

Retaining Wall Design Standards

July 27, 2023

INTENT

These provisions are intended to mitigate the impact of large, monotonous retaining walls in the right-of-way by requiring architectural and landscaping treatments that reduce the harshness of such walls and reflect the community identity.

INTERPRETATION

The terms used in these standards indicate whether provisions are required or whether they are discretionary, but highly recommended and desirable.

SHALL—The use of the term “shall” (or “shall not” in the negative) represents a requirement of the design to meet the intent of the guideline. This provision must be followed as part of planning, design, and implementation of the project.

SHOULD—The use of the term “should” (or “should not” in the negative) indicates a provision that is strongly encouraged, but that is not an absolute requirement. Compliance with this provision is voluntary, but highly desirable to the community.

PROVISIONS

1. The architectural finish of retaining walls shall depict artistic images having a strong relationship to the Pacific Northwest and the surrounding natural environment including native trees, flora, and fauna of the region. (see examples in Figures A and B)

FIGURE A



FIGURE B

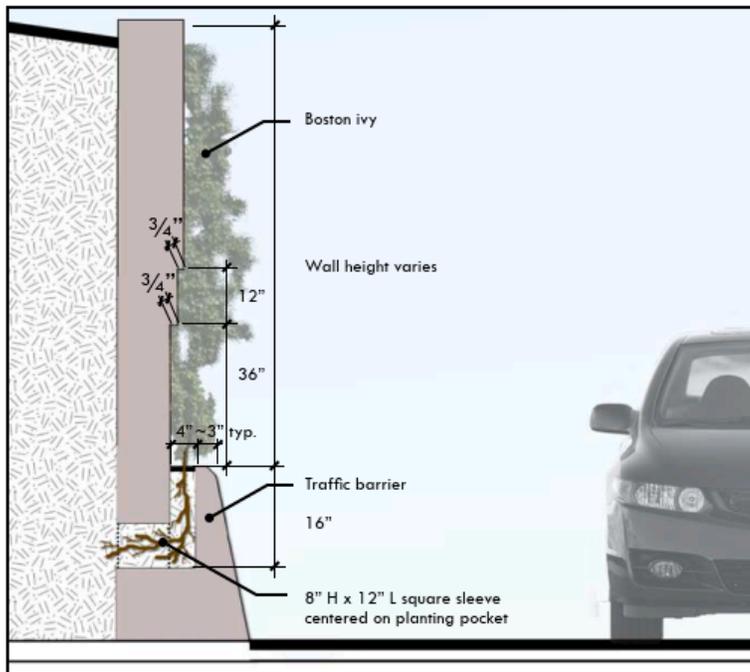


2. In addition to the architectural finish requirements of Provision 1, landscaping and vegetation such as that found in Figures C and D below shall be installed. Trees, shrubs and ground cover planted adjacent to a wall should incorporate plant species native the pacific northwest where possible.
 - a. In situations where the retaining wall is behind a sidewalk, the plantings shall be drought tolerant species that do not require permanent irrigation and shall be spaced in a manner similar to the spacing of the plantings shown in Figure C below.
 - b. In situations where the retaining wall is directly adjacent to a vehicular travel lane or shoulder, wall vegetation shall be installed in a manner similar to that described below.
 - i. The City's preference is that a permanent irrigation system be installed for vine pockets as shown in Figure D. When vine pockets are supported by an irrigation system, they can be spaced up to 10 feet apart on average for the length of the wall segment.
 - ii. If no permanent irrigation system is installed, vine pockets as shown in Figure D shall be spaced every 6 to 8 feet apart on average for the length of the wall segment unless structurally infeasible as demonstrated by a qualified structural engineer and verified by the City's structural engineering consultant. Vine pockets should be spaced so that the vines do not substantially obscure the artistic images depicted on the walls.
 - iii. Where landscaping is planted in front of the retaining wall, vines should be densely planted in front of the wall in a way that does not substantially obscure the artistic images depicted on the walls.

FIGURE C



FIGURE D



Vine Pocket – Example Section

3. The wall construction type for an independent wall segment may deviate from the requirements of Provisions 1 and 2 if it can be demonstrated to the Public Works Director's satisfaction that vegetation will grow directly from the wall face as shown in Figures E and F and will reach a

coverage of 80% of the wall front surface within 36 months. The plantings should be native and a permanent irrigation system shall be incorporated.

FIGURE E



FIGURE F

