
- Maintain the integrity of the original planting concept, while accommodating evolving cultural conditions.

Planting Systems Overview

Extent of Maintenance Area:

- Refer to as-built plans provided for extent of areas to be maintained and a record of existing conditions, including at grade planting areas, courtyard landscape and the north thru-block.

Planting Soils:

- General: Any site soil that requires replacement or topdressing shall use the same product to avoid soil interface conflicts or the creation of perched conditions. Specified soils are from Walrath, (253) 531-7499.
- Planting Beds: Planting beds both on-grade and on-structure use a standard bioretention mix consisting of 60%-65% coarse washed sand and 35%-40% compost. This media contains no loam or other natural topsoil that can bring weed seeds onto the site. It also provides a well-drained environment around plant root crowns, while providing adequate but not excessive organic matter.
- Bioretention Planters: Bioretention planters also use bioretention mix.

Mulch:

- Mulch is intended to temporarily cover the soil while plants fill in densely enough to suppress weeds and cover bare soil. The maintenance and renewal of mulch layers should not interfere with plant growth.
- Planting Beds: Mulch consists of medium-fine bark. Additional applications of mulch can consist of medium-fine bark or arborist chips.
- Bioretention Planters: Mulch consists of medium compost. Other mulch products such as bark or wood chips are not acceptable in this application as they float to the drain.

Irrigation Systems:

- All areas: planting areas include an automated irrigation system. As-built drawings of the irrigation system have been provided for reference.

- Right-of-Way: Planting in the right-of-way includes temporary irrigation which is to be decommissioned after establishment. There are isolation valves on the private party which will be turned off. Any irrigation equipment in the right-of-way that is accessible shall be removed at the time of decommissioning. (Much of this is installed beneath paving within suspended paving cells and cannot be removed)

Maintenance Protocols

Schedule:

- Maintenance Frequency: All planting areas shall be maintained *at a minimum* twice per month between April and October and once per month between November and March. Additional maintenance may be required to ensure a clean and attractive landscape.

Submittals:

- Work Schedule: At the beginning of the maintenance period, contractor is required to submit a spreadsheet showing the timing, frequency and an overview of maintenance tasks to be performed throughout the year. The spreadsheet shall include the number of workers assigned to each task, estimated time to complete each task.
- Monthly Report: the contractor shall submit a monthly report, detailing all plant losses, relevant warranty coverage; damages to planting, irrigation and other property; and any other issues that may need to be addressed.

Scope of Work

Overview:

- The contractor shall remove from the site all litter and debris on each visit. Dead plant material will be removed excepting natural tree litter within planting areas (including leaves and conifer needles) will be left as mulch so long as plants are not buried and plant health is maintained. Tree litter on adjacent hard surfaces shall be collected and disposed of.
- The contractor shall monitor plant health, soil moisture and damage to plants and property on each visit and take immediate and proactive action to correct any observed issues.

Irrigation:

- Always ensure that plants are receiving adequate—but not excessive—irrigation. Do not allow plants to wilt. Regular inspection of plant health and growth should ultimately determine appropriate levels of irrigation. Excessive irrigation tends to encourage shallow rooting, making plants less tolerant of dry conditions over the long term. Too much irrigation also encourages weed establishment.
    - Duration of manual irrigation and automated schedules should be adjusted accordingly.
    - Allow soil moisture to fall below field capacity between irrigation cycles, adjusting as necessary to maintain healthy plants. Plants (other than trees) should receive only the minimum amount of irrigation necessary to prevent wilting.

- After installation, the rootballs of trees should be irrigated twice monthly between April 15 and October 1 until established—and weekly during hot dry spells.
    - As a rule of thumb, provide 2 gallons of water on the rootball per inch of trunk diameter.
    - Do not irrigate if soils are saturated.
- After establishment, trees should be irrigated as needed during times of drought or stress.
- Use a visual inspection to ensure that water is distributed appropriately. Do not rely solely on automated systems. Supplement with hand irrigation, as necessary.
- The contractor will monitor irrigation systems to maintain proper functioning. Irrigation repairs or concerns should be immediately brought to the attention of the Owner's contact.
- The contractor will hand-water plants when and where necessary, including under building canopy and overhangs when automated systems are winterized or otherwise not performing adequately to keep plants healthy. Discuss with the Owner's contact the option to not winterize the irrigation system to allow weather protected zones to be irrigated year round.
- Irrigation system springtime activation maintenance includes:
    - Open quick coupler valves at all mainline terminations to safely vent stored compressed air energy.
    - Turn on the point of connection and valves to fill the mainline. When mainlines are filled and air purged, close quick coupler valves.
    - Inspect the irrigation point of connection assembly and mainline for leaks.
    - Inspect and electronically operate individual irrigation zones. Adjust irrigation sprinkler heads as necessary to provide full coverage.
    - Turn on controller, set program times and durations as necessary.
    - Owner's contact shall be advised of springtime system repairs. Repair any damage with the exception of failures or repairs to the irrigation system resulting from acts of nature, vandalism, or other accidents at no fault of the contractor, and notify the Owner's contact. Note that the contractor is responsible for providing temporary irrigation as needed until repairs are complete. All repairs shall be made with original equipment.
- Irrigation system operation maintenance includes:
    - Contractor to provide, set, manage and monitor irrigation schedules and program seasonal adjustments based on weather, plant type, plant water requirements, microclimate variables such as exposure, radiant and reflective heat, density, slope, and soil type.
    - Adjust irrigation controller to operate after hours, preferably in the early morning.
    - Inspect planting areas throughout the growing season and adjust controller to correct over- and under-watering.
    - Adjust heads as necessary to ensure adequate coverage.
- Irrigation system winterization includes:
    - Winterization will be performed by experienced personnel only. Sprinkler system will be winterized before freezing occurs to avoid damage.
    - Turn off main water valve and drain water from DCVA. Extreme care must be taken when blowing out the system to avoid excessive pressure which my damage valves or sprinkler pipe or cause physical injury. Air pressure must not exceed 60 pounds PSI. Close gate valve downstream of master valve and flow sensor. Air compressor capable

of providing 10 to 25 CFM of air volume will be introduced into the mainline with a quick coupler key into a quick coupler valve with a second quick coupler key fitted with a bronze full port ball valve inserted into a quick coupler valve at all mainline terminations to act as a safety air vent. Compressor will be turned on, gradually increasing air flow, initially purging the mainline of water, then activating the zone to purge it of water until the sprinklers only expel a fine mist and air. Repeat the process as necessary. After blowing out all zones, the safety air vent quick couplers will be opened while shutting down the compressor.
    - Controller power should remain on but adjust the controller to a no irrigation setting
- Irrigation backflow valve assembly inspection:
    - Service as necessary.

Plant Nutrition:

- In general, fertilizing should be kept to a minimum, and implemented only when necessary to correct nutrient deficiencies in planter soil, as indicated by soil analysis and by informed observation. When applicable, contractor should perform seasonal fertilization using a granular slow-release product, unless results of soil testing indicate otherwise. Spot fertilizing will occur on an as-needed basis.
    - Fertilizers are not to include any chemicals prohibited by Salmon Safe.
    - Excessive fertilization can lead to excessively lush growth that makes plants vulnerable to pests. Healthy plant growth is slow and steady, as appropriate to each species.
- Provide an annual report of all fertilizer used on site that documents where it was applied, when it was applied, how it was applied, the reasons for application, and the type and quantity of fertilizer applied.

Plant Pest and Disease Control:

- Provide personnel qualified in the recognition, diagnosis and treatment of plant damaging diseases and insects. Notify the Owner's immediately of an outbreak. Notification to include recommended treatment and potential costs. Treatment will not be performed without prior authorization. Additional work to be completed and billed separately from maintenance contract.
- Organic and cultural methods are the first line of defense, with an emphasis on prevention and pro-active management.
    - Diluted Dr. Bronner's Peppermint Castille Soap, neem oil and ladybugs can be used for aphid control on an as needed basis. Horticultural soaps and neem oil should not be used when temperatures exceed 85F.
    - When necessary, SLUGGO-based slug meal can be used to control slugs, carefully applied
- The last line of defense is chemical, applied by a State of Washington "certified" pesticide applicator only, with specific timing and limited use to target pests. Contractor is required to submit chemical to be used and schedule for use for approval prior to any application.
    - All pesticide use must comply with Salmon Safe standards.
    - Provide a report of all pesticide used on site that documents where it was applied, when it was applied, how it was applied, the reasons for application, and the type and quantity of pesticide applied.

Weed Control:

- Maintain a weed-free condition within planting.
- Preferred method for weeding should be accomplished by manual means over chemical means.
- Inspection for weeds should occur every two weeks during the growing season and monthly in the winter. Weeds must be removed promptly. Under no circumstances should weeds remain long enough to set seed.
- Contractor shall keep the site weed free by hand removing the whole weed including roots.
- Opportunities for weed establishment can be minimized by ensuring complete coverage of the planting soil with plants.
- Herbicides shall only be applied by a State of Washington licensed applicator. Submit product and timing for use for approval prior to application.
    - All herbicide use must comply with Salmon Safe standards.
    - Provide a report of all herbicide used on site that documents where it was applied, when it was applied, how it was applied, the reasons for application, and the type and quantity of herbicide applied.

Mulching & Tree Litter:

- Mulch is intended to temporarily cover the soil while plants fill in densely enough to suppress weeds and cover bare soil. Mulch should be applied as necessary to keep soil protected at all times.
- Natural tree litter within planting areas, including leaves and conifer needles, as mulch is encouraged as long as plants are not buried and plant health is maintained. Tree litter on adjacent hard surfaces shall be collected and disposed of by the Contractor.

Other Trash:

- The contractor will remove all litter and debris from planting beds, and along curb lines each visit. The contractor is responsible for disposal. Chronic trash accumulation issues should be coordinated with property management staff.

Plant Replacement:

- Required plant replacements shall be included in the monthly report submittal. Submittal to include species, reason for plant loss, source of replacement plant and pricing for replacement. Submittal to be approved prior to purchase of replacement plant.
- In general, declining or dead plants should be replaced immediately to ensure a healthy-looking landscape at all times.
    - Plants should be replaced with the same species and/or cultivar and in the same quantities and locations.
    - Replacement plants should be secured before plants are removed.
    - For plants that are not available, substitutions shall be proposed to Owner's contact for approval.
    - Exceptions to in-kind plant replacement can be made with approval of the consulting landscape architect only when a particular plant fails repeatedly due to a demonstrated

cultural incompatibility. First verify that cultural problems cannot be corrected by other means, submitting soil and/or plant tissue to an appropriate lab for analysis.

Management of Trees:

- Pruning
    - All pruning shall follow ANSI A300 Pruning Standards. Topping, flush cuts and stub cuts are not acceptable.
    - Structural and corrective pruning is not in the scope of this project and will be performed by a certified arborist only and with approval from Owner's contact.
    - Contractor is limited to pruning up to 12' height from the ground with hand pruners, pole saws, or pole clips.
    - Trees will be pruned to remove all, dead, dangerous, or broken branches.
- Pathways, sidewalks, driveways and parking areas within the maintenance contract limits shall be kept clear of leaf litter and other tree debris.

Pruning, Cutting Back & Plant Removal:

- All plants will be allowed to develop their natural form. Hedging or other types of shearing are not acceptable.
- Shrubs should typically not be pruned and should maintain their natural form, except as follows: selective pruning will include the removal of dead wood, diseased wood, and wood that is infected with insects, and excess sucker-shoots.
- Spent flowers should be removed to encourage continued blooming.
- Dormant perennials should be left in place until the last week of February, at which time they should be cut back and removed from the site before new growth resumes.
- Spent foliage should be gently combed from evergreen grasses and removed from the site. Do not prune evergreen grasses and sedges.
- Deciduous grasses should be cut back to a height of 6 inches during the last week of February.
- All dead, diseased or damaged plant material, including clippings and other debris, shall be removed promptly from the site, using a route approved by the Property Manager and without interfering with building operations.

Cost Control

The contractor shall:

- Be expected to bring proposals and ideas for landscape improvements to the attention of Owner's contact at any time for review.
- Perform no work requiring additional compensation without prior written approval from the Owner's contact. Exceptions include emergency repair of irrigation components and/or other issues that present immediate safety concerns or that may further damage property.
    - Immediately repair or remedy any such emergency and maintain record of repairs in a monthly report to the Owner's contact.
    - Immediately inform Owner's contact of work completed or in progress and present a record of work completed and associated costs.

Warranty for Replacement Plants

- The contractor guarantees installation of all plant materials installed by the contractor for a period of twelve (12) months following Final Completion.
- The contractor shall replace, at no additional cost to the Owner, plant materials damaged as a result of improper maintenance attention or procedures. Replacement material shall be of the same size and variety as the removed material unless indicated otherwise.
- The contractor shall inform the Owner's contact on a monthly basis of all plant losses, regardless whether covered by guarantee or unrelated to the maintenance activities. Provide the Owner's contact with the cause of the plant loss and recommendations with pricing for replacement, as well as for addressing the underlying cause of failure, if necessary.
- The contractor is not responsible for losses, repair or replacement of damaged work or plant material resulting from theft, uncharacteristically extreme weather conditions, fire, earthquakes, vandalism, vehicular incidents (other than contractor's vehicles), or the acts of others over whom the contractor has no reasonable control.

For questions on original landscape design contact project landscape architect:

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