Chapter 8 Visual and Aesthetic Resources

1 How is visual quality assessed?

The assessment of visual quality is concerned with both the character of the visual experience and the effect upon the viewer. The assessment of visual quality is subjective, because the visual environment is seen through personal and cultural frames of reference. There is, however, a reasonable basis for considering impacts to visual quality. This assessment is based on federal, state, and local policies and regulations, as well as from research that establishes the general public consensus of what constitutes a desirable visual environment.

Within the central Puget Sound region, cities and counties have developed and adopted plans, policies, and regulations that affect design, aesthetics, and visual character in different ways. Some local jurisdictions have adopted view regulations that specifically address light, glare, or protected views. For example, some cities have adopted specific requirements for environmental review on projects or plans within the city that protect views of specific natural and man-made features; discourage light, glare, and light blockage; and list parks, shorelines, schoolyards, and other landscape features that are to receive special protection.

Comprehensive plan policies from local jurisdictions also address the visual character of their communities, either explicitly through formal policies or in general terms within the entire planning document. Urban design concepts that include streetscapes and open spaces, as well as buildings, are becoming a more integral part of the comprehensive planning process.

Which elements of Washington Administrative Code (WAC) 197-11-444 are addressed in this chapter?

This chapter addresses:

- Section (1)(e)(v) Scenic resources
- Section 2(b)(iii) Light and glare
- Section 2(b)(iv) Aesthetics

The Puget Sound region is renowned for its natural beauty.

Source: Parametrix, Inc.

River valleys enhance the visual environment in rural areas.

Source: Parametrix, Inc.

2 What types of visual resources are present in the central Puget Sound region?

The natural beauty of the central Puget Sound region is considered one of its most valuable resources. Man-made visual resources are also found throughout the region (Exhibit 8-1).

Natural Areas

The Cascade and Olympic Mountains and their foothills are visible throughout the area. These views are especially valued, as are views of Mt. Rainier, Mt. Baker, Puget Sound, and the many lakes and rivers in the region.

Urban Areas

The built environment in urban portions of the region is diverse in scale, bulk, height, and overall character. Structures such as the Space Needle, sports stadiums, and bridges are important examples of public architecture and are prominent visual features. Public parks, green spaces, and open spaces are also highly valued visual resources. High-rise buildings in downtown Seattle, Tacoma, Bellevue, and Everett create scenic skyline views within these cities and from outlying areas.

Suburban Areas

Aesthetic features in suburban areas include the diversity and visual interest provided by concentrations of human activity, instances of prominent structures featuring historic or distinctive architecture, and urban art. The oldest architecture is found in downtown areas and surrounding neighborhoods.

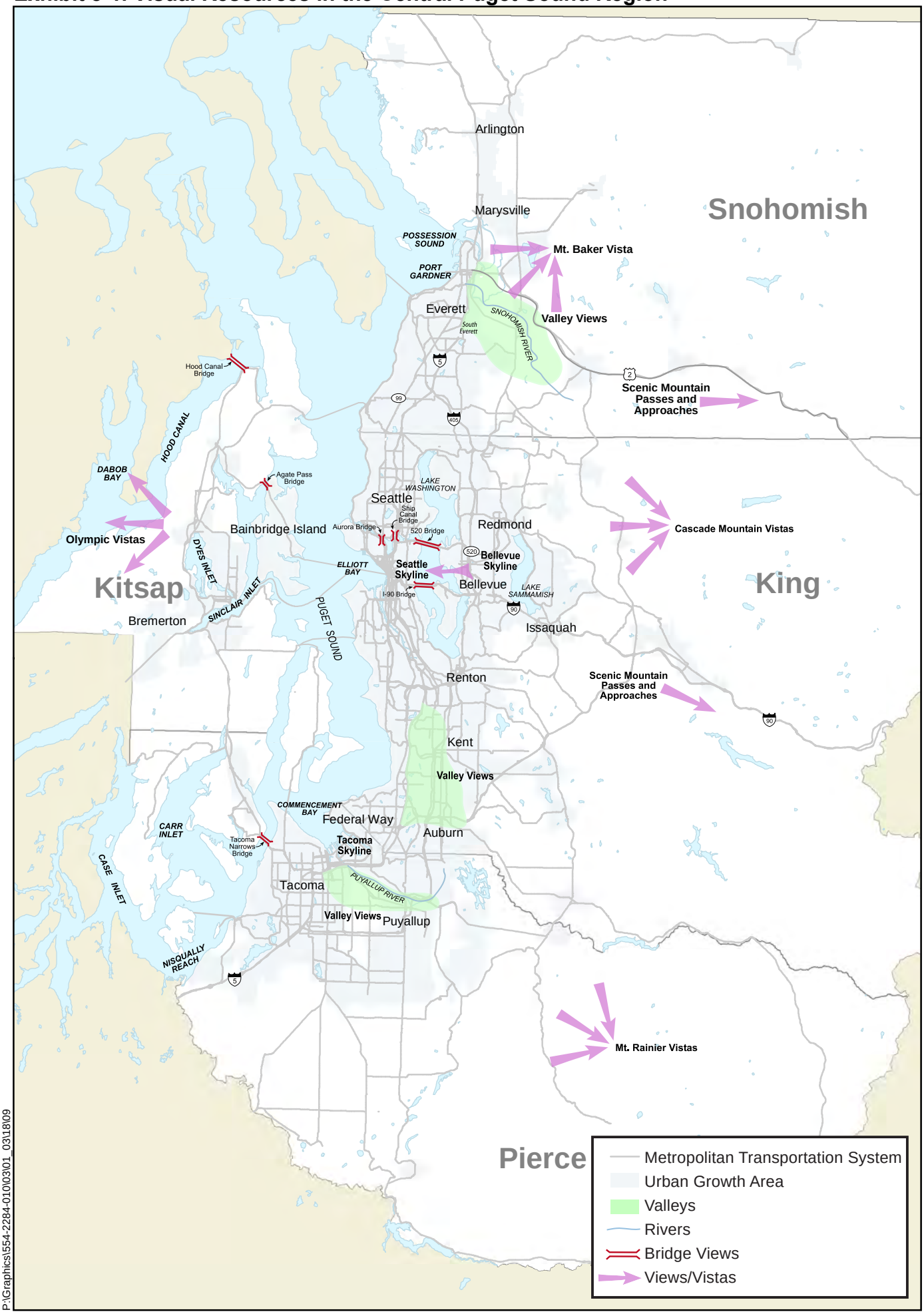
Agricultural Areas

Agricultural areas such as the Green, Puyallup, and Snohomish River valleys are typified by their openness, very low density of development, rural architecture, and occasional historic structures. They are oriented to the rectangular township/range/section pattern, interrupted by irregular natural features such as topography, water bodies, and wooded areas. The combination of these generally pleasing visual elements provides many scenic views in agricultural areas.

What are examples of visual resources?

- Transportation facilities – types, sizes, scale, and directional orientation.
- Streetscapes – including pavement types (for the roadway itself, as well as bike lanes, crosswalks, and sidewalks), median design, street trees, street furniture, and light fixtures.
- Overhead structures, utilities, and lighting – types, sizes, and scale.
- Viewpoints and views to visual resources – natural resources, farm landscapes, historic structures, and dramatic downtown skylines.
- Landforms – types, gradients, and scale.
- Vegetation – types, size, maturity, and continuity.
- Land uses and structures – size, scale (apparent size in relation to actual size), and character of associated buildings and ancillary site uses.
- Urban design.
- Historic structures and neighborhoods.
- Public spaces – including civic facilities, plazas, gathering places, and public art.
- Other open space types (including parks, reserves, greenbelts, and undeveloped land), extent, and continuity.

Exhibit 8-1. Visual Resources in the Central Puget Sound Region



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3 What effects on visual resources are common to all alternatives?

Specific effects on visual resources would be determined during project-level environmental review. The following sections discuss a sampling of possible effects.

Long-Term Effects

Effects on visual resources would depend on the nature of the existing landscape and the proximity of proposed transportation improvements to sensitive resources and viewpoints. Individual projects can also incorporate measures to avoid and/or minimize potential impacts to visual resources, and add features that improve the existing visual character of an area. The sensitivity of different land uses to visual change would vary greatly. For example, neighborhoods with single-family homes, parks, cemeteries, and schools and hospitals with open space campuses would tend to be more sensitive to bulk, height, increase of scale, and visual change than mixed-use areas with larger multistory residential buildings and commercial or industrial land uses.

Some transportation facilities would affect the views and visual character of some residential neighborhoods, natural areas, and open spaces. However, impact levels would generally be reduced where improvements are located along existing freeways and arterials, at existing park-and-ride lots, in activity centers, and in other aesthetically compatible locations.

Some transportation facilities, such as recreational trails or other nonmotorized facilities, could result in positive effects on the visual environment when they are placed in natural settings. Transportation projects that replace existing aging facilities with more aesthetically pleasing modern facilities can also result in improvements to the visual environment, such as removing view-blocking structures or using context-sensitive design principles.

Park-and-ride lots and parking garages would require large expanses of pavement, which may also contrast with the views

What is the difference between plan-level and project-level environmental review?

This FEIS is a plan-level (rather than a project-level) EIS. Accordingly, alternatives are defined and environmental effects are evaluated at a relatively broad level. More detailed project-specific environmental review will be developed as appropriate in the future for projects identified in the Transportation 2040 plan that are selected for implementation by their sponsors: Washington State Department of Transportation (WSDOT), transit agencies, counties, and cities.

What is context-sensitive design?

It is an approach to design that puts transportation needs, community values, and environmental goals on an equal footing in determining the final project design.

and visual character of adjacent land uses. Increased intensity of use at existing park-and-ride lots would generate additional visual impacts. Additional lighting in parking facilities would result in higher levels of light and glare around both expanded and proposed park-and-ride lots.

Additional rights of way may be required for many of the transportation improvements, and may include widening of arterials or highways or other public rights of way. Without mitigation, this would increase the visual impact from the roadway or other transportation facility and reduce visual buffers between roadways and adjacent uses. In cases where new rights of way may be required in areas that are either currently undeveloped or where other urban development exists, the introduction of transportation facilities could remove or alter existing features. This may affect visual character and views depending on the location.

Large transportation structures can alter the visual environment.

Source: Parametrix, Inc.

Added structures, overhead power sources, and other operation and maintenance facilities for transportation projects can obstruct or clutter views, cast shadows, and result in substantial changes to existing visual character. In some cases, the introduction of transportation facilities themselves may also be perceived as a visual impact; however, areas in which visual resources are currently affected by moderate to high levels of development, other transportation facilities, and traffic would be less likely to experience a noticeable change to the visual environment.

Construction Effects

Construction of transportation facilities would cause visual impacts by removing or altering existing visual resources that contribute to the quality of the visual environment. Examples include clearing vegetation, grading, and demolishing structures.

Temporary visual impacts would include the presence of construction equipment, materials, signage, and staging areas in the construction zone, which would reduce the visual quality of the immediate area during the construction period.

The presence of construction equipment can affect the visual environment.

Source: Parametrix, Inc.

Temporary lighting may be necessary for nighttime construction of certain project elements or at certain locations. Examples may include nighttime construction activity in existing road or highway rights of way (to minimize disruption of daytime traffic). This temporary lighting could impose impacts on residential areas by exposing residents to uncomfortable glare from unshielded light sources or by increasing ambient nighttime light levels.

During street and highway widening or ramp and overpass reconstruction, some views could be blocked and the visual character in the immediate area would be affected. Any other temporary visual impacts that would be imposed only during the construction period are not expected to be substantial.

4 Which alternatives would be likely to cause the greatest number of effects on visual resources?

The types of effects described in the response to Question 3 could occur under any of the proposed Transportation 2040 alternatives, including the Baseline Alternative. This question does not seek to identify specific effects to visual resources. Instead, it uses the amount of new transportation infrastructure contained in each alternative to compare the possible total effect to visual resources in the region.

As noted in the sidebar, this plan-level FEIS will not list the specific individual effects that could result from all of the projects contained in each Transportation 2040 alternative. In addition, it is not practicable to conduct a regionwide evaluation of the collective effect on the region's visual resources from all projects. Therefore, this plan-level FEIS does not contain a regionwide analysis of visual resources.

However, it is possible to provide an approximation of which alternatives could result in the greatest number of effects on visual resources. The Transportation 2040 alternatives contain varying levels of new transportation infrastructure (Exhibit 8-2), and it is likely that the alternatives with the most new infrastructure would result in the greatest number of effects on visual resources.

Why does this FEIS not list the specific environmental effects caused by each alternative?

Each of the Transportation 2040 alternatives contains hundreds of individual projects. If constructed in the future, these projects could affect the region's built and natural environments.

For some environmental disciplines, such as transportation or air quality, these projects could affect the environment in the vicinity of the project and also could collectively affect the regional environment. For these disciplines, this FEIS contains an analysis to evaluate the potential regional effects of these projects. The localized effects for these environmental disciplines will be identified in a future project-level environmental review.

For other environmental disciplines, such as visual and aesthetic resources, individual projects could affect the visual resources in their vicinity, but would not affect visual resources elsewhere in the region. Therefore, this FEIS does not contain a regionwide analysis for these disciplines. Future project-level environmental review will identify the specific localized effects on these environmental areas.

Exhibit 8-2[1]
Miles of New Infrastructure Included in Each Alternative

Facility Type	Base Year 2006	Baseline Alt	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Preferred Alt
Systemwide freeway and arterial lane miles	12,806	13,153	13,352	14,013	13,540	13,489	13,329	13,764
New freeway and arterial lane miles	-	348	546	1,208	735	683	523	958
Portion of new lane miles in new corridors	-	30	40	240	218	159	40	248
Light rail miles	2	55	55	82	55	82	82	86
New light rail miles		53	53	80	53	80	80	84
Commuter rail miles	74	82	82	82	82	82	128	128
New commuter rail miles	-	8	8	8	8	8	54	54
Total new miles of road and rail	-	409	607	1296	796	771	657	1096
Percent increase from 2006	-	3%	4%	9%	6%	5%	4%	7%
Nonmotorized facility miles	570	600	747	745	740	745	1058	1123
New nonmotorized facility miles	-	30	177	175	170	175	488	553

As shown in Exhibit 8-2, all of the alternatives contain similar amounts of new infrastructure, measured as a percentage of the total Metropolitan Transportation System (3 to 9 percent). Alternative 2 contains the greatest number of new miles of road and rail, while the Baseline Alternative contains the fewest. Of the action alternatives, Alternative 1 contains the fewest number of new miles of roads and rail. Therefore, Alternative 2 would likely result in the highest number of effects on visual resources and the Baseline Alternative would likely result in the lowest number. Among the action alternatives, Alternative 1 would likely result in the lowest number of effects on visual resources. The number of effects resulting from Alternatives 3, 4, and 5 would likely fall between the overall number of effects expected for Alternatives 1 and 2.

The Preferred Alternative includes the second-greatest number of new miles of roads and rail. Therefore, the Preferred

[1] This exhibit has changed since the DEIS.

Alternative would likely result in the second-greatest number of effects on visual resources. However, most of the new miles of roads and rail would be built along existing transportation corridors. New transportation facilities constructed in existing transportation corridors are less likely to negatively affect visual resources than those built in new corridors. Conversely, the Preferred Alternative adds the most miles of new freeway and arterial lane miles (248) in new corridors. Therefore, visual effects from the Preferred Alternative in new corridors would likely be higher than other alternatives.

The Preferred Alternative includes the greatest number of miles of nonmotorized facilities, which include bicycle and recreation trails. Projects that expand and enhance nonmotorized travel often result in positive visual effects by providing more viewpoints for visual resources without diminishing the nearby visual environment.

The comparisons presented here are intended to approximate the number of effects expected from each alternative and do not identify specific effects to visual resources. Future project-level environmental review will identify these effects.

5 What cumulative effects on visual resources could occur if the Transportation 2040 actions coincide with other planned actions?

What are cumulative effects?

Cumulative effects address the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

The existing natural and man-made landscape in the central Puget Sound region reflects past and present cumulative effects on visual and aesthetic resources. Future cumulative effects on visual and aesthetic resources could be affected by other regional plans and actions. Local jurisdictions throughout the region may revise their existing land use plans to be consistent with VISION 2040 and to complement the Transportation 2040 Preferred Alternative. New development resulting from these plans could have both positive and negative effects on the environment.

PSRC has performed an analysis of the development pattern changes that could result from the transportation alternatives (refer to Chapter 5: Land Use, Population, Employment, and

Housing) and has concluded that none of the Transportation 2040 alternatives would induce future land use and development pattern changes that are substantively different than the Baseline Alternative. In addition, all of the Transportation 2040 alternatives are consistent with the adopted VISION 2040 Regional Growth Strategy. Therefore, none of the Transportation 2040 alternatives would result in additional cumulative effects on visual resources.

6 How can the effects on visual resources be mitigated?

Mitigation measures to reduce or minimize adverse impacts on visual quality and aesthetic resources could include the following:

- Select and/or modify routes to avoid or reduce the need to acquire and clear new rights of way.
- Use interdisciplinary design teams to incorporate aesthetic considerations in the design of project elements through context-sensitive design.
- Implement Main Street or Great Streets programs that incorporate features to better integrate transportation facilities within their surrounding communities, including landscape and functional features emphasizing "complete streets" approaches that consider walking, bicycling, transit, and potential recreational use of a corridor.
- Integrate facilities with area redevelopment plans.
- Minimize the elevation or height of transportation facilities to limit their visibility.
- Minimize clearing for construction, construction staging, stockpiling, and storage.
- Minimize the extent of parking areas associated with the facilities.
- Minimize impacts to viewpoints, parks, view corridors, and scenic routes.

Replanting the areas around a project with grass, plants, or trees mitigates the visual effect of construction.

Source: Parametrix, Inc.

- Plant appropriate vegetation in and adjoining the project right of way, including street trees and greenbelts or other features that enhance the experience of facility users, as well as provide screening for sensitive visual resources and viewers.
- Replant remainder parcels with grass or simple plantings, maintain them, and pursue their redevelopment for land uses that prove feasible and consistent with neighborhood plans, such as residential, commercial, or open space uses.
- Use source shielding in exterior lighting at stations and ancillary facilities, such as maintenance bases and park-and-ride lots, to ensure that light sources (such as bulbs) are not directly visible from residential areas, streets, and highways, and to limit spillover light and glare in residential areas.
- Reduce light and glare impacts from temporary construction by aiming and shielding light sources.
- Screen views of construction equipment and materials.
- Minimize construction-related dust.
- Restore landscapes disturbed by construction-related activities to pre-construction condition as soon as possible after completion of work.

What is a remainder parcel?

"Remainder parcel" refers to the portion of land acquired for a project that is not ultimately occupied by that project, but is nonetheless affected by the project's proximity. Remainder parcels are often not suitable for redevelopment due to access or size restrictions.

7 Are there any significant unavoidable adverse impacts to visual resources?

Some significant unavoidable adverse impacts to visual quality and aesthetic resources could occur for projects during construction and operation where views are obstructed or where the transportation project is out of character and scale with the area. These impacts would be analyzed in detail during project-level review.