# Landscape Design Standards



February 8, 2006

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# **I. INTRODUCTION**

#### A. Overview

The following Landscape Design Standards are intended to be used to guide the design, implementation and management of exterior landscape areas at Sea-Tac International Airport (STIA).

Building interior landscape applications shall refer to the STIA Architectural Standards.

The Port of Seattle (POS) Landscape Standards Committee (see Appendix C) shall determine whether additional or less landscaping is required as follows:

- to screen and buffer a development from surrounding uses,
- to comply with the POS Landscape Design Guidelines,
- or where a development is within a high visibility area.

Less landscaping may be required to mitigate wildlife attractants as determined by the POS Wildlife Biologist and in accordance with FAA Certificate requirements.

To request changes, additions or removal of any portion of these Standards, complete the Update Request Form in Appendix A.

All special or unique conditions not explicitly covered by these Landscape Standards will be addressed on a case-by-case basis through the Landscape Standards Committee.

# B. Goals

The goals of these Landscape Standards include:

- 1. To preserve and enhance the aesthetic character of the Airport resulting in improved appearance to the surrounding community;
- 2. To improve the quality of the built environment;
- 3. To integrate the Airport into the surrounding community;
- 4. To promote the retention and conservation of existing natural vegetation;
- 5. To reduce the impacts of development on storm water drainage systems and natural habitats;
- 6. To promote the safety and security of pedestrian, vehicular and aircraft traffic;
- 7. To promote land use compatibility; and
- 8. To promote the "Vision" for STIA outlined in the Landscape Design Guidelines.

The Landscape Standards will accomplish these goals by:

- 1. Screening undesirable views from the street right-of-way and surrounding properties;
- 2. Providing a visual and physical buffer between different land uses;
- 3. Providing increased areas of permeable surfaces which allow:
  - a. Infiltration of surface water,
  - b. Reduction in the quantity of storm water discharge, and
  - c. Improvement in the quality of storm water discharge;
- 4. Creating more sustainable landscapes through the use of "water-wise" irrigation techniques, droughttolerant or native plants, and other water management strategies;
- 5. Reducing wildlife attractants and wildlife hazards; and
- 6. Utilizing landscaping adjacent to paved parking areas.

# C. Application

These Landscape Standards apply to:

- 1. All new development on vacant land by the POS or its Tenants that requires a permit through the POS Airport Building Department, and
- 2. When the cost of a building redevelopment totals one-half (1/2) or more of the assessed value of the existing building, the current Landscape Standards shall be applicable and integrated into the redevelopment project.

These Landscape Standards shall not apply when a change of use occurs for a building or a site, unless the new use qualifies as a Temporary Use as defined by these Landscape Standards.

All references to the City of SeaTac shall apply only to POS properties within the City of SeaTac boundary.

Where conflicts occur between these Landscape Standards and other POS documents, the STIA Rules and Regulation and the Wildlife Hazard Management Plan supersedes any requirement outlined in these Landscape Standards as it relates to safety and security at the POS. The Landscape Standards shall supersede all other POS documents related to landscaping at the POS, unless a variance request is approved by the Landscape Standards Committee. In cases where a project is determined by the City of SeaTac and Port to be subject to Mitigation Committee review, the Mitigation Committee may determine landscape treatment that differs from the established standards.

Regardless of the other provisions of these Final Landscape Standards, no development or construction activity (including clearing or grading) shall occur on any of the 'L-shaped Property' area until a Letter of Agreement has been formally agreed to by both the City of SeaTac and the Port of Seattle.

For the purposes of these Standards, the 'L-shaped Property' shall be those properties owned by the Port of Seattle on September 14, 1997, in the vicinity of 24<sup>th</sup> Avenue S. (western boundary), S. 148<sup>th</sup> Street (northernmost boundary), 26<sup>th</sup> Avenue S. and just past 28<sup>th</sup> Avenue S.(eastern boundary), and State Route 518 (southern boundary).

All landscape areas within the City of SeaTac's former Business Park Zone (see Appendix F) shall comply with the Interlocal Agreement for landscape standards per those sections referenced, and shall supersede the standards set forth in this document. All other sections included in these Landscape Standards not specifically referenced by the ILA shall still apply to the former Business Park Zone, including but not limited to: Tree Management, Security Features, Wildlife Hazard Mitigation Requirements, and Landscape Maintenance. Where differences occur between the standards set forth in this document, the more restrictive standard shall apply.

All areas not devoted to landscaping required by these Landscape Standards should be planted or retain existing vegetation whenever possible. No more than 20% of this additional landscape area shall be trees, calculated based on the drip line of the mature tree as referenced in the Approved Plant List (see Appendix E). Existing vegetation shall not be removed to meet this requirement.

Wildlife hazards or attractants, as determined by the POS Wildlife Management Biologist, will be managed using appropriate wildlife mitigation techniques, such as, selective tree harvesting (see Section XII).

No landscaping will be allowed, other than grass type(s) specified in the POS Master Specifications, inside the Landscaping Exclusion Zone (AOA) (see Appendix H).

Existing vegetation may be used in combination with or in lieu of new planting to meet the requirements of these Landscape Standards with approval by the Landscape Standards Committee through the Variance Request Process.

#### D. Coordination With Other Standards

All new development shall comply with all applicable POS and other city, county, state and federal guidelines, codes, plans and standards in addition to these Landscape Standards. Port guidelines and standards are available on the Port's website at <u>www.portseattle.org</u>. Other relevant POS standards may include, but are not limited to, the following (in no particular order):

Architecture, Engineering & Site Design POS Landscape Design Guidelines STIA Architectural Standards Seattle-Tacoma International Airport Design Guidelines STIA Rules & Regulations Water and Sanitary Waste Systems Standards Industrial Waste and Storm Drainage Standards POS A/E Design Submittal Requirements (Professional Services Agreement) POS A/E Designer and Subconsultant Quality Assurance and Control Requirements (Professional Services Agreement) Project Labor Agreement (Professional Services Agreement) Owner Controlled Insurance Program (Professional Services Agreement) Tenant Design & Construction Process Manual

Environmental Stormwater Pollution Prevention Plan Wildlife Hazard Management Plan (Airport Certification Manual) POS Water Conservation Standards Applicable Environmental Permits

<u>Graphics and Signage</u> Advertising Graphic and Display Design Guidelines STIA Signing and Graphics Guidelines Environmental Graphic Design Master Plan Roadway and Garage Signage Master Plan

Details and Specifications CAD and AFUS Standards POS Master Specifications POS Standard Details

<u>Art</u> AV/PMG and Aviation Art Program

<u>Federal Standards</u> FAA Regulations (as applicable) TSA Regulations (as applicable)

#### **II. ABBREVIATIONS AND DEFINITIONS**

- 1. Adjacent. Directly abutting, contiguous to, touching or adjoining.
- 2. **Architectural Standards**. An Airport-wide set of design guidelines and standards, including architecture, engineering, electrical, etc. developed by the POS.
- 3. AOA. Air Operation Area, also defined as the Landscape Exclusion Zone (see Appendix H).
- 4. **ARFF**. Aircraft Rescue and Fire Fighting.
- 5. AV/PMG. Aviation Project Management Group.
- 6. **Bioswale**. A grassy, flat-bottomed swale that receives runoff after it is collected and concentrated, and that removes pollutants from stormwater prior to its release to the natural system.
- 7. Critical/Sensitive Area Buffers. Areas defined and regulated by the applicable local jurisdiction, that extend a pre-determined distance away from sensitive areas, and that provide protection to those areas or provide for public safety with regard to the sensitive area. Buffer sizes are specified and regulated by the local jurisdiction's rules and/or regulations. This definition does not apply to critical or sensitive areas related to Master Plan projects that are already addressed by the Interlocal Agreement (ILA Table 2-7, Attachment A-1) with the City of SeaTac (see Appendix I).
- 8. Deciduous. A plant species with foliage (needle or broadleaf) that is shed annually.
- 9. **Demolished Property**. Any property where an existing structure has been removed, including property newly created vacant as a result of demolition activities.
- 10. **Detention Pond**. A constructed facility intended to hold storm water and release or infiltrate it at rates that do not damage downstream areas. Design and maintenance of these areas is defined in the Surface Water Management Plan.
- 11. **Driving Aisle**. That portion of the off-street parking area used exclusively for the maneuvering and circulation of motor vehicles.
- 12. **Drought Tolerant**. Plants that, once established, can survive with little or no water other than that from annual rainfall.
- 13. **Evergreen**. A plant species with foliage (needle or broadleaf) that persists and remains green year round.
- 14. FAA. Federal Aviation Administration.
- 15. **FAA Critical Area**. The zone within 10,000 feet of all runway surfaces for airports that are rated to receive aircraft using turboprop or turbofans as a means of propulsion.
- 16. **Fence**. A barrier for the purpose of enclosing space or separating lots (excluding retaining walls). Fences may consist of masonry walls, posts connected by boards, rails, etc. and shall comply with all applicable guidelines and standards at the POS.
- 17. Fence, AOA or Security. A type of fence line that is at a minimum 12 feet high topped with 3 strand barbed wire outrigger, designed to keep intruders outside of the air operating area. A minimum of 5 feet clearance must be maintained along the inside and outside of this fence. All changes to the AOA fence must be approved by the TSA.
- 18. **Fence, Wildlife Deterrent**. A fence designed to deter wildlife, especially coyotes, from digging under the AOA fence. This includes modifying other areas of potential access such as ensuring the separations between the AOA fence gates and other access points (culverts) are no wider than 3 inches.
- 19. **Grass Lawn**. An ornamental, mowed lawn area. Refer to POS Master Specifications for approved lawn seed type(s).

- 20. Groundcover. Living, low evergreen planting used in masses.
- 21. **Hazardous wildlife**. Wildlife species that are commonly associated with wildlife-aircraft strike problems, are capable of causing structural damage to aircraft or airport facilities, or act as attractants to other wildlife that pose a wildlife-aircraft strike hazard.
- 22. Herbicide. A chemical weed or plant killer, applied to leaves, foliage, roots or soil.
- 23. Hydrozone. A grouping of plant species that have similar irrigation watering needs.
- 24. **ILA**. The most recently revised Interlocal Agreement originally entered into by the Port of Seattle and City of SeaTac on September 4, 1997.
- 25. **Invasive Plant Species**. A plant that when established is highly destructive, competitive, or difficult to control by cultural or chemical practices and requiring control under Washington State's weed control law, Chapter 17.10 RCW, and as listed on King County's Noxious Weed List.
- 26. Landscape Design Guidelines. "Tools for Design Professionals" report, 1998. Outlines the overall concept of the *Northwest Evergreen Forest* for all landscape areas at the POS,
- 27. Landscaping. Live vegetative materials required for a development.
- 28. Landscaping Exclusion Zone. Area where landscaping is not required (see Appendix H).
- 29. Landscape Plan. A plan, drawn to scale and per the POS CAD Standards (see POS Engineering Department), which clearly delineates existing and proposed landscape features and structures, including irrigation.
- 30. Landscape Standards. The Landscape Design Standards set forth in this document to guide landscape development at the POS.
- 31. Landscape Standards Committee. A POS/ City of SeaTac committee whose basic purpose is to review and approve Variance Requests and Landscape Standards Update Requests (see Appendix C).
- 32. Limited Landscaping Zone. Area where landscaping is limited due to wildlife hazard management and related safety/security requirements (eee Appendix H).
- 33. Lot. A distinct parcel of property.
- 34. Lot Line. The geographic boundaries of a lot.
- 35. **Mulch**. An organic material, such as yard waste or decomposed sawdust manure that is fully composted, used on the soil surface for moisture retention, weed suppression and soil insulation, or rototilled into subgrade as a soil amendment. Mulch must be a weed free material. Refer to the POS Master Specifications for acceptable mulch products.
- Native Species. Vegetation comprised of plant species, other than noxious weeds, which are indigenous to the Pacific Northwest and which reasonably could be expected to naturally occur on the site.
- 37. **Parking Lot**. An area not within a building where motor vehicles may be stored for the purposes of temporary, daily, or overnight off-street parking. Typically paved with asphalt or concrete and landscaped.
- 38. **Parking Space**. An area accessible to vehicles, improved, maintained and used for the sole purpose of parking a motor vehicle.
- 39. **PDRC**. Preliminary Design Review Conference, refer to "Section 1" of the Port-City of SeaTac Development Review Process, dated May 21, 2001.
- 40. Pesticide. Any substance used for the control of insects, mites, mollusks, nematodes, or rodents.
- 41. **Plant Approval Committee**. A POS committee whose basic purpose is to review and approve Approved Plant List Update Requests (see Appendix E).

- 42. **Planting Soil**. Free draining sandy loam soil, containing a minimum five (5) percent organic content by weight and suitable chemistry/fertility elements to support normal plant growth. Refer to POS Master Specifications.
- 43. POS. Port of Seattle.
- 44. **Restricted Airspace**. That space above and adjacent to the airport that must remain clear of all unauthorized penetrating obstructions as deemed by the FAA.
- 45. **Shrubs**. Woody plants often multi-stemmed, generally less than fifteen (15) feet at maximum growth height at maturity, and may be evergreen or deciduous.
- 46. Sidewalk. Paved walkway for pedestrians at the side of a street.
- 47. **Significant Tree**. An existing healthy tree (excluding cottonwood varieties) which, when measured four feet (4) above finish grade, has a minimum trunk diameter of:
  - a. Eight (8) inches for evergreen trees, or
  - b. Twelve (12) inches for deciduous trees.
- 48. STIA. Sea-Tac International Airport.
- 49. STIA Roadway Classifications. See Appendix J.
- 50. **Temporary Use.** Use of a property for a limited period of time. Time limit allowed may vary depending on use as determined by the POS. Temporary uses within the City of SeaTac are as further defined in Appendix L.
- 51. Temporary Use Permit. A permit to allow a use of limited duration and/or frequency.
- 52. **Tenant**. Any person, firm, corporation, Governmental Agency or other entity which has entered into a contractual relationship with the POS for lease, rental, or occupancy of a building, land or other facility on POS property.
- 53. Tree. Woody perennial plants with a height generally greater than fifteen (15) feet.
- 54. **TSA**. Transportation Security Administration.
- 55. Vacant Property. Any property where an existing structure has been removed as a result of POS activities.
- 56. Variance. An adjustment in the application of these standards to a particular property.
- 57. **Water Feature**. A man-made waterfall, fountain, stream, etc. This does not include environmental mitigation sites.
- 58. Water-wise. Planting and irrigation practices that conserve water usage.
- 59. **Wildlife**. Any wild animal, including without limitation any wild mammal, bird, reptile, fish, amphibian, mollusk, crustacean, arthropod, coelenterate, or other invertebrate, including any part, product, egg, or offspring there of. As used in these Landscape Standards "wildlife" includes feral animals and domestic animals while out of the control of their owners.
- 60. Wildlife Attractant. Any human-made structure, land use practice, or human-made or natural geographic feature, that can attract or sustain hazardous wildlife on or adjacent to airport property, such as, landing or departure airspace, aircraft movement area, loading ramps, or aircraft parking areas of an airport. These attractants can include but are not limited to architectural features, landscaping, waste disposal sites, wastewater treatment facilities, agricultural or aquacultural activities, surface mining, or wetlands.
- 61. **Wildlife Hazard**. A potential for an aircraft collision or disease transmission problem as a result of direct or potential contact with wildlife within the FAA Critical Area.

# III. PROJECT REVIEW AND APPROVAL PROCESS

#### A. Plan Review and Approval

All projects shall comply with the Project Notification & Review Procedures as called for in "Attachment A" to the Interlocal Agreement (ILA) and "Section 1" of the Port-City of SeaTac Development Review Process, dated May 21, 2001. Projects must complete a Preliminary Design Review Conference (PDRC) checklist to determine if projects must go through the Port's PDRC meeting process or if City of SeaTac review is required. A copy of the checklist is included as Appendix D. In addition, all applicable permits and a Compliance of Port Standards Certificate (COPS) must be applied for through the POS Airport Building Department.

Landscape areas located outside the FAA Critical Area, but within five (5) statute miles of the airport's aircraft movement areas, loading ramps, or aircraft parking areas, may be reviewed by the FAA as needed to determine if they present potential wildlife hazards to aircraft operations. Any conflicts resulting from requirements or design changes made by the FAA relating to the safety and security of the POS shall supersede the requirements of these Landscape Standards (see Appendix H).

All landscape plans and installation will be reviewed and enforced by the POS Airport Building Department to ensure compliance with these Landscape Standards.

# B. Variance Process

A variance from any portion of these Landscape Standards may be allowed where:

- 1. A literal application or enforcement of these Landscape Standards would result in practical difficulty or unnecessary hardship;
- There are extraordinary circumstances, such as irregular lot shape, size or natural features of a property, or the physical character or configuration of a property is such that the strict implementation of these Landscape Standards will impose unnecessary hardships of the applicant or significantly interfere with reasonable use of the property;
- 3. The hardship or extraordinary circumstances described above is not the result of deed restrictions or the applicant's own actions;
- 4. The design of the project is compatible with other authorized uses within the area and will not cause adverse impacts, such as a lack of visual screening;
- 5. The variance will not constitute a grant of special privilege not enjoyed by the other properties in the area;
- 6. The variance requested is the minimum necessary to afford relief;
- 7. The public interest will not suffer any substantial detrimental effect; and
- 8. The relief granted will be in accordance with the spirit, or intent, of these Landscape Standards.

The applicant for the Variance Request must clearly state why the variance is requested based on the items above and how the requested variance will still meet the overall intent of these Landscape Standards. Refer to the Variance Request Form included in the Appendix B to this document. Items to be considered in reviewing a Variance Request include, but are not limited to, the following:

#### Visual Character

Supports the goals and visual design character and/or level of screening expressed in these Landscape Standards and in the Landscape Design Guidelines.

#### Safety/Security

The design should ensure the safety and security of the traveling public.

The design shall not create a condition that would constitute a current or future wildlife hazard attractant.

#### Maintainability

The design can be maintained per these Landscape Standards and/or other industry-standard, best management practices. Both short-term and long-term maintenance should be considered.

#### **Environmental**

The design should not adversely impact the environment.

#### Interlocal Agreement (ILA)

The design should be consistent with Interlocal Agreement (ILA) commitments.

The Landscape Standards Committee shall either approve or disapprove a Variance Request within ten days of receipt. If approved, a variance shall be issued in writing. If disapproved, the Landscape Standards Committee shall provide a written statement explaining the reasons for disapproval. For POS projects within the City of SeaTac that trigger the PDRC process, the City of SeaTac will be notified and provided an opportunity to review and confirm that these Standards have been met through the Landscape Standards Committee (see Appendix C) prior to approval or disapproval of the Variance Request.

Conditions may be imposed by the POS upon granting a Variance Request.

An appeal to a decision regarding a Variance Request may be made, in writing, within two weeks of the date the Variance Request was approved or disapproved. For POS projects within the City of SeaTac, appeals will be resolved via the dispute resolution process identified in the ILA. For all other POS projects, appeals are submitted to the POS Senior Aviation Management (SAM).

# **IV. LANDSCAPE BUFFER AND SCREENING REQUIREMENTS**

#### A. Purpose

The intent of the following types of landscape treatment is to serve as minimum requirements for quality landscaping at STIA to meet the goals outlined in Section I. However, additional or less landscaping may be required by the Landscape Standards Committee. Less landscaping shall require approval via the variance process. In addition, density, heights, and types of planting and screening are important aspects of landscape design. Therefore, the Landscape Standards Committee will also consider appearance and screening function for landscape approval.

All Landscape Buffer and Screening Types shall meet the requirements outlined in the General Landscaping Provisions (see Section VIII).

Where two adjacent or overlapping Landscape Buffer or Screen Types are within the same lease or lot area, they may be combined to provide the more stringent of the two landscape requirements, except where Parking Lot Landscape Buffers apply.

# B. Perimeter Landscape Buffer



#### Location

Perimeter Landscape Buffer shall be located adjacent to a POS lease or lot line.

#### Requirements

Perimeter Landscape Buffers shall be provided in accordance with the table below. Refer to the following descriptions for requirements specific to each buffer type listed in the table.

Adjacent Use	Requirements
Residential	Type A Full Buffer
Roadway Right-of-Way – Port, City and/or State Owned)*	Type B Filtered Buffer
Non-Residential – POS Owned	None
Non-Residential – Not POS Owned	Type B Filtered Buffer
Temporary Use	See Temporary Use Section VII.
Demolished Property	See Demolished Properties Section VI.

\* Where a lease or lot line is set back and not directly adjacent to a roadway right-of-way, and no other developable POS lot is located between the lease or lot line and the roadway right-of-way, the Perimeter Landscape Buffer along that lease or lot line shall be moved to be located directly adjacent to the roadway right-of-way, but still within POS property. All other Perimeter Landscape Buffers for remaining lease or lot lines shall not be affected.

- 1. Type A Landscape: Full Buffer. Type A landscaping shall meet all of the following criteria:
  - a. Minimum 20' wide buffer as measured from the edge of the lease or lot line;
  - b. Trees and shrubs chosen and spaced so as to grow together within three (3) years in a manner sufficient to obscure sight through the buffer;
  - c. Deciduous and evergreen trees provided at a rate of one (1) tree per ten (10) linear feet of landscape buffer;
  - d. At least 70% of the trees shall be evergreen and 30% deciduous;
  - e. Shrubs provided at a rate of one (1) shrub per four (4) linear feet of landscape buffer;
  - f. At least 90% of the shrubs shall be evergreen; and
  - g. Groundcover spaced to result in total coverage of the landscape area within three (3) years.







- 2. Type B Landscape: Filtered Buffer. Type B landscaping shall meet all of the following criteria:
  - a. Minimum 10' wide buffer as measured from the edge of the lease or lot line;
  - b. Trees and shrubs chosen and spaced so as to grow together within three (3) years in a manner sufficient to provide a filtered view through the buffer;

- c. Deciduous and evergreen trees provided at a rate of one (1) tree per twenty (20) linear feet of landscape buffer;
- d. At least 30% of the trees shall be evergreen and 50% deciduous;
- e. Shrubs of a type that do not exceed a height at maturity of four (4) feet and provided at a rate of one (1) shrub per four (4) linear feet of landscape buffer;
- f. At least 70% of the shrubs shall be evergreen; and
- g. Groundcover spaced to result in total coverage of the landscape area within three (3) years.



<u>TYPE 'B' LANDSCAPE – FILTERED BUFFER</u> Conceptual Plan – Not to Scale

# C. Parking Lot Landscape Buffer



#### **Location**

Adjacent to and/or within surface parking areas outside the AOA. Landscaping will not be required in parking areas inside the AOA. Refer to Appendix H for a map of the AOA area as it relates to these Landscape Standards.

#### **Requirements**

- 1. *Type C Landscape: Partial Buffer.* Type C landscape buffer functions as a partial visual separator and shall be provided accordingly:
  - a. Landscape areas shall provide shade and visual relief wherever possible;
  - b. Total combined landscape area shall be a minimum 10% of the interior parking lot area, including parking spaces and driving aisles;
  - c. Landscape buffer areas shall have a narrow dimension of no less than ten (10) feet with a preference given to combining islands for larger planting areas;
  - d. Landscape planting areas shall be located at the perimeter of the parking lot and/or clustered at the entries, shelters, etc. to allow the greatest flexibility of the interior space;
  - e. Landscape planting areas meeting the requirements of a Parking Lot Landscape Buffer cannot be substituted and shall be in addition to any other required buffer or screening requirements.
  - f. Permanent curbs or structural barriers shall be provided to protect the plantings from vehicle overhang;
  - g. Trees and shrubs chosen and spaced so as to grow together within three (3) years in a manner sufficient to form a partial visual separator;

- h. Deciduous and evergreen trees chosen to result in a variety of canopy types and tree heights throughout the buffer, and provided at a rate of one (1) tree per twenty-five (25) linear feet of landscape buffer;
- i. At least 70% of the trees shall be deciduous;
- j. Shrubs of a type that do not exceed a height at maturity of four (4) feet and provided at a rate of one (1) shrub per four (4) linear feet of landscape buffer;
- k. At least 50% of the shrubs shall be evergreen; and
- I. Living groundcover, spaced to result in total coverage of the landscape area within three (3) years.
- m. Linear dimensions used for calculating plant quantities above shall be taken along the longest length of the landscape area.



#### PARKING LOT LANDSCAPE BUFFER Conceptual Elevation – Not to Scale



PARKING LOT LANDSCAPE BUFFER Conceptual Plan – Not to Scale

# D. Right-Of-Way Landscape Buffer



#### Location

Right-of-way landscape buffer shall be provided along the property frontage, within the road right-ofway by the POS or Tenant, as applicable, as follows:

Roadway Classification*	Approximate Tree Quantity**
Principle Arterial – Airport Expressway	40' on center
Principle Arterial – Terminal Roadway System (adjacent to buildings)	Optional – trees not required
Minor Arterial – Air Cargo Road and portions of South 160 <sup>th</sup> / South 170 <sup>th</sup> Streets	40' on center
Service Road (open to the public)	40' on center

\* Refer to Appendix J for a map of roadway classifications.

\*\* Spacing identified is intended to be used to calculate the general quantity of trees to be provided and does not include access curb cuts, such as driveway entrances. Actual tree spacing will vary per the requirements outlined below.

Landscaping will not be required on POS roadways not open to the public or within the Landscaping Exclusion Zone (see Appendix H and Appendix J).

#### **Requirements**

1. Type D Landscape: Streetscape Buffer. Type D landscaping shall meet all of the following criteria:

Landscaping in this area should generally unify the overall roadway corridor. Right-of-way landscape buffer functions as a partial visual separator and shall be provided accordingly:

- a. Minimum width of five (5) feet shall be provided within the roadway right-of-way adjacent to the curb or pavement edge;
- b. Deciduous or broadleaf evergreen trees shall be provided;
- c. Tree spacing shall allow for a minimum of 15' between adjacent tree canopies at maturity, as defined by the Approved Plant List (see Appendix E), and shall depend on tree type selected, location of underground utilities and/or adjacent light fixtures, required setbacks and sight-distance requirements;
- d. Where tree canopies extend over the roadway edge, trees shall have a minimum six (6) foot branching height at time of planting;
- e. Trees may be planted in formal row(s) or in a more informal spacing to create a park-like setting where space is available;
- f. Conifer trees may be allowed in limited quantity provided adequate space is available;
- g. Groundcover shall be provided, except along Service Roads and Principle Arterial Terminal Roadway System, to result in a total coverage of the landscape area within three (3) years, unless trees are planted in tree grates;
- h. Mowed grass lawn may be used to cover 100% of the required groundcover area, except along Minor Arterial roadways where mowed grass lawn is not allowed;
- i. Shrubs are not required, but may be provided and shall be maintained at a height not to exceed thirty (30) inches at maturity where planted adjacent to the roadway edge;
- j. Landscaping may consist of trees only, planted in tree grates adjacent to the roadway edge within the sidewalk area where space is limited; and
- k. Landscaping may be provided outside the roadway right-of-way with approval of the Landscape Standards Committee.



PREFERRED RIGHT-OF-WAY LANDSCAPE BUFFER Conceptual Section – Not to Scale



<u>ALTERNATIVE OPTIONS (As approved by the Landscape Standards Committee)</u> Conceptual Section – Not to Scale

# E. Landscape Screening



# 1. Entry/Gateway Areas

#### Location

Adjacent to major building &/or airport entrances, walkways, drives.

#### **Requirements**

- a. Refer to the POS Landscape Design Guidelines for specific recommendations regarding gateways to STIA.
- b. Entry and gateway areas shall be landscaped whenever possible;
- c. Landscaping used should provide color, texture and visual interest; and
- d. Larger plant sizes may be considered to provide immediate interest and effect.

# 2. Dumpsters, Service Areas, Loading Docks, and Storage Yards

#### Location

Adjacent to dumpsters, service areas, loading docks, and storage yards.

#### **Requirements**

- 1. *Type E1 Landscape: Visual Screen.* Type E1 landscaping shall meet all of the following criteria:
  - a. A five (5) foot wide landscape area shall be provided to screen incompatible uses;
  - b. Fences, walls and/or berms may be used in conjunction with or in place of other landscaping to screen incompatible uses when limited space is available as approved by the Landscape Standards Committee; and

c. Landscape areas shall include a combination of trees, shrubs and/or groundcovers to result in total coverage of the landscape area within three (3) years such that a minimum of 75% of the incompatible use is screened.

# 3. Uninterrupted Wall Surfaces

#### Location

Any uninterrupted wall surface 30' long or greater.

#### **Requirements**

- 1. *Type E2 Landscape: Visual Screen.* Type E2 landscaping shall meet all of the following criteria:
  - a. A five (5) foot wide landscape area shall be provided to partially screen uninterrupted wall surfaces;
  - Landscape area shall include a combination of trees, shrubs and/or groundcover to result in total coverage of the landscape area within three (3) years such that a minimum of 50% of the wall surface is screened;
  - c. Architectural features, such as building reveals and other detailing, trellis structures and public art may be used in conjunction with other landscaping as approved by the Landscape Standards Committee, and
  - d. Landscape planters may be used to meet this requirement where concrete/asphalt surfaces exist adjacent to building façades that are visible to the public.

# V. ENVIRONMENTAL LANDSCAPE FEATURES



All landscaping associated with environmental features (e.g. detention ponds, bioswales, slope stabilization, geotechnical explorations, and other related elements), shall be provided and maintained in accordance with any permit requirements through the regulatory agency and/or all relevant POS documents (standards, guidelines, plans and/or specification), in addition to the requirements outlined below. Refer to Section I for a list of POS documents that may apply.

All landscape associated with environmental features shall meet the requirements outlined in the General Landscaping Provisions (see Section VIII).

#### A. Detention Ponds

Landscape must comply with the Port of Seattle Comprehensive Stormwater Management Plan (CSMP), as most recently revised, Detention Pond Requirements section. This document was developed in compliance with the City of SeaTac and POS Interlocal Agreement.

- 1. For projects located within 10,000 feet of active runways, the following shall apply unless superseded by revisions to the CSMP:
  - a. Eliminate the potential for wetland vegetation growth on the pond bottom and side slopes by lining the pond with heavy-duty liners, riprap or quarry spalls. Alternately, use vegetation that provides no food or habitat for wildlife. For example, closely mowed grass, which is preferred by waterfowl, should be avoided.
  - b. Break up possible bird flight lines by planting trees, setting up poles and/or fences which do not allow most waterfowl clear landing or takeoff room on the pond surface.
  - c. Landscape must comply with Port of Seattle Comprehensive Stormwater Management Plan, most recently revised, Maintenance Section, including controlling growth of unwanted vegetation.

#### B. Bioswales

Landscape must comply with the POS Comprehensive Stormwater Management Plan (CSMP), most recently revised, Best Management Practices Section.

# C. Slope Stabilization & Construction Site Management

Stabilization of cut or fill slopes shall be accomplished in accordance with permits issued by a regulatory agency and/or shall comply with the POS Master Specification.

#### D. Geotechnical Exploration

Geotechnical explorations shall comply with the POS Stormwater Pollution Prevention Plan, including requiring disturbed soil areas to be raked, seeded, and covered with straw mulch after site exploration, hydrogeologic testing, and soil cutting collection have been completed.

# E. Critical/Sensitive Area Buffers

Critical/sensitive areas and buffers are regulated by the applicable jurisdiction in which they are located.

Critical/sensitive areas located within the City of SeaTac are regulated by the Interlocal Agreement ("Attachment A-4" to the ILA).

# VI. DEMOLISHED PROPERTIES

- 1. A Demolition Permit is required by the POS and may be conditioned as necessary to reasonably mitigate adverse impacts associated with demolition activities.
- 2. All debris and other material resulting from demolition activities shall be removed from the site.
- 3. All disturbed areas resulting from demolition activities shall be graded smooth and hydroseeded, or other POS approved erosion control method applied, within the disturbed area.
- 4. If a fence is required by the POS, then the fence shall be at a minimum a temporary galvanized chain link fence (i.e., posts at-grade on concrete blocks). A permanent vinyl-coated chain link fence shall be provided when the fence is located within paved surfaces that drain directly to catch basins, inlets, or other storm-drainage structure. Fence posts and rails do not need to be vinyl-coated. Vinyl-coating is not required within landscape areas.
- 5. For POS projects within the City of SeaTac, refer to Appendix K.

# VII. TEMPORARY USES

- 1. For the purposes of these Landscape Standards, a temporary use includes the following activities:
  - a. Carnivals, street fairs, and outdoor holiday celebrations;
  - b. Seasonal sales of Christmas trees, fireworks, flowers, fruits and vegetables;
  - c. Temporary construction sheds or trailers, staging area, lay down or other construction related activities only for the duration of the construction activity; provided, that no residential or other use shall be made of such temporary construction sheds or trailers that is unrelated to the construction activity;
  - d. Temporary parking facilities; and
  - e. Recreational uses.
- 2. No landscape improvements will be required for the duration of the temporary use.
- 3. Landscaping as required by these Landscape Standards shall be provided once the property is redeveloped with a permanent use.
- 4. Temporary uses shall be provided with sanitary facilities if the Building Code or Health Department Code specifically requires it.
- 5. Temporary uses shall meet all other applicable codes, ordinances and standards as determined by the POS.
- 6. For POS projects within the City of SeaTac, refer to Appendix L.

# **VIII. GENERAL LANDSCAPING PROVISIONS**

All landscaping, including areas not devoted to specific landscape buffers or screening, shall meet the requirements outlined in this section.

#### A. General Requirements

- 1. Plants shall conform to the current edition of the American Nursery & Landscape Association (ANLA) standards.
- 2. Trees with vertical branching should be used in narrow planting areas to avoid conflicts with vehicles or pedestrians.-
- Existing vegetation and architectural features (including walls, trellis structures, public art, planters and fences) may be used in conjunction with landscape requirements outlined in these Landscape Standards provided they achieve the intent of the landscape buffer or screen type and as approved by the Landscape Standards Committee.
- 4. Landscape within the Limited Landscaping Zone (LLZ) shall not include any trees or other vegetation that would exceed a height of 15' at maturity or grow higher than the elevation of the runway surface, and shall be planted such that a minimum clear area of 15' is maintained between adjacent tree crowns. The use of conifers within the LLZ shall be kept to a minimum and shall not exceed a total of 30% of the total landscaping (see Appendix H).
- 5. At least 50% of the landscape materials shall be native or drought-tolerant species, whenever possible. See the Approved Plant List (see Appendix E) for a list of plant types approved by the POS.
- 6. Use of trees in landscape areas should be minimized to a level that offers desired screening but does not produce a dense canopy of trees as is commonly found in a forest landscape provided minimum requirements of these Standards are met. Landscaping shall be arranged in the best configuration to maximize the buffer or screening function with minimal use of tree cover.
- 7. Grass lawn may be provided as a groundcover not to exceed a maximum of 50% of the total required groundcover area.
- 8. Landscaping shall be installed prior to occupancy for the project.
- 9. Landscaping shall provide for all sight distance requirements.
- 10. Landscaping around electrical utilities shall comply with the current edition of the National Electric Code (NEC).
- 11. Landscaping shall be located on the exterior side (that side closest to the lease/lot line) of any wall or fence used within landscape buffer areas.
- 12. Access for maintenance personnel, equipment, and vehicles shall be provided when designing landscape areas.
- 13. Slopes should be terraced whenever possible. Use of plants with fibrous roots on slopes should be considered.

#### B. Berms

Berms are encouraged as a screening device provided:

- 1. There is a variation in height and width to provide interest;
- 2. The combined height of the berm and shrub/groundcover planting shall not exceed the height requirements defined for each landscape buffer or screen type; and
- 3. Berms shall not exceed a slope of three (3) horizontal feet to one (1) vertical foot.

# C. Mulch & Soil Amendments

Water-wise mulches and soil amendments shall be provided in all landscape areas. Soil shall be amended and mulch applied as follows:

- 1. Existing subgrade soils shall be augmented with a two (2) inch layer of composted mulch rototilled to a minimum of six (6) inches deep;
- 2. After existing soils have been augmented with mulch and rototilling, a minimum four (4) inch layer of planting soil shall be placed and rototilled to a minimum six (6) inches deep; and
- 3. After planting trees, shrubs and groundcovers, landscape areas (except grass lawn) shall be covered with two (2) inches of mulch.
- 4. Beauty bark will not be allowed on slopes.

Alternative soil amendments and water-wise mulches may be used as approved by the Landscape Standards Committee.

# D. Plant Size & Spacing

- 1. Deciduous trees shall have a minimum caliper of two (2) inches as measured per the American Nursery & Landscape Association (ANLA) standards.
- 2. Coniferous and broadleaf evergreen trees shall be at least six (6) feet in height. Broadleaf evergreen trees shall have a tree form and a minimum branching height of three (3) feet unless otherwise stated.
- 3. Multi-trunk trees shall have a minimum height of six (6) feet.
- 4. Shrubs shall be at least eighteen (18) inches in height or width at time of planting.
- 5. Groundcovers, except grass lawn, shall be a minimum one (1) gallon container size at time of planting and planted at twenty-four inches (24") on center spacing.

#### E. Plant Selection

- All plants shall be adapted to their sites (sun exposure, cold hardiness, hydrozones, soil type, soil pH). Plants with differing environmental requirements shall not be used together if desirable circumstances (sun exposure, water requirements) cannot be provided for both plant types. Plant materials should consist of at least 50% native species, whenever possible, or drought tolerant non-native species that are adapted to the climatic conditions of the Puget Sound region.
- 2. Plant selection shall comply with FAA rules and advisory circulars, including, but not limited to restrictions on vegetation (obstruction) height and wildlife hazard attractants.
- 3. No artificial plants will be allowed.
- 4. Trees adjacent to paved surfaces shall not have invasive root systems and shall be selected to avoid damage to vehicles from sap, berries or other undesirable plant characteristics.
- 5. Only plants on the Approved Plant List (see Appendix E) shall be allowed for use on POS property. A list of plants that are not approved for use at the POS is also included. Plants that have nuts and/or berries will not be approved. The Approved Plant List may be supplemented with additional plants upon request. Project Managers and/or their consultant may request additional plants to the Plant Approval Committee on a project-by-project basis. However, the plant approval process is a lengthy process. As such and due to budgetary constraints, POS project managers may consider requesting only using plants provided on the existing Approved Plant List.

# IX. LANDSCAPE MAINTENANCE

All landscape areas shall be maintained by the POS (or POS Tenant as applicable) as follows:

- 1. All maintenance practices shall comply with the Stormwater Pollution Prevention Plan.
- 2. Remove and keep all landscape areas free of invasive plant species per State and County regulations.
- 3. Reseed bare areas in existing grass lawn.
- 4. Apply mulch to planting areas as needed to maintain a two-inch (2") mulch depth.
- 5. Maintain all areas to achieve effective, positive drainage, either through natural means (i.e. infiltration) or through an installed drainage system, to improve plant health and to reduce wildlife hazard associated with the creation of lagoons, wetlands, pooling or standing water, and open watercourses.
- 6. Reduce the use of chemicals in the landscape (e.g., herbicides, pesticides and fertilizers) through integrated pest management practices involving regular monitoring to determine if and when treatments are needed; proper soil amendments; and plant selection and maintenance practices. All chemical applications shall be made in a manner that will avoid their entry into waterways and storm drain systems, and shall comply with the POS Stormwater Pollution Prevention Plan for STIA. Use of fertilizers with reduced phosphorus content is encouraged.
- 7. All chemical fertilizers, herbicides, and pesticides shall be applied in accordance with the following:
  - a. Materials Safety Data Sheet information;
  - b. Label directions;
  - c. POS Stormwater Pollution Prevention Plan;
  - d. The revised Code of Washington Chapter 17.21 and NPDES permit; and
  - e. Local government ordinances.

The applicator shall be licensed by the State of Washington for the class of pesticide used. Target pesticide and herbicide application at sensitive plant life stages.

- 8. All plant transplanting shall comply with the American Nursery & Landscape Association standards (current edition).
- 9. All plant pruning and/or removal or shall be done by an arborist certified by the International Society of Arboriculture, as applicable and as outlined in Section XII, or per industry Best Management Practices.
- 10. Dead, diseased, plants in a state of decline, stolen or vandalized planting that is required by these Landscape Standards shall be replaced within thirty (30) days of notice given by POS, or during the next planting season if the loss does not occur in a planting season.
- 11. A maintenance assurance program shall be required for all new projects for a period of one (1) year from the completion of planting in order to assure compliance with these requirements. Refer to POS Master Specifications.
- 12. Hazards to public safety and/or the safety and security of airport operations, as determined by the Landscape Standards Committee, will be managed or maintained through pruning, transplanting and/or removal as needed to protect the continued safety/security of the airport environment.
- 13. Landscaping planted in association with detention facilities shall be maintained per the POS Comprehensive Stormwater Management Plan.
- 14. Maintenance of wetland or stream mitigation and buffer areas shall be according to associated permits issued for those areas.
- 15. A Maintenance Cost Basis Formula has been established by the POS to estimate landscape maintenance costs for all new projects, and should be included in all project budgeting processes (see Appendix G).

# X. SECURITY REQUIREMENTS

All landscape areas shall comply with the following safety and security requirements:

1. Landscape areas adjacent to building facades, where pedestrian access is available, shall provide clear visibility from grade to a minimum three (3) foot height. Distance of clear zone will be determined on a case-by-case basis through the POS Airport Security. Remote building façades or those with no pedestrian access do not apply, as determined by the POS Airport Security.



TYPICAL CLEAR ZONE ADJACENT TO BUILDING FACADE Conceptual Section – Not to Scale

- 2. Planting near doors, stairs, exits, etc. shall not provide concealment for a person in those areas.
- Landscaping under and around roadway and bridge overpasses shall provide an unobstructed view of that area from the roadway and shall not provide any place for concealment of a person under or around overpasses or similar structures.
- 4. Landscaping shall not provide access to second story windows.
- 5. All landscape areas located adjacent to an AOA security fence shall:
  - a. Not include deciduous or evergreen trees located such that the branches intersect or extend over the fence; and
  - c. Maintain an area clear of trees and shrubs within five (5) feet of either side of the AOA fence.



AOA SECURITY FENCE Conceptual Section – Not to Scale

# XI. WILDLIFE HAZARD MITIGATION REQUIREMENTS

Wildlife hazards or attractants, as determined by the POS Wildlife Management Biologist, will be managed using appropriate wildlife mitigation techniques, such as, selective tree harvesting (see Section XII). If hazardous wildlife is detected, corrective action will be implemented to preserve the safety and security of airport operations.

The following recommendations shall be considered for all landscape areas:

- 1. Select deciduous tree varieties with slower growth rates and that do not propagate with rhizomes;
- 2. Select tree varieties without seeds or berries to attract wildlife;
- 3. Select tree varieties whose branching habits are open, offering less protection for birds;
- 4. Select sterile varieties of trees, when possible;
- 5. Treat established trees with a sterilant chemical to stop or minimize fruiting; and
- 6. Treat tree species with Plant Growth Regulators (provided adverse impacts to the surrounding environment are avoided) to lengthen the pruning or management cycle.

# XII. TREE MANAGEMENT

Tree management shall be provided, maintained and/or implemented for all landscape areas accordingly:

- 1. No more than twenty (20) percent of the living crown of a tree shall be removed in one year, or as directed by an Arborist certified by the International Society of Arboriculture;
- 2. All pruning shall be done in accordance with current International Society of Arboriculture standards, and shall result in a balanced and open form for the height and width of the tree. Pruning cuts shall be made back to live lateral branches, leaving no stubs.
- 3. Trees shall be removed only when:
  - a. The maximum allowed pruning does not meet the requirements to discourage wildlife hazards; or
  - b. Trees are of a size that cannot warrant transplanting; or
  - c. Trees exceed the maximum allowable height requirements imposed by the FAA (e.g. FAA Critical Area conflicts).
  - d. Trees constitute an emergency wildlife hazard or wildlife attractant as determined by the POS Wildlife Biologist.
  - e. For police, fire, safety, and/or security purposes.
- 4. All trees removed that were required by these Landscape Standards shall be replaced at time of removal, except when aviation safety is the reason for the removal. Replacement trees shall meet all applicable requirements of these Landscape Standards (size, spacing, type, etc.).
- 5. Trees shall be selected for harvesting on the basis of their position relative to adjacent trees. Weak, unhealthy trees and trees being crowded by the greatest number of adjacent trees shall be removed first.
- 6. Tree harvesting shall generally be done during the dry months of the year, except under emergency conditions. Trees shall be cut and felled such that remaining trees, shrubs and groundcovers are not damaged or cause excessive compaction to surrounding soils (see Section XIII).

Harvested trees shall be removed from the area immediately if the downed trees are adjacent to a public roadway or present an alternative conflict.

# XIII. PRESERVATION OF SIGNIFICANT TREES

Preservation of significant trees should be considered by the Landscape Standards Committee, as follows:

- 1. Significant trees which are in good health and do not constitute a safety hazard, as designated by an Arborist certified by the International Society of Arboriculture, should be retained, whenever possible, in all landscape areas.
- 2. In general, trees under the following conditions might not apply:
  - a. Within areas devoted to access points and to sight distance requirements at street or driveway intersections;
  - b. Within areas cleared for, or trees having an adverse impact on, required roads, utilities, sidewalks, trails or storm drainage systems;
  - c. Trees that constitute a wildlife hazard attractant, as determined by the POS Wildlife Management Biologist;
  - d. Trees with branches extending within five (5) feet of the AOA security fence, or that pose a security hazard for airport operations;
  - e. Trees pruned or removed due to overhead utility lines; and/or
  - f. The site design incorporates the retention of other natural vegetation in consolidated locations that promotes the natural character of the site or otherwise meets the purpose and intent of this section.
- 3. Special interest, historical and/or specimen trees or clusters of trees with outstanding qualities, form, health and/or cultural/historical significance should be retained whenever possible.
- 4. The soil around retained trees should remain undisturbed with a disturbance-free zone extending out from the trunk of the tree one (1) foot radius per one (1) inch diameter of the tree trunk, when measured four (4) feet above grade; and no impervious surfaces, fill, excavation, vehicle operations, compaction, removal of native soil or storage of construction materials should be permitted within the disturbance-free zone, unless otherwise approved by an Arborist certified by the International Society of Arboriculture
- 5. Additional tree protection methods may be recommended by the Landscape Standards Committee, and may include, but are not limited to:
  - a. Temporary fencing corresponding to the disturbance-free zone of the trees to be retained;
  - b. Tunneling instead of trenching;
  - c. Stump grinding instead of stump pulling;
  - d. Routing of construction traffic to prevent excessive soil compaction; and/or
  - e. Retaining an Arborist, certified by the International Society of Arboriculture, to determine additional measures that may need to be taken to preserve significant, special interest or specimen trees.

# XIV. IRRIGATION REQUIREMENTS

As a result of the increasing cost of water and periodic water shortages, a water-wise irrigation system suitable to maintain all new landscape areas shall be provided, installed and maintained as follows:

- 1. Coordinate with the Mechanical Utilities Systems Team (MUST), the Proactive Electrical Systems Team (PEST), and the Water, IWS, Storm & Sanitary Sewer Committee (WISE) for existing water and electrical points of connection and system design review prior to construction. An Application for Connection Form must be submitted and approved prior to construction. Irrigation controls shall be installed in accordance with the latest NEC and shall be listed by an authority recognized by the State of Washington. In the case of the installation of systems that use controllers above 120 volts for direct control of irrigation devices, such installations shall comply with NEC article 675 and be listed and labeled by UL or approved equal.
- 2. Systems shall be designed to ensure that overspray, runoff or low-head drainage does not occur.
- 3. Systems shall be designed for separate irrigation zones based upon plant hydrozone requirements, soil conditions and maturity of planting.
- 4. Sprinkler heads with consistent application rates shall be selected for proper area coverage, operating pressure, and adjustment capability.
- 5. Sprinkler head spacing shall be based upon manufacturer's recommendation to provide the most efficient water application.
- 6. Irrigation systems shall use state-of-the-art water conserving features, such as:
  - a. Moisture or precipitation sensors,
  - b. Rain shut-off device(s),
  - c. Pressure regulator valve(s) and
  - d. Master control and flow sensing valve(s).
- 7. Consider soil type and infiltration rates in designing irrigation systems.
- 8. Special problems posed by irrigation on slopes, in median strips and in narrow hydrozones shall be addressed.
- 9. Systems shall include a backflow prevention device per POS Standard Details.
- 10. Irrigation meters shall be installed per POS Standard Details.
- 11. Irrigation systems shall be designed with provisions for winterization by providing both manual drains at all low points (automatic drain valves are not permitted) and a means to blow out irrigation system pipes with pressurized air. The POS Maintenance Department shall be notified twenty-four (24) hours prior to winterizing the system so that a Maintenance Representative can be present during the winterizing work.
- 12. Consider the natural drainage patterns of the landscape, the microclimate and other natural features that may affect water availability and needs of a particular planting area.
- 13. Irrigation systems shall be regularly monitored and maintained for efficient water-wise irrigation of the landscape. Automatic controllers shall be set for operation at night to optimize water efficiency and assure adequate moisture levels. Maintenance adjustment needs or repairs may be indicated by the following common irrigation performance problems:
  - a. Dry areas between sprinkler heads;
  - b. Wet areas due to excessive water coverage;
  - c. Water applied to areas not requiring water (over-spray);
  - d. Ponding water at sprinkler heads;
  - e. Loss of water pressure; and/or
  - f. Damaged or broken sprinkler heads and/or pipe.

# XV. SPECIAL LANDSCAPE FEATURES

#### A. Water Features

All proposed water features (not including environmental landscape features and/or mitigation sites (see Section V) will be reviewed by the POS Wildlife Biologist and may be allowed on POS property provided:

- 1. They are located in urban, high traffic (vehicular and pedestrian) areas or in specific locations where the potential for wildlife hazards to aircraft are reduced;
- 2. They are unvegetated and are not located in a natural environment, such as, wetlands, streams, etc.;
- 3. They do not include standing bodies of water unless covered in a fashion that prevents attracting wildlife;
- 4. They consider the use of chemicals or other means of deterring wildlife from the water feature(s) but must meet all other regulatory requirements; and
- 5. They meet all FAA regulations and other requirements to avoid any conflicts with airport operations.
- 6. They minimize the ability to enhance breeding of mosquitoes capable of spreading the West Nile Virus.

#### **B.** Public Art

Refer to the Aviation Art Program procedures for applicability of public art on STIA projects. Where used in the landscape, public art shall be integrated into the overall design approach to maintain a consistent, coherent overall landscape design as determined on a case-by-case basis through the Aviation Art Program and the Landscape Standards Committee, and shall consider:

- 1. Recommendations outlined in the Landscape Design Guidelines;
- 2. Sight distance requirements, per Washington State Department of Transportation Design Manual;
- 3. Safety of the traveling public (i.e. distractions to vehicular drivers, etc.);
- 4. Access and feasibility for maintenance; and
- 5. FAA regulations and other limitations as may be required to avoid any conflicts with airport operations.

Landscape planting in and of it self is not considered an art feature by the POS and cannot be counted towards the 1% for art program.

#### C. Lighting

Lighting may be provided to accent or highlight landscape areas or special features in the landscape, or to increase the pedestrian usability of a particular space at night, such as, walkways, streetscapes and/or plazas. Where used in the landscape, lighting shall be integrated into the overall design approach to maintain a consistent, coherent landscape design as determined on a case-by-case basis through the Landscape Standards Committee. All lighting provided shall meet the requirements outlined in the Architectural Standards, Electrical Standards and other relevant POS guidelines or standards, and shall consider recommendations outlined in the Landscape Design Guidelines.

All lighting design shall be reviewed and approved by the Proactive Electrical Systems Team (PEST) prior to installation.

All lighting shall consider Recommended Practices for Outdoor Lighting by the Illuminating Engineering Society of North America (IESNA).

Lighting that is near and clearly visible from City residential areas and street right-of-way shall be screened in a manner to prevent off-site glare.

# D. Site Furnishings

Street furniture may be provided in landscape areas, along roadways, roadway frontages, public transportation areas, walkways and/or in exterior plaza/gathering spaces. Where used, street furniture shall be integrated into the overall design approach to maintain a consistent landscape design, and reflect the overall character of Sea-Tac International Airport. All street furniture shall meet the requirements outlined in the Architectural Standards. Selection of street furniture shall consider:

- 1. Recommendations outlined in the Landscape Design Guidelines;
- 2. Accessibility;
- 3. Security and public safety in locating street furniture elements; and
- 4. Access and feasibility of maintenance.

All site furnishings shall be reviewed by the Design Review Committee.

# E. Signage

In general, signage design (way-finding/directional, informational, etc.) is governed by the Signage Standards and Guidelines for STIA. Interpretive signage and other landscape-related signage may be considered provided in meets the overall intent of the Signage Standards and Guidelines for STIA.

STIA Landscape Design Standards