



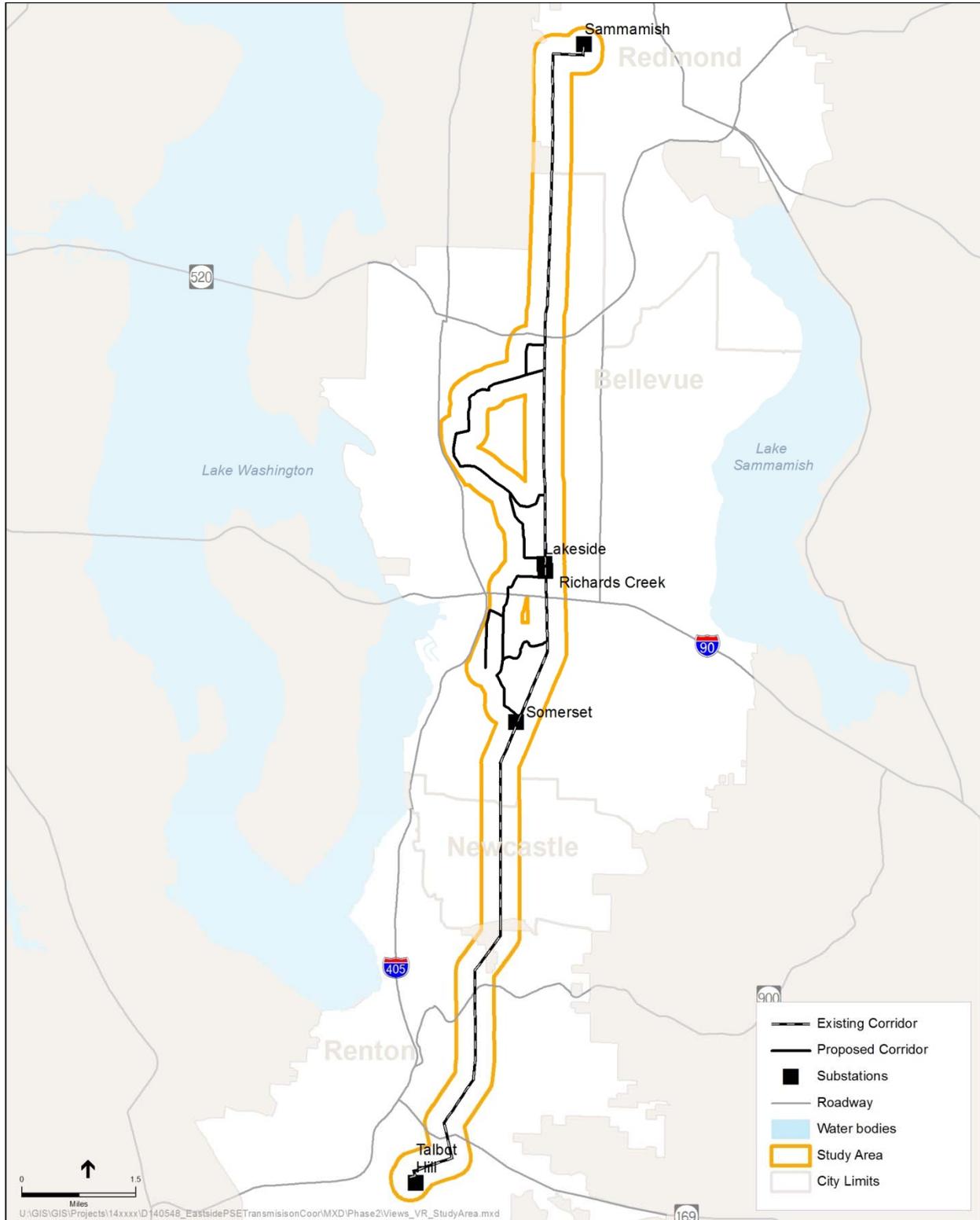
3.2 SCENIC VIEWS AND THE AESTHETIC ENVIRONMENT

Impacts to views and visual resources were evaluated at a programmatic level in the Phase 1 Draft EIS. The Phase 1 Draft EIS provides a high-level assessment of impacts to visual character; changes to views, viewpoints, and visual resources; and light, glare, and exhaust impacts. This section addresses impacts to *scenic views* and the *aesthetic environment*. Scenic views are views of visual resources that are considered special attributes of the study area and region (Figure 3.2-1). Visual resources associated with the study area were identified in the Phase 1 Draft EIS based on study area plans, regulatory codes, and scoping comments. These include scenic views of the Olympics, the Cascades, Mount Rainier, Cougar Mountain, Lake Washington, Lake Sammamish, and the downtown Bellevue and downtown Seattle skylines. The aesthetic environment is what influences human perception of the world. It is comprised of the natural environment (e.g., topography, vegetation, water bodies) and built environment (e.g., buildings, utility infrastructure). Topics of the Phase 1 analysis that were determined to have no significant impacts (such as light, glare and exhaust) were not carried forward to this Phase 2 assessment.

SEPA (WAC 197-11) requires all major actions sponsored, funded, permitted, or approved by state and/or local agencies to undergo planning to ensure that environmental considerations, such as impacts related to scenic views and the aesthetic environment, are given due weight in decision-making. Because the value of scenic views and the aesthetic environment is subjective, based on the viewer, it is difficult to quantify or estimate impacts. In particular, little guidance exists supporting a standard methodology for assessing visual impacts associated with transmission line projects. A number of methodologies were reviewed to inform the methodology used for this project. For this project, the assessment of impacts to scenic views and the aesthetic environment was generally based on methods described in the Federal Highway Administration (FHWA) *Guidelines for Visual Impact Assessment* (FHWA, 2015). The FHWA guidelines were developed for linear infrastructure projects and provide a useful framework. FHWA guidelines describe methods to assess impacts, but do not specify thresholds for determining significant impacts. Similarly, state and local regulations do not provide guidance for determining significance. Therefore, significance was determined based on criteria similar to those described in *The State Clean Energy Program Guide: A Visual Impact Assessment Process for Wind Energy Projects* (Vissering et al., 2011), which was developed for large electrical facilities.

Methods for Studying the Affected Environment

The affected environment is described by four characteristics: visual character, affected population, visual quality, and visual resources. These characteristics were used to assess impacts to the aesthetic environment and scenic views. Changes to the visual character and visual quality of the study area were assessed to identify impacts to the aesthetic environment. The potential for the project to obstruct views of visual resources located outside of the study area was assessed to identify impacts to scenic views. The affected population was considered for both the assessment of the aesthetic environment and the assessment of scenic views.



Source: King County, 2015; Ecology, 2014.

Figure 3.2-1. Scenic Views and Aesthetic Environment Study Area

Under the FHWA guidance, the study area for the visual impact assessment (referred to in the FHWA guidance as the “area of visual extent”) was determined based on the physical constraints of the environment (e.g., topography) and the physiological limits of human sight.

For the Energize Eastside project, the study area is defined as the area within 0.25 mile from the edge of the existing and new corridor, including all segments and options, excluding areas west of Interstate 405 (I-405) (Figure 3.2-1). I-405 and all areas west of I-405 were excluded because the freeway provides such a wide separation that the project would not visually impact the neighborhoods west of the freeway, views seen from those neighborhoods, or views of drivers on I-405. This study area focuses on areas where the project transmission line would be within the foreground view where viewers are most likely to experience the scale of the project and observe details and materials. While the project would be visible at greater distances, significant visual impacts are not probable given the project’s scale relative to its largely mixed urban context.

3.2.1 Relevant Plans, Policies, and Regulations

The Phase 1 Draft EIS provided an overview of the planning policies and regulations pertinent to the protection of views and visual resources (see Section 12.2 in the Phase 1 Draft EIS). For this Phase 2 Draft EIS, the policies and regulations considered were updated to incorporate changes to the Newcastle 2035 Comprehensive Plan (City of Newcastle, 2016) and include applicable subarea plan policies (see Appendix C). It is likely that local covenants exist throughout the study area that provide aesthetic standards specific to their respective communities. For the purpose of this Phase 2 Draft EIS, private covenants were not reviewed unless determined by the Partner Cities to uphold broader City policies. In general, the Partner Cities do not have SEPA policies that provide authority to recognize private covenants.

Visual Quality

High – Area is relatively undisturbed by development. Development that does exist has urban design that is considered aesthetically pleasing (per local planning documents). There is minimal utility presence. Utilities that are present are small-scale and have consistent height and form that blend with the surrounding aesthetic environment.

Medium – Development blends with the natural environment and does not disrupt the natural harmony of the area. Development has consistent building height and form and is not inconsistent with set design standards. There is moderate utility presence that generally blends with the surrounding aesthetic environment.

Low – Built environment takes precedence over natural environment. Development has inconsistent height and form and does not meet set design standards. There is high utility presence, and utility infrastructure is the prominent feature in the viewshed.

3.2.2 Scenic Views and the Aesthetic Environment in the Study Area

The affected environment is described according to four characteristics, as defined below and summarized by project component (i.e., substation, and transmission line segment and option) in Table 3.2-1:

1. **Visual Character:** Visual character is the aggregate of the visible attributes of a scene or object, including natural (topography, water bodies, vegetation) and built (building height and form, types of infrastructure) features. The visual character is described based on the identification of major natural and built features through a review of maps, aerial photography, Google Street View, and field observation.
2. **Affected Population:** The affected population includes viewers from residences, roadways, commercial areas, and public places such as parks and trails. The affected population was identified by reviewing existing and planned land uses within the study area, as described in Section 3.1, *Land Use and Housing*.
3. **Visual Quality:** Visual quality of the aesthetic environment refers to how well the aesthetic environment meets viewer preferences for the natural and built environments. Visual quality was assessed based on the visual character of the segment and option routes, stated preferences expressed in public comments during the EIS process, and professional judgement. Appendix C provides a detailed description of what was considered a high, medium, or low visual quality for each element of the aesthetic environment. Visual quality in the segments is not homogenous, and ranges from low quality in some areas to high quality in others. These characteristics are described below for each segment.
4. **Visual Resources:** Visual resources include scenic views of the Olympics, the Cascades, Cougar Mountain, Mount Rainier, Lake Washington, Lake Sammamish, and the downtown Bellevue and downtown Seattle skylines.

Table 3.2-1. Overview of the Affected Environment by Project Component (Substation, Transmission Line Segment, and Option)

Visual Character	Affected Population	Visual Quality	Visual Resources (Scenic Views)
Richards Creek Substation			
<p>Natural Environment:</p> <ul style="list-style-type: none"> • Located on a plateau with the topography sloping downhill to the west • Dense stands of evergreen trees along the east and west flanks <p>Built Environment:</p> <ul style="list-style-type: none"> • Industrial warehouses • Lakeside substation • Elementary school • A range of commercial building types; see Figure 3.2-2 • Two- to three-story apartment/condo buildings 	<ul style="list-style-type: none"> • Utility workers • Industrial workers • Chestnut Hill Academy students and faculty 	<p>Overall, visual quality is low in the vicinity of the Richards Creek substation site because the built environment dominates the natural environment (except for the undeveloped wooded area to the east) and building form lacks consistency, the built environment consists of an industrial area with different building forms and configurations and large parking lots, and a high presence of utility infrastructure that varies in form (Lakeside substation and 115 kV transmission lines).</p>	<p>N/A</p>

Visual Character	Affected Population	Visual Quality	Visual Resources (Scenic Views)
Redmond Segment			
<p>Natural Environment:</p> <ul style="list-style-type: none"> • Topography generally slopes downhill to the east and north • Swan Lake at Sixty-01 Condominium • 500-foot-wide cleared corridor heads west from Sammamish substation • Dense stands of trees about the utility corridor <p>Built Environment:</p> <ul style="list-style-type: none"> • Single-story and two-story single-family homes • Three-story condominium complexes • Middle school • A range of commercial building types; see Figure 3.2-2 • Industrial parks and warehouses • Two single-circuit 115 kV on H-frame poles (~60 ft in height) • Sammamish substation 	<ul style="list-style-type: none"> • Golfers • Park and trail users • Shoppers • Retail workers • Industrial workers • Rose Hill Middle School students and faculty • Residents • Utility workers 	<p>Visual quality is low where the built environment disrupts the natural environment, which occurs near the Sammamish substation and a 500-foot long cleared corridor connecting the Sammamish substation to the transmission line corridor. The built environment near the Sammamish substation (warehouses, commercial buildings, utilities) also has low visual quality because of inconsistent height and form. Visual quality is high in the residential neighborhoods away from the existing transmission line and lower immediately adjacent to the corridor. Residential neighborhoods are primarily single-family residential and have consistent building height and form. Utilities are present, including a 115 kV transmission line, but the configuration has consistent height and form, except where the transmission line leaves the Sammamish substation.</p>	<p>Occasional scenic views of the Cascades</p>

Visual Character	Affected Population	Visual Quality	Visual Resources (Scenic Views)
Bellevue North Segment			
<p>Natural Environment:</p> <ul style="list-style-type: none"> • Topography generally slopes downhill to the south and to the east. • Tall tree stands about the utility corridor <p>Built Environment:</p> <ul style="list-style-type: none"> • Single-story and two-story single-family homes • Religious facilities • A range of commercial building types, see Figure 3.2-2 • Industrial parks and warehouses • Two single-circuit 115 kV on H-frame poles (~55 ft in height) 	<ul style="list-style-type: none"> • Residents • Religious followers • Park and trail users • Drivers on SR 520 • Retail employees • Shoppers • Utility workers 	<p>Visual quality is generally high in the residential neighborhoods away from the existing transmission line and generally low immediately adjacent to the corridor. Residential neighborhoods are primarily single-family and have consistent building height and form. Visual quality is lowest south of SR 520 where commercial developments and industrial parks have inconsistent height and form, and large paved parking lots. Utilities are present, including a 115 kV transmission line, but configuration has consistent height and form.</p>	<p>Occasional scenic views of the Cascades. Views of the Olympics from Northup Way. Views of Mount Rainier at key locations along SR 520.</p>

Visual Character	Affected Population	Visual Quality	Visual Resources (Scenic Views)
Bellevue Central Segment, Existing Corridor Option			
<p>Natural Environment:</p> <ul style="list-style-type: none"> • North portion of the option slopes downhill slightly to the east and more steeply to the west. South of Bel-Red Rd, topography slopes downhill to the west • Sharp depression west of the Glendale Country Club • Vegetated along much of the corridor where commercial and industrial uses are not present <p>Built Environment:</p> <ul style="list-style-type: none"> • A range of commercial building types, see Figure 3.2-2 • Single-story and two-story single-family homes • Two- to three-story apartment/condominium buildings • Elementary School • Industrial warehouses • Two single-circuit 115 kV on H-frame poles (~55 ft in height) 	<ul style="list-style-type: none"> • Residents • Golfers • Park and trail users • Industrial workers • Shoppers • Retail workers • Office workers • Utility workers • Chestnut Hill Academy students and faculty • Utility workers 	<p>Areas with higher visual quality include Kelsey Creek Park and the Glendale Golf Course where the natural environment is undisturbed by the built environment, and residential areas away from the existing corridor, which have consistent building height and form. Areas with low visual quality are generally areas abutting the transmission line, the industrial area surrounding the Lakeside substation, and the commercial and industrial development north of Bel-Red Rd. The area north of Bel-Red Rd is planned to have high visual quality in the future, as redevelopment complies with Bel-Red Corridor Plan design guidelines. Utilities are present, including a 115 kV transmission line, and the configuration has consistent height and form along the option, except where it intersects with the Lakeside substation.</p>	<p>Sporadic scenic views of downtown Seattle and the Olympics from east of the existing corridor.</p>

Visual Character	Affected Population	Visual Quality	Visual Resources (Scenic Views)
Bellevue Central Segment, Bypass Option 1			
<p>Natural Environment:</p> <ul style="list-style-type: none"> • North portion of the option slopes downhill slightly to the east and more steeply to the west. South of Bel-Red Rd, topography slopes downhill to the west from the Bellevue Botanical Gardens • Rise in topography at Woodridge Hill • Vegetated along much of the corridor where commercial and industrial uses are not present • Kelsey Creek <p>Built Environment:</p> <ul style="list-style-type: none"> • Single-story and two-story single-family homes • Two- to three-story apartment/condo buildings • A range of commercial building types; see Figure 3.2-2 • Industrial warehouses • 124th Ave NE: SCL 230 kV line • Eastside Rail Corridor 	<ul style="list-style-type: none"> • Residents • Visitors and employees of the Botanical Gardens • Park and trail users (including Eastside Rail Corridor) • Industrial workers • Shoppers • Retail workers 	<p>Areas with generally high visual quality include the Botanical Gardens and areas abutting the Lake Hills Connector where the natural environment is less disturbed by the built environment, and residential areas away from the existing transmission corridor, which have consistent building height and form. Areas with lower visual quality are present in areas abutting the transmission line, the industrial area surrounding the Lakeside substation, and the commercial and industrial development north of Bel-Red Rd. The area north of Bel-Red Rd is anticipated to have high visual quality in the future, as redevelopment complies with Bel-Red Corridor Plan design guidelines. Utilities are present, including a 115 kV transmission line, and the configuration has consistent height and form along the option where it occurs, except where it intersects with the Lakeside substation.</p>	<p>Scenic views from Woodridge include views of Lake Washington, downtown Bellevue, and Seattle.</p>

Visual Character	Affected Population	Visual Quality	Visual Resources (Scenic Views)
Bellevue Central Segment, Bypass Option 2			
<p>Natural Environment:</p> <ul style="list-style-type: none"> • North portion of the option slopes downhill slightly to the east and more steeply to the west. South of Bel-Red Rd, topography slopes downhill to the west from the Bellevue Botanical Gardens • Rise in topography at Woodridge Hill • Vegetated along much of the corridor where commercial and industrial uses are not present • Kelsey Creek • Richards Creek • Wetlands east of Richards Rd. <p>Built Environment:</p> <ul style="list-style-type: none"> • A range of commercial building types; see Figure 3.2-2 • Single-story and two-story single-family homes • Two- to three-story apartment/condo buildings Industrial warehouses • SE 26th St: one single-circuit 115 kV on wood poles (~65 ft in height) • Eastside Rail Corridor • 124th Ave NE: SCL 230 kV line 	<ul style="list-style-type: none"> • Residents • Visitors and employees of the Botanical Gardens • Park and trail users (including Eastside Rail Corridor) • Industrial workers • Shoppers • Retail workers • Utility workers 	<p>Areas with generally high visual quality include the Botanical Gardens, areas abutting the Lake Hills Connector, and wetlands to the east and vegetation to the west along Richards Rd where the natural environment is less disturbed by the built environment, as well as residential areas away from the existing transmission corridor, which have consistent building height and form. Areas with generally low visual quality are present in areas abutting the transmission line, the industrial area surrounding the Lakeside substation, and the commercial and industrial development north of Bel-Red Rd. The area north of Bel-Red Rd is anticipated to have high visual quality in the future, as redevelopment complies with Bel-Red Corridor Plan design guidelines. Utilities are present, including a 115 kV transmission line, and the configuration has consistent height and form along the option where it occurs, except where it intersects with the Lakeside substation.</p>	<p>Scenic views from Woodridge include views of Lake Washington, downtown Bellevue, and Seattle.</p>

Visual Character	Affected Population	Visual Quality	Visual Resources (Scenic Views)
Bellevue South Segment, Oak 1 Option			
<p>Natural Environment:</p> <ul style="list-style-type: none"> • Topography slopes downhill to the south and the west; there is a southward incline associated with the Coal Creek ravine • Rise in topography associated with the Somerset neighborhood • Dense vegetation at Coal Creek ravine • Coal Creek, Sunset Creek <p>Built Environment:</p> <ul style="list-style-type: none"> • Single-story and two-story single-family homes • Two- to three-story apartment/condo buildings • Religious facilities • Middle school, high school • Corridor: Two single-circuit 115 kV on H-frame poles (~60 ft in height) • SE 30th St: Two single-circuit 115 kV on wood poles; one 12.5 kV on a wood pole (~60–65 ft in height) • Factoria Blvd SE/Coal Creek Pkwy: One single-circuit 115 kV on wood poles (~65–75 ft in height) 	<ul style="list-style-type: none"> • Industrial workers • Drivers on I-90 • Residents • Religious followers • Newport High School students and faculty • Park and trail users • Utility workers 	<p>Areas with generally high visual quality include the Coal Creek Natural Area where the natural environment is less disturbed by the built environment, and residential areas away from the existing transmission line, which have consistent building height and form. Areas with generally low visual quality are located along Factoria Blvd where the mixture of uses results in a variety of building forms and heights, and I-90. Utilities are present, including a 115 kV transmission line and a 12.5 kV distribution line, and configuration has different heights and forms depending on the location along the route.</p>	<p>Views of downtown Seattle from certain locations on I-90. Scenic views from Somerset include views of the Olympics, Lake Washington, and the Bellevue and Seattle skylines. There are also scenic views of downtown Seattle and the Olympics from multi-family residential housing off of Factoria Blvd SE.</p>

Visual Character	Affected Population	Visual Quality	Visual Resources (Scenic Views)
Bellevue South Segment, Oak 2 Option			
<p>Natural Environment:</p> <ul style="list-style-type: none"> • Topography slopes downhill to the south and the west; There is a southward incline associated with the Coal Creek ravine • Rise in topography associated with the Somerset neighborhood • Dense vegetation at Coal Creek ravine • Coal Creek • Sunset Creek <p>Built Environment:</p> <ul style="list-style-type: none"> • Single-story and two-story single-family homes • Two- to three-story apartment/condo buildings • Religious facilities • Middle school • High school • Corridor: Two single-circuit 115 kV on H-frame poles (~60 ft in height) • SE 30th St: Two single-circuit 115 kV on wood poles; one 12.5 kV on a wood pole (~60–65 ft in height) • Factoria Blvd SE/Coal Creek Pkwy: One single-circuit 115 kV 	<ul style="list-style-type: none"> • Drivers on I-90 • Residents • Religious followers • Newport High School students and faculty • Park and trail users • Tyee Middle School students and faculty • Utility workers 	<p>Areas with generally high visual quality include the Coal Creek Natural Area (where the natural environment is less disturbed by the built environment) and residential areas away from the existing transmission line that have consistent building height and form. Areas with generally low visual quality are located along Factoria Blvd where the mixture of uses results in a variety of building forms and heights, and I-90. Utilities are present, including a double-circuit 230 kV lattice tower, 115 kV transmission line, and a 12.5 kV distribution line. The utility configurations have different heights and forms depending on the location.</p>	<p>Views of downtown Seattle from certain locations on I-90. Scenic views from Somerset include views of the Olympics, Lake Washington, and the Bellevue and Seattle skylines. There are also scenic views of downtown Seattle and the Olympics from multi-family residential housing off of Factoria Blvd SE.</p>

Visual Character	Affected Population	Visual Quality	Visual Resources (Scenic Views)
<p>on wood poles (~65–75 ft in height)</p> <ul style="list-style-type: none"> SE 38th St/124th Ave SE: SCL double-circuit 230 kV on a lattice tower 			
<p>Bellevue South Segment, Willow 1 Option</p>			
<p>Natural Environment:</p> <ul style="list-style-type: none"> Topography generally slopes downhill to the south and the west; the corridor also crosses the Coal Creek ravine, which runs south to north Rise in topography associated with the Somerset neighborhood Dense vegetation at Coal Creek ravine Coal Creek <p>Built Environment:</p> <ul style="list-style-type: none"> I-90 Single-story and two-story single-family homes A range of commercial building types; see Figure 3.2-2 Middle school Two single-circuit 115 kV on H-frame poles (~60 ft in height) 	<ul style="list-style-type: none"> Drivers on I-90 Residents Shoppers Retail workers Students Park and trail users Tyee Middle School students and faculty Utility workers 	<p>Areas with generally high visual quality include the Coal Creek Natural Area (where the natural environment is less disturbed by the built environment) and residential areas away from the existing transmission line that have consistent building height and form. Areas with generally low visual quality are those located along I-90 and residential areas located adjacent to the transmission line. Utilities are present, including a 115 kV transmission line, and the utility configuration has consistent form and height along the option.</p>	<p>Views of downtown Seattle from certain locations on I-90. Scenic views from Somerset include views of the Olympics, Lake Washington, and the Bellevue and Seattle skylines.</p>

Visual Character	Affected Population	Visual Quality	Visual Resources (Scenic Views)
Bellevue South Segment, Willow 2 Option			
<p>Natural Environment:</p> <ul style="list-style-type: none"> • Topography generally slopes downhill to the south and the west; the corridor also crosses the Coal Creek ravine, which runs south to north • Rise in topography associated with the Somerset neighborhood • Dense vegetation at Coal Creek ravine • Coal Creek <p>Built Environment:</p> <ul style="list-style-type: none"> • Single-story and two-story single-family homes • Two- to three-story apartment/condo buildings • Middle school • High school • Preschool • Religious facilities • Existing Corridor: Two single-circuit 115 kV H-frames (~50 – 60 ft) • Newport Way: one double-circuit 12.5 kV wood poles (~40 – 45 ft) • Factoria Blvd SE/Coal Creek Pkwy: one single-circuit 115 kV on wood poles (~65 ft in height) 	<ul style="list-style-type: none"> • Drivers on I-90 • Residents • Religious followers • Newport High School students and faculty • Park and trail users • Tye Middle School students and faculty • Utility workers 	<p>Areas with generally high visual quality include the Coal Creek Natural Area where the natural environment is less disturbed by the built environment, and residential areas away from the existing transmission line, which have consistent building height and form. Areas with generally low visual quality are areas abutting the existing transmission corridor. Utilities are present, including a 115 kV transmission line and a 12.5 kV distribution line, and the configuration has different heights and forms depending on the location along the route.</p>	<p>Views of downtown Seattle from certain locations on I-90. Scenic views from Somerset include views of the Olympics, Lake Washington, and the Bellevue and Seattle skylines.</p>

Visual Character	Affected Population	Visual Quality	Visual Resources (Scenic Views)
Newcastle Segment			
<p>Natural Environment:</p> <ul style="list-style-type: none"> • Topography slopes to the east. South of SE May Creek Park Drive, there is a steep downhill slope down into the May Creek Valley, which then transitions into a slight uphill slope to the terminus of the segment • Interspersed tree buffering along existing transmission corridor <p>Built Environment:</p> <ul style="list-style-type: none"> • Single-story and two-story single-family homes • Two- to three-story apartment/condo buildings • City Hall • Library • A range of commercial building types; see Figure 3.2-2 • Two single-circuit 115 kV H-frame poles (~55 ft in height) • SCL 230 kV line 	<ul style="list-style-type: none"> • Residents • Retail workers • Shoppers • Municipal workers • Library visitors and workers • Park and trail users • Utility workers 	<p>Areas with generally high visual quality include residential areas away from transmission lines, which have consistent building height and form, and areas around Lake Boren and the May Creek ravine where the natural environment is less disturbed by the built environment. Areas with generally low visual quality are areas abutting the existing transmission corridors. Utilities are present, including a 115 kV transmission line, but the utility configuration has consistent height and form.</p>	<p>Scenic views from Olympus include views of Cougar Mountain, the Cascades, the Olympics, and in some places Mount Rainier.</p>

Visual Character	Affected Population	Visual Quality	Visual Resources (Scenic Views)
Renton Segment			
<p>Natural Environment:</p> <ul style="list-style-type: none"> • Rolling east/west topography with steeper north/south slopes at the Honey Creek and Cedar River ravines • Tall tree stands near Honey Creek and Cedar River ravines <p>Built Environment:</p> <ul style="list-style-type: none"> • Single-story and two-story single-family homes • Two- to three-story apartment/condo buildings • A range of commercial building types; see Figure 3.2-2 • Religious facilities • Cemetery • Technical college • Talbot Hill substation • Two single-circuit 115 kV on H-frame poles (~55 ft in height) • SCL 230 kV line 	<ul style="list-style-type: none"> • Residents • Retail workers • Shoppers • Religious followers • Renton Technical College students and faculty • Park and trail users • Industrial workers • Utility workers 	<p>Areas with generally high visual quality include residential areas, which have consistent height and form, Honey Creek and Cedar River ravines, and areas of unincorporated King County adjacent to the existing corridor, where the natural environment is less disturbed by the built environment. Areas of generally low visual quality are present on Monroe Ave where the mixture of uses results in a variety of building forms and heights. The height and form of the 115 kV transmission line is consistent throughout most of the segment, except where it intersects with the Talbot Hill substation, which has lower visual quality.</p>	<p>Scenic views along the corridor include views of the Olympics and the Cascades.</p> <p>Scenic views near Talbot Hill include views of Mount Rainier, Lake Washington, and the Cedar River.</p>



Multi-story retail and office centers



Automobile dealerships



Retail strip malls



Shopping centers



Individual shops



Grocery stores

Source: Google, 2016.

Figure 3.2-2. Examples of Commercial Building Types in the Study Area

3.2.3 Long-term (Operation) Impacts Considered

This analysis examines two types of visual impacts: impacts to the aesthetic environment and impacts to scenic views. It also addresses viewer sensitivity, which applies to both the aesthetic environment and scenic views. The analysis also considers potential mitigation measures to minimize or eliminate project impacts to scenic views and the aesthetic environment.

3.2.3.1 Impacts to Visual Quality of the Aesthetic Environment

Impacts to the general aesthetic environment are related to the potential for the project to impact visual quality in the study area. As described in Section 3.2.2, visual quality of the aesthetic environment refers to how well the *visual character* meets viewer preferences for the natural and built environments. Changes to visual quality were assessed for each segment and option based on *contrast* (the extent to which a viewer can distinguish between an object and its background) produced by the project against the existing visual character surrounding the segment. The degree of contrast was then evaluated to determine whether or not it would reduce the overall visual quality of the segment.¹ For example, the visual quality of the natural environment could be negatively impacted if a natural area that is relatively undisturbed by development is disturbed by the project. The built environment could be negatively impacted if the project does not blend with an area that has a consistent urban form (similar building height and form) or consistent utility height, configuration, and form. The relationships between the main factors of the analysis of visual resources are illustrated in Figure 3.2-3.

To assess changes to the aesthetic environment, 44 viewpoints were selected at various locations along the existing and new corridors to show different ways the natural and built environments could be impacted. Areas identified as sensitive during public scoping were also considered during the selection of key viewpoints. Visual simulations of the project were developed for each of the viewpoints by Power Engineers (Power Engineers, 2016). Methods for preparing visual simulations are detailed in Appendix C. For this EIS, simulations for 18 of the 46 key viewpoints (KVPs) are used to support impact conclusions (see Section 3.2-5, *Long-term Impacts*). They are listed in Table 3.2-2, and their locations shown on Figure 3.2-4. Appendix C includes simulations for all 46 KVPs and a map showing their locations.

Methods for Identifying Potential Impacts

Aesthetic Environment: A geographic information system (GIS) analysis was used to determine what portions of the study area would potentially have views of the project, based on the location of the segment or option, the proposed height of the poles, and the surrounding topography. This analysis was further refined to exclude areas where views of the project would be obstructed by major visual barriers, such as dense tree stands or buildings.

Scenic Views: A GIS analysis was performed to identify areas from which the project would obstruct the view of an identified visual resource. The GIS analysis determined where identified visual resources can be seen based on the location and height of the visual resource and the topography of the surrounding area. This area was further refined by overlaying the study area to determine where the project could impact scenic views of visual resources. This analysis identified areas where view impacts were most likely. Site observation from these areas verified the general extent of the areas most affected.

For more information on the GIS analysis, see Appendix C.

¹ Alternative 1 was compared to existing conditions, including the existing overhead transmission line if present.

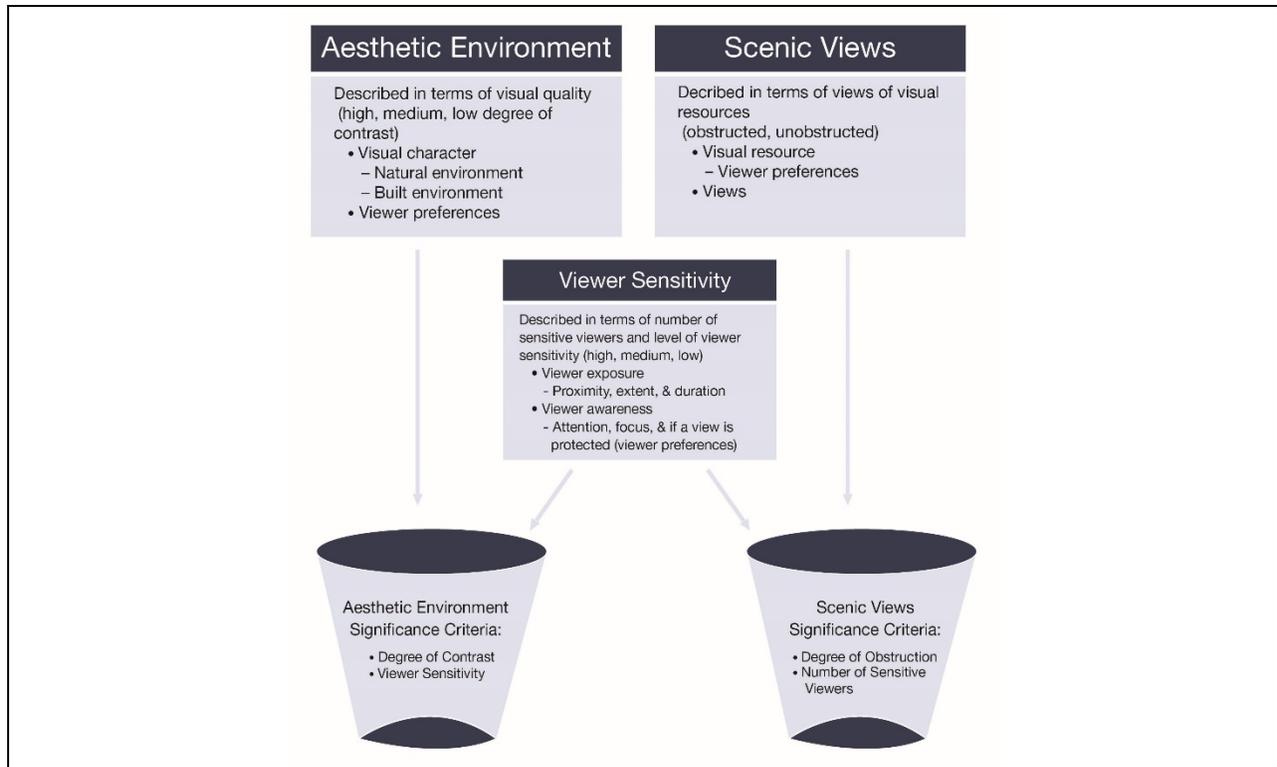


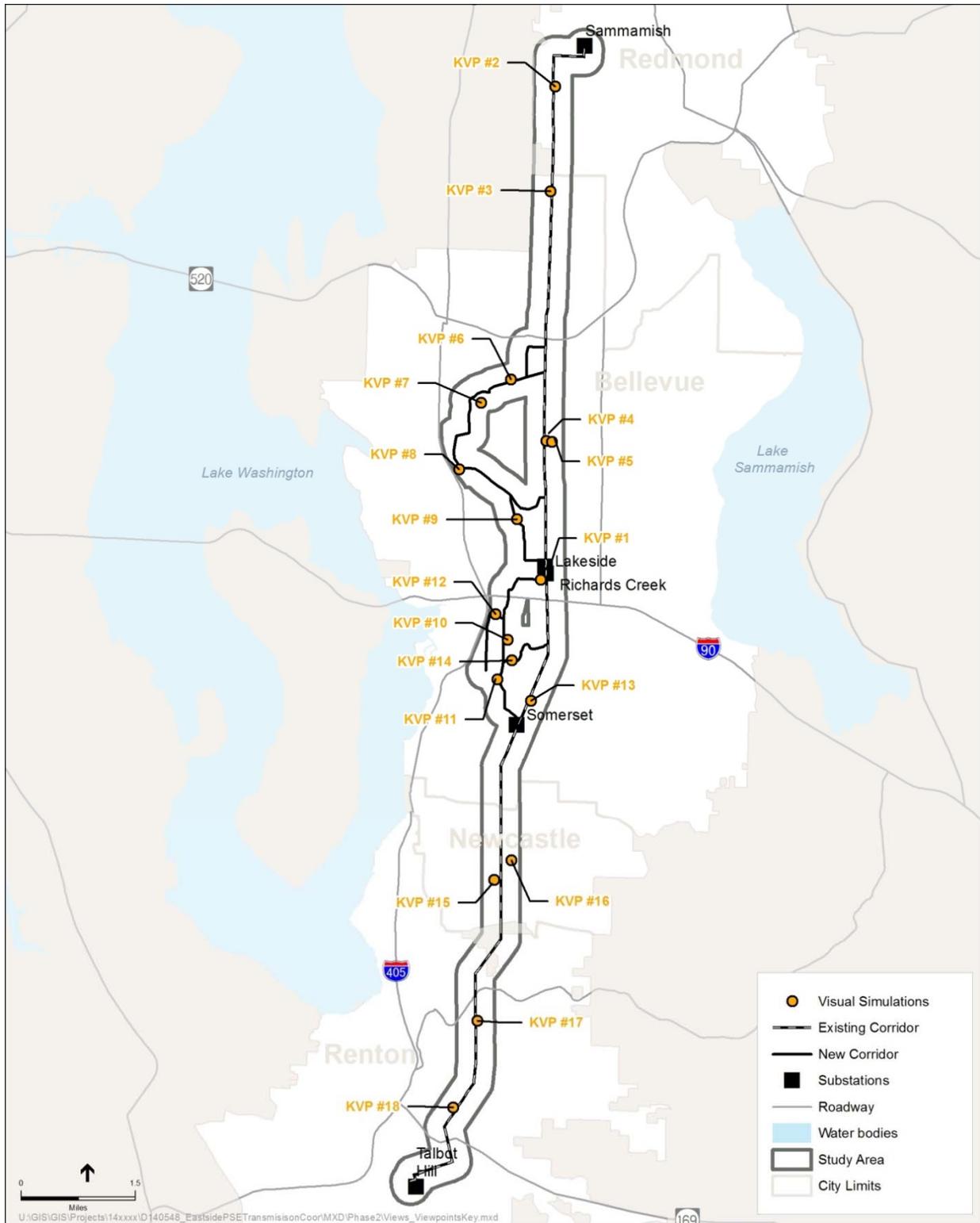
Figure 3.2-3. Factors Considered for the Analysis of the Aesthetic Environment and Scenic Views

Table 3.2-2. Key Viewpoints Selected for the Visual Quality Analysis

KVP	Location	Segment/Option	Reason for Selecting Viewpoint
1	Richards Creek Substation	All Options	<ul style="list-style-type: none"> Shows the new substation when taking into account grading and clearing.
2	Redmond Way	Redmond	<ul style="list-style-type: none"> Representative of the natural environment along the segment (topography and vegetation). Representative of the built environment (shows project configuration and height for entire segment).
3	13540 NE 54 th PI	Bellevue North	<ul style="list-style-type: none"> Representative of the natural environment along the segment (topography and vegetation). Representative of the built environment (single-family residential development; project configuration and height for entire segment).
4	13606 Main Street	Bellevue Central – Existing Corridor	<ul style="list-style-type: none"> Shows project from rise in topography looking along the transmission line corridor. Is identified in the Wilburton Subarea Plan as a key view.

KVP	Location	Segment/ Option	Reason for Selecting Viewpoint
5	13636 Main Street	Bellevue Central – Existing Corridor	<ul style="list-style-type: none"> Shows project from rise in topography from the side of the transmission line. Is identified in the Wilburton Subarea Plan as a key view.
6	12828 Bel-Red Rd	Bellevue Central – Bypass Options 1 and 2	<ul style="list-style-type: none"> Shows project surrounded by commercial and industrial uses. Shows project from an area slated for increased density.
7	12239 NE 8 th St	Bellevue Central – Bypass 1 and 2 Options	<ul style="list-style-type: none"> Identified in the Wilburton Subarea Plan as a key view.
8	Lake Hills Connector	Bellevue Central – Bypass Options 1 and 2	<ul style="list-style-type: none"> Identified in the Wilburton Subarea Plan as a key view. Shows how project would be viewed by future users of the Eastside Rail Corridor.
9	1680 Richards Rd	Bellevue Central – Bypass Option 2	<ul style="list-style-type: none"> Richards Rd is identified in the Richards Valley Subarea Plan as an area where the City wants to preserve the vegetated appearance. Shows impacts to an area with wetland land cover. Shows the project from the Woodridge Trail trailhead.
10	4122 Factoria Blvd SE	Bellevue South - Oak 1 Option	<ul style="list-style-type: none"> Visual connections along Factoria Blvd are protected in the Factoria Subarea Plan.
11	Factoria Blvd/Coal Creek Pkwy	Bellevue South - Oak 1 Option	<ul style="list-style-type: none"> Identified via public comment. Visual connections along Factoria Blvd are protected in the Factoria Subarea Plan.
12	12513 SE 38 th St	Bellevue South - Oak 2 Option	<ul style="list-style-type: none"> Shows construction of poles where they do not currently exist.
13	4730 134 th PL SE	Bellevue South - Willow 1 Option	<ul style="list-style-type: none"> Identified via public comment. Shows the option with the tallest poles in the Somerset neighborhood.

KVP	Location	Segment/ Option	Reason for Selecting Viewpoint
14	12892 SE Newport Way	Bellevue South - Willow 2 Option	<ul style="list-style-type: none"> Shows a change in built environment from a 40-foot 12.5 kV line on wooden poles to 75-foot steel monopoles. Shows removal of underbuild and reduction in clutter.
15	12732 SE 80 th Way	Newcastle	<ul style="list-style-type: none"> Representative of the built environment (single-family residential development; project configuration and height for entire segment). Shows the project from the ridge near the corridor.
16	Lake Boren Park	Newcastle	<ul style="list-style-type: none"> View from recreational use. Shows the project from a lower elevation looking up at the project.
17	1026 Monroe Ave NE	Renton	<ul style="list-style-type: none"> Shows project surrounded by institutional and single-family residences.
18	318 Glennwood Court SE	Renton	<ul style="list-style-type: none"> Shows project surrounded by single-family residential development and placed on a ridge.



Source: King County, 2015; Ecology, 2014.

Figure 3.2-4. Locations of Key Viewpoints used in the Aesthetic Environment Analysis

3.2.3.2 Obstruction of Scenic Views

Impacts to scenic views include the potential for the project to obstruct views of the visual resources identified in Section 3.2.2. A GIS analysis was performed to identify areas from which project-related view impacts were most likely. Site observation from these areas verified the general extent of the areas most affected (see Appendix C).

3.2.3.3 Viewer Sensitivity

The assessments of impacts to the aesthetic environment and scenic views both incorporate viewer sensitivity of the affected population. Viewer sensitivity was determined by examining *viewer exposure* and *viewer awareness*. Awareness considers viewer attention and focus, and whether affected views are protected by policy, regulation, or custom (such as local covenants relating to views or aesthetics). It was assumed that two groups were the most sensitive to changes in the aesthetic environment and scenic views: residents, and recreational users in parks and other recreational settings. These two groups would have the greatest exposure to the project of all of the viewers because they are often near the project and would frequently observe the project over longer durations (particularly residential viewers).

The viewer extent of residential viewers was determined by assigning areas of high, medium, and low population density by assessing American Community Survey 2014 Census block data on a segment-by-segment basis within the study area (U.S. Census Bureau, 2014). The viewer extent of recreational users was assessed by identifying those recreation areas (parks, trails, outdoor recreation facilities) that lie within the study area, and determining whether or not the view or natural setting of the recreation areas is identified as a defining feature (based on findings in the Phase 1 Draft EIS, see Table 11-1 in the Phase 1 Draft EIS, and the recreation analysis in the Phase 2 Draft EIS, see Section 3.6)². If a recreation area that is used for its views or natural setting would be impacted, the assessment considered how frequently the recreation area is used.

Drivers on I-90 are considered sensitive viewers because I-90 is designated as a National Scenic Byway (the Mountains to Sound Greenway) from Seattle to Thorp, Washington. The designation was assigned because of the presence of pastoral valleys, forests, and the mountain landscape (FHWA, 2016). However, the portion of the scenic byway where the project would cross (at the intersection with Richards Road or approximately 137th Avenue SE) is highly urbanized (see Figure 3.2-5).

Viewer Exposure: Exposure considers the proximity, extent, and duration of views. All viewers within the study area are considered to be close to the project. **Viewer extent** is specific to each segment or option, and is dependent on residential density along the segment/option and how many outdoor recreation areas (parks, trails, outdoor recreation facilities) are impacted that are used for their scenic views or natural setting. The **duration** of views is consistent for all segments and options, with residential viewers experiencing the longest view duration due to their stationary nature and fixed views of the transmission line. Recreational users have a shorter view duration that is confined to the time spent at the recreational resource, with park users having longer view duration and trail users, who are more mobile, having shorter view duration.

Viewer Awareness: Awareness considers viewer attention and focus, and whether affected views are protected by policy, regulation, or custom. This analysis is based on policies and regulations of the areas each component crosses, and therefore is specific to each component. Applicable policies and regulations are described in Section 3.2.1.

² Please note: the study area for the scenic views and aesthetic environment assessment is larger than the study area used for the recreation analysis.



Existing westbound view where Willow options would cross I-90



Existing westbound view where Oak options would cross I-90

Source: Google, 2016.

Figure 3.2-5. Existing Views for I-90 Crossing Locations

In addition, the crossings are located within 1 mile of the I-405/ I-90 interchange, reducing viewer focus on the visual setting as many drivers are exiting I-90. Drivers on I-90 would also have the shortest view duration in the study area due to the speed at which they travel (approximately 40–65 mph depending on traffic conditions). There are views of downtown Seattle from certain locations on I-90. However, scenic views from I-90 are not expected to be impacted because the transmission line would be located high enough to be above the drivers' line of sight to these views.

Viewer sensitivity was assigned a value of low, medium, or high depending on the following (Table 3.2-3):

Table 3.2-3. Assigning a Degree of Viewer Sensitivity

Viewer Sensitivity	Viewer Exposure	Viewer Awareness
High	Residential density along the segment/option is high and outdoor recreation areas (parks, trails, outdoor recreation facilities) used for their scenic views or natural setting would be impacted.	Areas with scenic views or aesthetics that are protected by policy, regulation, or custom are impacted, and viewers have access to and regularly enjoy these views for extended periods.
Moderate	Residential density along the segment/option is high, or outdoor recreation areas (parks, trails, outdoor recreation facilities) used for their scenic views or natural setting would be impacted.	Areas with scenic views or aesthetics that are protected by policy, regulation, or custom, but where viewer focus and attention are limited, for reasons such as travel speed, duration of visit, or topography that limits available views.
Low	Residential density along the segment/option is not high and no outdoor recreation areas (parks, trails, outdoor recreation facilities) used for their scenic views or natural setting would be impacted.	Areas with scenic views or aesthetics that are not protected by policy, regulation, or custom, or where viewers are not likely to focus on a view that may be protected.

3.2.3.4 Magnitude of Impact

Because the value of scenic views and the aesthetic environment is subjective, it is difficult to quantify or estimate impacts. There is no widely accepted definition of significant visual effects because the significance of an activity varies with the setting and viewer preferences. Extensive research for significance criteria for transmission line projects was conducted by the EIS Consultant Team and did not identify any applicable criteria. For this project, significance was determined based on criteria similar to those described in *The State Clean Energy Program Guide: A Visual Impact Assessment Process for Wind Energy Projects* (Vissering et al., 2011). These criteria, while not used for transmission lines, were used for wind turbines, which can be similar in height and scale to utility poles and are widely studied for visual impacts. This guide suggests the following criteria for determining if a project would result in “undue or unreasonable visual impacts:” violation of aesthetic standards, dominance of the project in views from highly sensitive viewing areas, and failure to take reasonable mitigation measures (Vissering et al., 2011).

A review of policies and regulations applicable to the study area revealed that the existing regulatory framework was insufficient for determining significance because no clear written standards are included for aesthetic impacts in any of the Partner Cities. To develop a threshold for significance that reflects the policies of the Partner Cities, the EIS Consultant Team held a workshop in August 2016 with staff from the Partner Cities. The purpose of the workshop was to collaboratively define significance thresholds based on policies, past precedent, and practice within the Partner City jurisdictions. Information on the workshop process and how significance was identified is detailed in Appendix C.

For this analysis, the potential magnitude of project-related impacts is classified as being significant or less-than-significant as follows:

Less-than-Significant:

- **Aesthetic environment** - The degree of contrast between the project and the existing aesthetic environment would be minimal, or viewer sensitivity is low.
- **Scenic views** - The area with impacted scenic views would not include a substantial number of sensitive viewers, defined as residential viewers, viewers from parks and trails, or viewers from outdoor recreation facilities; or the degree of additional obstruction of views compared to existing conditions would be minimal.

Significant:

- **Aesthetic environment** - The degree of contrast between the project and the existing aesthetic environment would be substantial and viewer sensitivity is high.
- **Scenic views** - The area with scenic views impacted includes a substantial number of sensitive viewers, defined as residential viewers, viewers from parks and trails, or viewers from outdoor recreation facilities; and the degree of additional obstruction of views compared to existing conditions would be substantial.

3.2.4 Long-term Impacts: No Action Alternative

Under the No Action Alternative, no substantial new infrastructure would be introduced into the aesthetic environment, and no substantial changes to the visual character or visual quality of the study area would occur. No impacts to scenic views are anticipated.

3.2.5 Long-term Impacts: Alternative 1 (New Substation and 230 kV Transmission Lines)

3.2.5.1 Impacts Common to all Project Components

Visual Quality of the Aesthetic Environment

Impacts to visual quality of the aesthetic environment were assessed for each segment and option based on the contrast (with either the natural environment or the built environment) that the project would produce, as described below (and illustrated in Figure 3.2-6).

Contrast with the Natural Environment: Contrast with the natural environment results from inconsistency with natural setting (vegetation, topography, etc.). This includes the removal of vegetation, changes to topography (grading), or introduction of new infrastructure whose height and form do not blend with the height and form of the surrounding natural environment.

- *Vegetation Removal.* Periodic trimming and tree removal would occur within the Managed Right-of-Way in accordance with PSE’s vegetation management criteria (see Section 3.4). The width of the Managed Right-of-Way would depend on the pole configuration (see Appendix E). However, in general it would extend 16 feet from the outside transmission wires and 6 feet from wire-free side of poles. PSE would trim or remove trees that mature to a height of 15 feet or greater in the Managed Right-of-Way for a 230 kV transmission corridor, and trees that mature to a height of 25 feet or greater in the Managed Right-of-Way

for a 115 kV transmission corridor. A more detailed discussion of vegetation removal and PSE's Vegetation Management Program is provided in Section 3.4, *Plants and Animals*. Tree removal within an existing utility corridor that is already subject to PSE's vegetation management criteria would generally produce less contrast with the natural environment than areas where a new corridor is created.

- *Changes to Topography.* Grading can cause substantial contrast with the natural environment if it is inconsistent with the underlying topography of the area. Grading is proposed for the Richards Creek substation. Minimal grading is expected for the transmission line.
- *Blending with Natural Setting.* The project would place poles in some areas with high density of tree stands, and some with low density of tree stands surrounding the existing or new corridor. In general, poles placed in areas with no trees would result in greater contrast because it would introduce a new type of geometry in an area where that geometry does not currently exist. Contrast can also occur if the poles are taller than the existing tree stands. Contrast with the natural environment would be low in areas where the poles would be surrounded by vegetation and would not protrude above the tree line. The project would be constructed in areas with varying topography. Areas where the poles would be placed on ridges are more likely to contrast with the natural environment because they would become a prominent feature on the landscape (being taller than all of the surrounding landforms). Conversely, poles that are located next to rises in topography would be more likely to blend with the surrounding landscape because they would not extend into the skyline, and would be less visible from areas located at higher elevations.
- *Contrast with the Built Environment:* Contrast with the built environment results from inconsistency with the built setting (buildings, utility infrastructure, etc.). This includes introducing infrastructure that has a height and/or form that is incompatible with the surrounding built environment, introducing infrastructure that is inconsistent in height and form itself, or creating more visual clutter.
- *Incompatible Height and Form with Surrounding Built Environment.* All segments and options would result in new or additional utility infrastructure being introduced into the built environment. Contrast with the built environment would be most substantial where new infrastructure is introduced (e.g., a new transmission line is placed in an area where there currently is no transmission infrastructure). Contrast could also occur where the height and form of the new infrastructure are inconsistent with the surrounding structures (buildings and other utility infrastructure). For this analysis, typical pole heights (65 – 95 ft) were used when describing the change in height from existing to proposed. It is possible that some pole heights may reach the maximum pole heights listed in Chapter 2. However, having one or a few taller poles alone would not result in a significant impact because of the limited extent of the impact.



Vegetation removal



Changes in topography



Blending with the natural setting



Incompatible height and form with surrounding built environment



Inconsistent project height and form



Visual clutter

Source: Google, 2016.

Figure 3.2-6. Examples of Contrast

- *Inconsistent Project Height and Form.* Depending on the segment and option, the height and form of the transmission infrastructure varies in consistency. More contrast would occur in areas where the pole configuration and/or height would change. Almost all of the pole configurations would be made of steel with patina applied to provide a rust-colored look. Some variability in pole height is possible within areas identified as having a consistent pole height and form, depending on whether or not the typical or maximum pole height is used (usually based on topographic or other constraints). Having one or a few taller poles would not be considered a significant impact because of the limited extent of the impact.
- *Visual Clutter.* Visual clutter occurs where there is a dense presence of poles, wires, and other utility infrastructure. Higher contrast would occur in areas where more poles would be required than under existing conditions, and there would be more wires. There is the potential for a reduction in contrast in areas where the number of poles and wires would be reduced (i.e., removal of underbuild).

Obstruction of Scenic Views

Scenic views would not be impacted to the same degree under all of the segments or options. Where scenic views would be obstructed, the obstruction could be caused by the placement of a pole in a new location; increased diameter of the pole, blocking more of a scenic view than under existing conditions; increased pole height resulting in poles protruding into scenic views; or lines being raised into a spot on the horizon where they would impact previously unobstructed scenic views.

Viewer Sensitivity

As described in Section 3.2.3.1, viewer sensitivity applies to both the aesthetic environment and scenic views, and was determined by examining viewer exposure and viewer awareness. Relevant plans, policies, and regulations were also reviewed to identify potential impacts that would affect more sensitive viewers (Table 3.2-4). Some jurisdictions have policies that apply to the project and address potential impacts to scenic views, the aesthetic environment, or both. Only those jurisdictions with applicable policies relating to the project and scenic views or the aesthetic environment were included. Table 3.2-4 provides an overview of applicable policies that describe what scenic views and elements of the aesthetic environment should be protected, and identifies the project's potential inconsistencies with these policies. Policies suggesting measures for reducing scenic view and aesthetic impacts are summarized as potential mitigation measures in Section 3.2.6.

Table 3.2-4. Consistency with Relevant Plans, Policies, and Regulations

Planning Document	Applicable Planning Statement, Policy, or Regulation*	Potential Inconsistencies with Policies	Segment/Option
King County			
<p>Eastside Rail Corridor Master Plan 2016</p>	<p>Scenic: In some cases, bridges may also be locations for viewpoints.</p> <p>Aesthetic: Existing landscape that does not need to be removed for trail construction will be evaluated to determine if it is consistent with public use, including aesthetics and overall trail design.</p>	<p>Scenic: The project could be adjacent to a bridge where the trail would cross the Lake Hills Connector. However, it is not likely that it would impact scenic views because the 230 kV line would be to the east of the bridge, and scenic views from that bridge would likely be to the west (e.g., the Bellevue skyline).</p> <p>Aesthetic: Project could impact the aesthetics of the trail setting on SE 1st St through presence of 230 kV poles and vegetation clearing.</p>	<p>Bellevue Central</p>

Planning Document	Applicable Planning Statement, Policy, or Regulation*	Potential Inconsistencies with Policies	Segment/Option
Redmond			
City of Redmond Comprehensive Plan	<p>Scenic: Public view corridors of Mount Rainier, the Cascade Mountains, and Lake Sammamish should be protected (Plan Policy CC-14).</p> <p>Unique public views that provide a sense of place should be protected.</p> <p>Aesthetics: Views of surrounding hillsides, mountains, and tree line should be protected.</p> <p>Tree stands and views from the valley should be protected (Plan Policy N-SV-4).</p> <p>Woodland views from neighborhood residences should be protected.</p>	<p>Scenic: Project could obscure public scenic views.</p> <p>Aesthetics: Project could change the visual quality of the natural environment through clearing or grading.</p>	Redmond
Redmond Zoning Code (RZC)	<p>Scenic: Public view corridors and gateways should be protected (RZC 21.42).</p> <p>Aesthetics: Appearance of public ways should be protected.</p>	<p>Scenic: Project could be inconsistent with public view corridor and gateway design standards.</p> <p>Aesthetics: Project could be inconsistent with public way design standards (RZC 21.17.020).</p>	

Planning Document	Applicable Planning Statement, Policy, or Regulation*	Potential Inconsistencies with Policies	Segment/Option
City of Bellevue			
Bellevue Comprehensive Plan 2015	<p>Scenic: Views of water, mountains, and skylines from public places should be protected (Plan Policy UD-23).</p> <p>Aesthetics: Overhead lines should not be located in green belts and open spaces identified in the Parks and Open Space System Plan (Plan Policy UT-45).</p> <p>Distinctive neighborhood character within Bellevue’s diverse neighborhoods should be protected (Plan Policy N-9).</p> <p>The following boulevards should be designed to reflect scenic elements of the surrounding areas and neighborhoods. Streetscape design should promote a comfortable park-like experience for all users (Plan Policy UD-70):</p> <ul style="list-style-type: none"> • Bel-Red Road • Lake Hills Connector • Richards Road • Factoria Blvd SE • Coal Creek Parkway • SE Newport Way 	<p>Scenic: Project could obstruct scenic views from parks, trails, and other public spaces (Plan Policies UD-23 and UT-45).</p> <p>Aesthetics: Project could locate overhead lines in greenbelts and open spaces (Plan Policy UT-45).</p> <p>Project could, through introduction of a new transmission line, or substantial changes in transmission pole type, height, or form could create contrast with existing, distinctive neighborhood character (Plan Policy N-9).</p> <p>Construction of transmission line along boulevards could be inconsistent with policy UD-70 if the degree of contrast is substantial or design requirements specific to these boulevards are not met.</p>	Bellevue North, Bellevue Central, Bellevue South

Planning Document	Applicable Planning Statement, Policy, or Regulation*	Potential Inconsistencies with Policies	Segment/Option
Bridle Trails Subarea Plan 2015	<p>Aesthetics: Wooded, natural, rural, and equestrian character of the subarea should be protected (Plan Policy S-BT-3).</p> <p>Vegetation on the lower slopes of the bluff adjacent to SR 520 at approximately 136th Ave NE should be retained to provide a visual separator between residential areas and the freeway (Plan Policy S-BT-42).</p> <p>Roadsides in Bridle Trails Subarea should be protected (Plan Policy S-BT-43).</p>	<p>Aesthetics: Project could remove vegetation and change the wooded, natural, rural, and equestrian character of the subarea (Plan Policy S-BT-3).</p> <p>Project could remove vegetation on the lower slopes of the bluff adjacent to SR 520 at approximately 136th Ave NE to the point that it no longer provides a visual separator between residential areas and the freeway (Plan Policy S-BT-42).</p> <p>Project could reduce the unified visual appearance of roadways (Plan Policy S-BT-43).</p>	Bellevue North
Bel-Red Subarea Plan 2015	<p>Aesthetics: Bel-Red Subarea street environment should be protected (Plan Policy S-BR-25; S-BR-39; S-BR-59).</p> <p>Bel-Red Subarea parks and open space system should be protected (Plan Policy S-BR-35).</p>	<p>Aesthetics: Project could remove street trees and/or reduce the aesthetic beauty of subarea parks or open spaces.</p>	Bellevue Central
Wilburton/NE 8 th St Subarea Plan 2015	<p>Scenic: Significant views from park lands should be protected (Plan Policy S-WI-11).</p> <p>Aesthetics: Views of prominent landforms, vegetation, watersheds, drainage ways, downtown, and significant panoramas in the subarea should be protected (Plan</p>	<p>Scenic: Project could obstruct scenic views from park lands.</p> <p>Aesthetics: There would be noticeable changes to the key views through new contrast.</p>	Bellevue Central

Planning Document	Applicable Planning Statement, Policy, or Regulation*	Potential Inconsistencies with Policies	Segment/Option
	<p>Policy S-WI-40).</p> <p>Key views include:</p> <ul style="list-style-type: none"> • West from NE 8th St and NE 5th St on the ridge between 122nd Ave NE and 123rd PI NE. • South from the Lake Hills Connector north of SE 8th St. • From SE 1st St and Main Street at the power line right-of-way at 136th Ave. 		
Southeast Bellevue Subarea Plan 2015	Aesthetics: Existing residential character should be protected (Plan Policy S-SE-2).	Aesthetics: Project could introduce new infrastructure into the built environment that is not consistent with the existing height and form of the surrounding residential neighborhoods.	Bellevue Central
Richards Valley Subarea Plan 2015	<p>Scenic: Views from Woodridge Hill should be protected.</p> <p>Aesthetics: Views of the wooded areas and wetlands in the valley (associated with Richards Creek and Kelsey Creek) should be protected.</p> <p>Eastgate I-90 corridor should be protected.</p> <p>Natural character surrounding streets and arterials should be protected.</p> <p>Green and wooded character of the</p>	<p>Scenic: Project could obstruct views from Woodridge Hill.</p> <p>Aesthetics: Project could remove trees or wetlands, particularly within the valley or along Richards Rd.</p> <p>Project could change the visual quality of the Eastgate I-90 corridor or other streets and arterials.</p>	Bellevue Central, Bellevue South

Planning Document	Applicable Planning Statement, Policy, or Regulation*	Potential Inconsistencies with Policies	Segment/Option
	Richards Rd corridor should be protected (Plan Policy S-RV-30).		
Eastgate Subarea Plan 2015	<p>Scenic: Existing views from public spaces should be protected (Plan Policy S-EG-23).</p> <p>View amenities of adjacent single-family neighborhoods should be protected (Plan Policy S-EG-22).</p>	Scenic: Project could obstruct views from public spaces or single-family residents adjacent to the project.	Bellevue Central, Bellevue South
Factoria Subarea Plan 2015	<p>Aesthetics: Pathways and access points with views of Sunset Creek, Richards Creek, and Coal Creek should be protected (Plan Policy S-FA-18).</p> <p>Visual connections along Factoria Blvd should be protected (Plan Policy S-FA-32).</p>	Aesthetic: Project could obstruct views of Sunset Creek, Richards Creek, Coal Creek, or view connections along Factoria Blvd.	Bellevue South
Newport Hills Subarea Plan 2015	<p>Aesthetics: Emphasize as a distinct visual element the preservation of existing trees on protected slopes and hilltops (Plan Policy S-NH-44).</p> <p>Existing visual features such as trees and hilltops, views of water, and passive open space should be protected (Plan Policy S-NH-54).</p>	Aesthetics: Project could remove trees on protected slopes and hilltops or change the overall visual quality of the natural environment.	Bellevue South

Planning Document	Applicable Planning Statement, Policy, or Regulation*	Potential Inconsistencies with Policies	Segment/Option
Newcastle			
City of Newcastle 2035 Comprehensive Plan	<p>Aesthetics: Existing character, scale, and neighborhood quality should be protected (Plan Policy LU-G3).</p> <p>Open space, wildlife habitats, recreational areas, trails, connection of critical areas, natural and scenic resources, as well as shoreline areas should be identified and preserved (Plan Policy LU-G6).</p> <p>Natural features that contribute to the city's scenic beauty should be protected (Plan Policy LU-G8).</p>	<p>Aesthetics: Project could reduce the visual quality of the natural or built environment.</p> <p>The project could affect the visual character of trails within the existing transmission line corridor.</p>	Newcastle
Community Business Center/ Lake Boren Corridor Master Plan 2000	<p>Aesthetics: Developments will also take advantage of the area's viewsheds, whether down a street corridor, view of Lake Boren, or views from or to surrounding hillsides.</p>	<p>Aesthetics: Project could change views of the western hillside (where it would be located). Although the project would be placed within the existing transmission corridor, the increased pole height could make it more visible than under existing conditions. However, the presence of dense, tall tree stands would continue to reduce the contrast the line would have with the surrounding aesthetic environment.</p> <p>The transmission line would be located to the west of Master Plan development, and would not hinder views from the Master Plan area of Lake Boren or of the hillsides to the east.</p>	Newcastle

Planning Document	Applicable Planning Statement, Policy, or Regulation*	Potential Inconsistencies with Policies	Segment/Option
Renton			
City of Renton Comprehensive Plan 2015	<p>Scenic: Public scenic views and public view corridors, such as “physical, visual, and perceptual linkages to Lake Washington and Cedar River” should be protected (Plan Policy L-55).</p> <p>Views of the water from public property or views enjoyed by a substantial number of residences should be protected.</p> <p>Aesthetics: Natural forms, vegetation, distinctive stands of trees, natural slopes, and scenic areas that “contribute to the City’s identity, preserve property values, and visually define the community neighborhoods” should be protected (Plan Policy L-56).</p>	<p>Scenic: Project could obscure public scenic views, views of the water from public property, or views enjoyed by a substantial number of residences.</p> <p>Aesthetics: Project could create a large degree of contrast.</p>	Renton

Source: City of Bellevue, 2011, 2015b, 2015c, 2015d, 2015e, 2015f, 2015g, 2015h, 2015i, 2015j; City of Newcastle, 2000, 2016; City of Redmond, 2015a; City of Renton, 2011, 2015a; and King County, 2016.

*Statements that are not identified in this table as being related to specific policy or regulation are general planning statements from adopted plans.

3.2.5.2 New Richards Creek Substation

Impacts to the aesthetic environment for the Richards Creek substation would be less-than-significant because the site is within PSE's existing corridor, and the degree of contrast with the existing environment would be minimal. Viewer sensitivity is low because there would be few sensitive viewers, and the utility infrastructure is consistent with existing plans and policies.

There would be no impacts to scenic views because no scenic views were identified at the site.

- **Visual Quality of the Aesthetic**

Environment: A new substation would be introduced into the visual environment in an area that has cleared open space and wooded hillside. Clearing and grading associated with site development would result in new contrast in the aesthetic environment (see Figure 3.2-7). Visual quality of the natural environment would change as parts of the undeveloped wooded area to the east would be cleared and developed into a substation, and cutting into the hillside and redistribution of fill material would result in a long-term change to the topography of the site. Visual quality of the built environment would not be adversely impacted because the new substation would not contrast with the surrounding built



environment. The substation would be constructed immediately to the south of the existing Lakeside substation, and a 115 kV transmission corridor currently crosses the site heading north and south. Because the project would be built adjacent to similar development, it would add to the existing visual clutter. However, this would not result in significant impacts to the aesthetic environment, largely because the site would remain screened by vegetation from areas with differing visual character. Therefore, impacts to the visual quality of the aesthetic environment would be less-than-significant.

- **Scenic Views:** There are no scenic views in the vicinity of the proposed substation; impacts to scenic views would be less-than-significant.
- **Viewer Sensitivity:** There are few sensitive viewers in the vicinity of the substation site. The closest residential use is multi-family housing located approximately 700 feet to the northeast of the substation site, but they would not be able to see the new substation. The proposed substation would not be inconsistent with any study area plans or policies (see Appendix C). Therefore, viewer sensitivity would be low.



Existing Pole Height: 65-70 feet



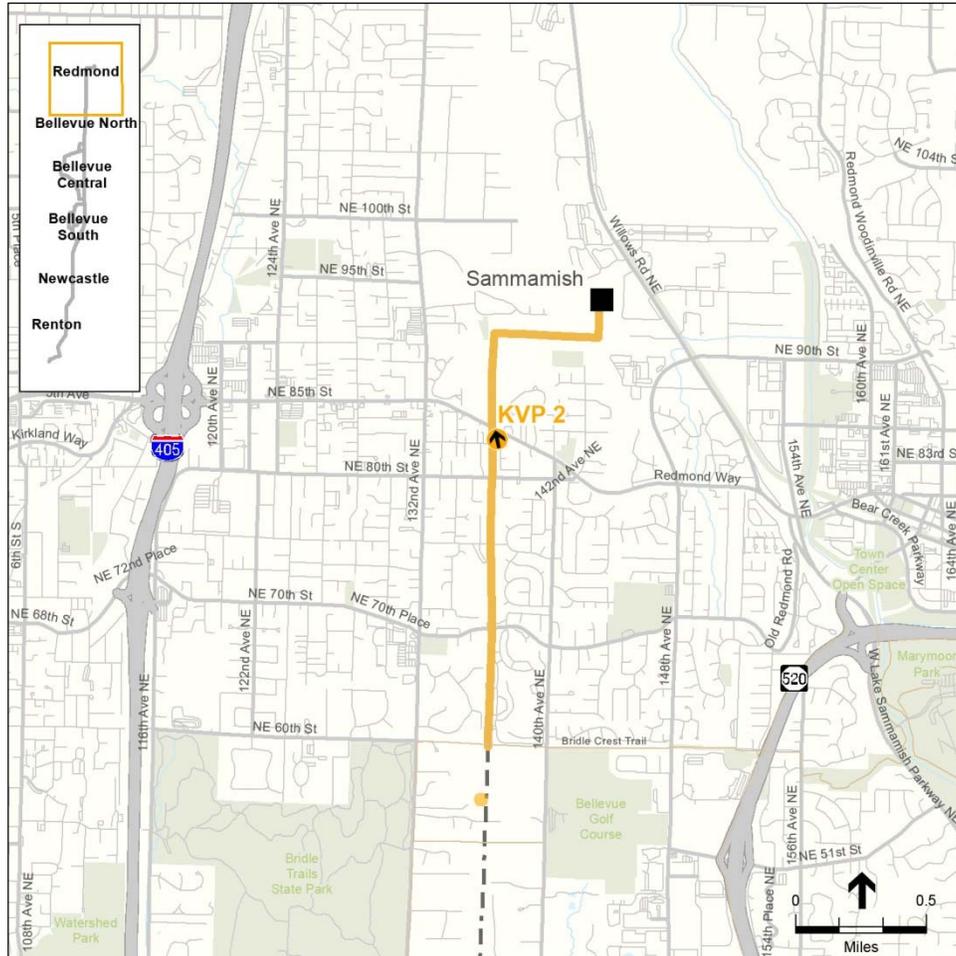
Proposed Pole Height: 70-90 feet

Note: Simulated pole heights are site-specific and may differ from the typical pole heights described in Chapter 2 due to topography, etc.
 Source: Power Engineers, 2016

Figure 3.2-7. KVP 1, Existing and Proposed Conditions of Richards Creek Substation from SE 30th Street Looking East

3.2.5.3 Redmond Segment

Impacts to the aesthetic environment for the Redmond Segment would be less-than-significant. The segment is located within PSE's existing corridor, and the degree of contrast with the existing environment would be minimal. Impacts to scenic views are unlikely due to the presence of dense vegetation and tall tree stands. The project would be consistent with existing plans and policies.



- **Visual Quality of the Aesthetic Environment:** Contrast with the natural environment would increase because the poles would be approximately 35 feet taller than the existing poles. With a typical pole height of 95 feet, the new poles would be taller than much of the surrounding vegetation, and additional clearing would be required, particularly in areas where a large number of trees are within the transmission line corridor, such as the northern portion of the segment. The pole height and configuration would increase the contrast with surrounding residential development. Despite the height increase and additional clearing, the built environment would be unchanged because transmission lines already exist in the corridor. The new transmission line would have consistent height and form throughout the segment. The project would reduce visual clutter in the corridor by reducing the number of poles from existing conditions (see Figure 3.2-8). Impacts to the visual quality of the aesthetic environment would be less-than-significant.

- **Scenic Views:** The City of Redmond has policies to protect scenic views from public places. Specific public view corridors are codified in RZC 21.42.060. The project would not impact any scenic views from parks, trails, or outdoor recreation facilities. None of the public view corridors identified in RZC 21.42.060 are within the study area. There is the potential for some residential view impacts, but such impacts are expected to be minor due to the presence of dense vegetation and tall tree stands. Impacts to scenic views would be less-than-significant.
- **Viewer Sensitivity:** Primary viewers are residential viewers, who would be sensitive to changes to woodland views. Other sensitive viewers include users of the Bridle Crest Trail. The City of Redmond Comprehensive Plan policies call for protecting woodland views in residential neighborhoods. Trees would need to be removed, which could potentially change the wooded character of the area. However, tree removal would occur within an existing transmission corridor. Tree removal would be most noticeable to residents adjacent to the corridor, but the overall appearance of tree stands and woodland views is not expected to be adversely impacted because the area where additional clearing would occur is already mostly cleared. Some residential viewers may view the increased height of the poles positively because the lines would be higher than at present and therefore out of their line of sight, while others would not view the change as beneficial because the lines would be more visible than under existing conditions. Although the project would directly cross the Bridle Crest Trail, it would occur at a location where the existing 115 kV line traverses the trail. The Redmond Zoning Code protects the appearance of public ways. The project would not impact the appearance of public ways because it would be replacing one transmission line infrastructure with another in an existing utility corridor. Viewer sensitivity would be moderate.



Existing Pole Height: 50 feet



Proposed Pole Height: 85 feet

Note: Simulated pole heights are site-specific and may differ from the typical pole heights described in Chapter 2 due to topography, etc.
Source: Power Engineers, 2016

Figure 3.2-8. KVP 2, Existing and Proposed Conditions from Redmond Way Looking North

3.2.5.4 Bellevue North Segment

Impacts to the aesthetic environment on the Bellevue North Segment would be less-than-significant. The transmission line would be in the existing corridor, and there would be minimal contrast with existing conditions. Viewer sensitivity is low because there are few sensitive viewers. The project would be consistent with existing plans and policies because the tree removal (0.5 percent of trees within the Bridle Trails Subarea) is not expected to substantially change the existing wooded, natural, rural, and equestrian character of the Bridle Trails Subarea (see Appendix C). In addition, no trees would be removed from the lower slopes of the bluff adjacent to SR 520 at approximately 136th Avenue NE, so the visual separator between residential areas and the freeway would not be removed (see Appendix C).

There would be no impacts to scenic views because the degree of additional obstruction of views from the transmission line would be minimal.



- **Visual Quality of the Aesthetic Environment:** Contrast with the natural environment would be minimal because the 95-foot poles would in most cases be shorter than the surrounding vegetation or would appear shorter than surrounding vegetation due to vegetation density (see Figure 3.2-9). In general, the topography does not affect the visibility of the transmission line along this segment because dense, tall vegetation obscures the view of the transmission line. Within the built environment the poles would be approximately 35 feet taller than existing conditions, and the pole diameter would be wider than existing conditions, contrasting more with the surrounding houses and existing utility infrastructure. The new transmission line would have consistent form and height

throughout the segment, and would reduce visual clutter by reducing the number of poles. Impacts would be less-than-significant.

- **Scenic Views:** No scenic views from parks, trails, or outdoor recreation facilities would be significantly impacted. There are occasional views of the Cascades along the transmission corridor, views of the Olympics from Northup Way, and views of Mount Rainier along SR 520. Changes in the transmission infrastructure from 115 kV transmission lines to 230 kV transmission lines are not expected to negatively impact views from those locations because the change would occur within an existing transmission corridor, and the increase in height would move the wires farther above drivers' line of sight of visual resources. Impacts would be less-than-significant.
- **Viewer Sensitivity:** Sensitive viewers along the Bellevue North Segment are primarily residential viewers and users of the two unnamed trails and Viewpoint Park. In general, because of the high density of tall vegetation, only residential viewers close to the transmission line would be able to view it. The closer viewers are to the transmission line, the less likely they are to view the lines because increasing the existing pole height by 35 feet would raise the lines out of their line of sight. The presence of dense vegetation also reduces the likelihood that the transmission line would be visible from any of the recreational resources, except where it directly crosses them. In addition, none of these resources are identified as having scenic qualities, and a transmission line already crosses these resources. The Bridle Trails Subarea Plan protects the wooded, natural, rural, and equestrian character of the subarea, and it encourages retention of vegetation on the lower slopes of the bluff adjacent to SR 520 at approximately 136th Avenue NE to provide a visual separator between residential areas and the freeway (City of Bellevue, 2015d). It is estimated that approximately 0.5 percent of trees in the Bridle Trails Subarea as a whole would be removed for the project. No trees would need to be removed directly north of SR 520. Overall, viewer sensitivity is considered low.



Existing Pole Height: 55 feet



Proposed Pole Height: 90 feet

Note: Simulated pole heights are site-specific and may differ from the typical pole heights described in Chapter 2 due to topography, etc.
Source: Power Engineers, 2016

Figure 3.2-9. KVP 3, Existing and Proposed Conditions from NE 54th Place Looking North

3.2.5.5 Bellevue Central Segment, Existing Corridor Option

Impacts to the aesthetic environment would be less-than-significant because the transmission line would be within the existing corridor, and contrast with the existing environment would be minimal. Viewer sensitivity would be low because the project would not be inconsistent with study area plans or policies.

Scenic view impacts along this option would be less-than-significant.



- **Visual Quality of the Aesthetic Environment:** Contrast with the natural environment would be greater where tall vegetation is not present or is limited (e.g., at the Glendale Country Club). Most of the vegetation removal would occur south of the Lake Hills Connector. In general, the topography reduces the visibility of the line to the west because the decline in elevation is steep enough that views of the transmission line from the west are blocked by vegetation and housing in the foreground. Contrast with the built environment would be slightly greater than existing conditions because the poles would be approximately 40 feet taller and the pole diameter would be wider than the existing poles. However, a transmission line already exists in the corridor, and the new transmission line would have consistent form and height throughout the option route, and would reduce visual clutter by reducing the number of poles. Impacts would be less-than-significant.

- **Scenic Views:** Scenic view impacts along this option would be minimal because topography and vegetation obscure scenic views from most of the study area.
- **Viewer Sensitivity:** Sensitive viewers along the option route are residential viewers and recreational users. Kelsey Creek Park is the only recreational resource identified by the City as being used for its natural setting. The presence of dense vegetation reduces the likelihood that the transmission line would be visible from Kelsey Creek Park. The project would directly cross and/or follow the SE 3rd Trail, the SE 10th Trail, three unnamed trails, the Highland–Glendale Property, and Skyridge Park. However, because none of these resources are identified by the City as being used for their views or natural setting, and a transmission line already crosses these resources, viewer sensitivity to the change is expected to be low. The project would not be inconsistent with the Wilburton/NE 8th Street Subarea Plan because it would not substantially change the following key views: From SE 1st Street and Main Street at the transmission line right-of-way at 136th Avenue (see Figure 3.2-10). A transmission line already exists, and the project would only change the height and form of the line.



Existing Pole Height: 50 feet



Proposed Pole Height: 100 feet

Note: Simulated pole heights are site-specific and may differ from the typical pole heights described in Chapter 2 due to topography, etc.
Source: Power Engineers, 2016

Figure 3.2-10. KVP 4, Existing and Proposed Conditions from Main Street Looking North



Existing Pole Height: 55 feet



Proposed Pole Height: 105 feet

Note: Simulated pole heights are site-specific and may differ from the typical pole heights described in Chapter 2 due to topography, etc.
Source: Power Engineers, 2016

Figure 3.2-11. KVP 5, Existing and Proposed Conditions from Main Street Looking West

3.2.5.6 Bellevue Central Segment, Bypass Option 1

Bypass Option 1 would be located in a new corridor and would have a high degree of contrast with the existing aesthetic environment due to the introduction of new electrical infrastructure in the built environment and the amount of clearing that would be required. Viewer sensitivity would also be high because the new corridor would require the removal of, and prevent future planting of, street trees over 15 feet in height along streets in the Bel-Red Subarea. This would be inconsistent with the Bel-Red Subarea Plan in areas that are expected to have a high future population density (e.g., the Bel-Red Corridor). In addition, the view corridors of Lake Hills Connector, NE 5th Street, and NE 8th Street would be impacted. Impacts to the aesthetic environment would be significant.

Bypass Option 1 would impact scenic views, but the degree of obstruction of views would be minimal. Although there would be a moderate potential for scenic view impacts, the degree of view obstruction would be minimal due to the spacing of poles, width of the poles, and width of the wires. Therefore, impacts to scenic views would be less-than-significant.



- Visual Quality of the Aesthetic Environment:** Contrast with the natural environment would be greatest where vegetation is present because clearing within the new 30- to 55-foot wide easement would be required for the option. This clearing along the Lake Hills Connector, along with the contrast introduced by poles where there are currently no poles, would significantly impact the quality of the aesthetic environment. In general, the topography would reduce the visibility of the line uphill of the bypass route, but would not hide it completely from view. Contrast with the built environment would be higher than existing conditions because new poles would be introduced into the built environment that are taller than the surrounding low-rise buildings. The project would provide consistent form in that the same pole height and configuration would be used throughout the new corridor except where it rejoins with the existing corridor at the south end of the route, at the intersection of NE 20th Street and Northup Way, and where it goes under the existing SCL transmission lines (near the intersection of 124th Avenue NE and Bel-Red Road and southeast of the intersection of SE 8th Street and the Lake Hills Connector). These four areas would present a contrast to the built environment. However, the current SCL transmission line contrasts strongly with the surrounding built environment at 124th Avenue NE and Bel-Red Road (see Figure 3.2-6) and the natural environment surrounding the Lake Hills Connector. Therefore, even though the lattice towers adjacent to the PSE transmission line crossing would be raised by approximately 12 feet, it is unlikely that the change from existing conditions would be highly perceptible, except that the SCL pole type would be changed from a lattice tower to a monopole. Overall, impacts to the visual quality of the aesthetic environment surrounding Bypass Option 1 would be significant due to the high degree of contrast.
- Scenic Views:** Bypass Option 1 has the potential to impact scenic views of downtown Bellevue from east of 120th Avenue NE and from the area bounded by Northup Way to the north, Bel-Red Road to the south, 132nd Avenue NE to the west, and approximately 136th Place NE to the east. However, the degree of scenic view obstruction is expected to be limited because of the presence of other obstructions (trees, buildings, etc.). Raising the SCL line where the project would cross it would require that the SCL poles on either side of the crossings be converted from the existing 130- to 145-foot lattice steel towers to 142- to 157-foot monopoles. This would occur immediately to the north and south of the Bel-Red crossing and the Lake Hills Connector crossing. The north crossing of the SCL line (near the intersection of 124th Avenue and Bel-Red Road) has a high likelihood of impacting scenic views because one of the neighboring parcels, the Spring District development, is zoned with a maximum building height of 150 feet. It is possible that views of the Cascades from two proposed Spring District office buildings (Block 16 and Block 24) would be impacted. Views from Block 24 would likely be obstructed by wires; however, views from Block 16 would also have the monopole in front of the north portion of the building. The remaining neighboring parcels surrounding the north crossing are zoned with maximum building heights of 45 feet or 70 feet, lower than the existing and proposed towers, so impacts are not expected. It is unlikely that scenic view impacts would occur at the south crossing of the SCL line (just south of the Lake Hills Connector) because the primary viewers would be drivers on the Lake Hills Connector and users of trails within the Woodridge Open Space, both of which are already beneath the lines and would remain so under the proposed change. Therefore, there would be no new scenic view obstruction. Overall, because of the limited extent of these impacts, the impacts to scenic views would be less-than-significant.

- **Viewer Sensitivity:** Sensitive viewers along Bypass Option 1 are residential viewers and recreational users. Kelsey Creek Park is the only recreational resource identified by the City as being used for its natural setting. The presence of dense vegetation reduces the likelihood that the transmission line would be visible by users of Kelsey Creek Park. The new corridor would not directly cross any other recreational resources, except for the future Eastside Rail Corridor. According to the Eastside Rail Corridor Regional Trail Final Master Plan (King County, 2016), the Eastside Rail Corridor (ERC) will likely be the most heavily used trail corridor on the Eastside. Connecting the Eastside’s largest communities and employment centers, it is expected that “*the trail would become part of the everyday experience for thousands of King County residents for commute trips, trips from home to school, and recreation*” (King County, 2016). A high number of viewers could be impacted by the project in the future. The project would be inconsistent with the Bel-Red Subarea Plan because it would require the removal of vegetation along approximately 0.8 mile of Bel-Red Road, 0.4 mile along 132nd Avenue NE, and 0.2 mile along NE 20th Street and would preclude the placement of street trees over 15 feet in height (see Figure 3.2-12). Plans for the Bel-Red Corridor involve redevelopment along the road and future Link Light Rail stations (such as the Spring District) for high-density employment and residential centers. As a result, the population density in that area would likely be classified as high in the future and a large number of residential viewers could be affected (City of Bellevue, 2011). The project would also be inconsistent with the Wilburton/NE 8th Street Subarea Plan because it would impact the following key views: (1) south from the Lake Hills Connector north of SE 8th Street, and (2) west from NE 5th Street and NE 8th Street on the ridge between 122nd Avenue NE and 123rd Place NE (see Figures 3.2-13 and 3.2-14). Viewer sensitivity along much of the option is high.



Existing Pole Height: N/A



Proposed Pole Height: 120 feet

Note: Simulated pole heights are site-specific and may differ from the typical pole heights described in Chapter 2 due to topography, etc.
 Source: Power Engineers, 2016

Figure 3.2-12. KVP 6, Existing and Proposed Conditions from Bel-Red Road Looking Southwest



Existing Pole Height: N/A



Proposed Pole Height: 100 feet

Note: Simulated pole heights are site-specific and may differ from the typical pole heights described in Chapter 2 due to topography, etc.
Source: Power Engineers, 2016

Figure 3.2-13. KVP 7, Existing and Proposed Conditions from NE 8th Street Looking West



Existing Pole Height: N/A



Proposed Pole Height: 100 feet

Note: Simulated pole heights are site-specific and may differ from the typical pole heights described in Chapter 2 due to topography, etc.
Source: Power Engineers, 2016

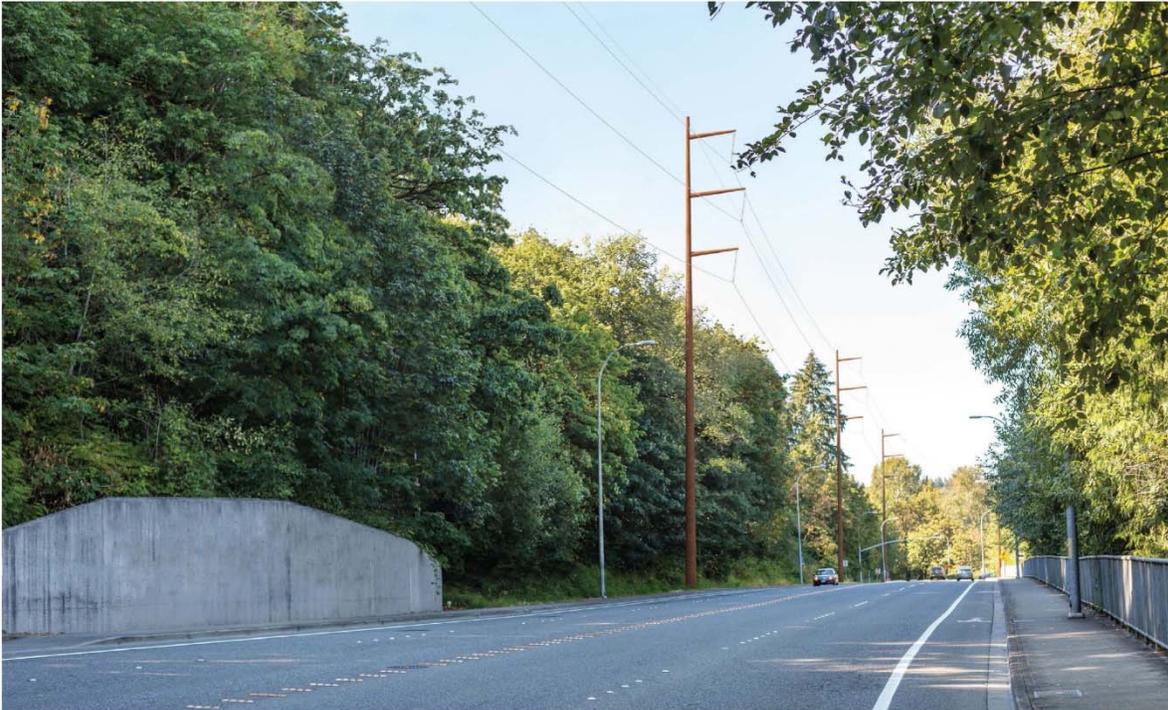
Figure 3.2-14. KVP 8, Existing and Proposed Conditions from Lake Hills Connector Looking East.

impacts to the visual quality of the aesthetic environment surrounding Bypass Option 2 would be significant due to the high degree of contrast that the project would introduce.

- **Scenic Views:** Bypass Option 2 has the potential to impact scenic views of downtown Bellevue from east of 120th Avenue NE. However, the degree of scenic view obstruction is expected to be minor because of the presence of other obstructions (trees, buildings, etc.). Impacts from raising the SCL line would be similar to those described for Bypass Option 1. Impacts to scenic views would be less-than-significant.
- **Viewer Sensitivity:** Sensitive viewers along Bypass Option 2 are residential viewers and users of Kelsey Creek Park. The presence of dense vegetation reduces the likelihood that the transmission line would be visible from Kelsey Creek Park. A new pole would be placed near the Woodridge Trail trailhead, but it is not expected to negatively impact the natural setting for trail users because it would not be visible once trail users walk uphill into the Woodridge Open Space and are surrounded by dense vegetation (see Figure 3.2-15). The project would be inconsistent with the Bel-Red Subarea Plan because it would require the removal of vegetation along approximately 0.8 mile of Bel-Red Road and 0.2 mile along NE 20th Street, and would preclude the placement of street trees over 15 feet in height. Similar to Bypass Option 1, the population density along the Bel-Red Corridor would likely be classified as high in the future (City of Bellevue, 2011). The project would be inconsistent with the same key views in the Wilburton/ NE 8th Street Subarea Plan that were identified for Bypass Option 1. In addition, Bypass Option 2 would be inconsistent with the Richards Valley Subarea Plan because it would change the green and wooded character of the Richards Road corridor. Under Bypass Option 2, trees within 30 feet of the alignment would need to be cleared along Richards Road between the Lake Hills Connector and SE 26th Street (approximately 0.9 mile). The largest amount of tree removal would be required along the Woodridge Open Space, which would change the wooded character of Richards Road along that portion of the road (see Figure 3.2-15). Viewer sensitivity along much of the option is high.



Existing Pole Height: N/A



Proposed Pole Height: 110 feet

Note: Simulated pole heights are site-specific and may differ from the typical pole heights described in Chapter 2 due to topography, etc.
Source: Power Engineers, 2016

Figure 3.2-15. KVP 9, Existing and Proposed Conditions from Richards Road Looking North

3.2.5.8 Comparison of Bellevue Central Options

All options have the potential to impact scenic views and aesthetics. The potential impacts of the options for the Bellevue Central Segment to these resources are compared below (Table 3.2-5). In some instances, there is a moderate potential for scenic view impacts due to pole height and placement; however, because the degree of obstruction would be low due to pole spacing and line width, no significant scenic view impacts are anticipated under the any of the Bellevue Central Options. Because none of the options would result in significant adverse impacts to scenic views, the comparison below focuses on differences in impacts to the aesthetic environment.

In the Bellevue Central Segment, two of the three options (Bypass Options 1 and 2) would require the creation of a new transmission line in an area where such a corridor does not currently exist. As a result, these options would create a high degree of contrast by introducing new electrical infrastructure into the built environment and requiring substantial clearing. Both options would also be inconsistent with subarea plan policies (see Table 3.2-4), resulting in a high likelihood of viewer sensitivity to the change. Both bypass options would result in significant adverse impacts to the aesthetic environment; however, Bypass Option 2 would result in more significant impacts due to the tree removal required along Richards Road.

Table 3.2-5. Comparison of Bellevue Central Options

Scale:	Lower Potential for Impact	Moderate Potential for Impact	Higher Potential for Impact
Segment / Option	Impacts to Visual Quality of the Aesthetic Environment	Impacts to Scenic Views	Viewer Sensitivity
Existing Corridor Option	Low	Low	Low
Bypass Option 1	High	Moderate	High
Bypass Option 2	High	Moderate	High

3.2.5.9 Bellevue South Segment, Oak 1 Option

Portions of the Bellevue South Oak 1 Option would be in the existing corridor, and impacts to the aesthetic environment would be less-than-significant in those areas because of the low degree of contrast with existing conditions. The portions of the Oak 1 Option that would be in a new corridor would have a higher degree of contrast than in the existing corridor; however, because transmission line infrastructure is already present throughout the route, the project would not contrast greatly compared to existing conditions. There is a relatively high density of residential viewers along the new corridor, and there is the potential for some subarea plan inconsistency. Therefore, viewer sensitivity is moderate along this option. However, overall impacts to the aesthetic environment would be less-than-significant because of the low degree of contrast.

Impacts to scenic views would be less-than-significant because of the low degree of additional view obstruction.



- Visual Quality of the Aesthetic Environment:** Contrast with the natural environment would occur where new clearings would be required. This includes along the following road locations where the typical easement width would be 35 feet (with a range of 30 to 55 feet): SE 30th Street, Factoria Boulevard SE, Richards Road, and Coal Creek Parkway. In general, the topography would limit the visibility of the line along the existing corridor. The flatter topography surrounding Factoria Boulevard SE would make that portion of the option more visible than in other portions (see Figure 3.2-16). Because transmission line infrastructure is already present throughout the route the project would not contrast greatly compared to existing conditions. Pole height would increase along Factoria Boulevard/Coal Creek Parkway by approximately 15 feet, and on SE 30th Street by approximately 20 feet. There would be no change in form within the existing corridor. However, along all of the other portions of the option route, pole configuration would change to various 230 kV configurations (see Chapter 2). The project would not provide consistent pole height and form throughout the option route although on any given right-of-way there would be consistent form and height. The areas where a change in pole form and height would occur include the substation locations (Richards Creek and Somerset) and at the intersection of the existing transmission corridor and SE 60th Street. The option would be in the line of sight for single-family residences directly abutting the corridor southeast of the ravine. However, the topography associated with corridor south of SE 60th Street would make the line more visible for houses located within a block of the corridor than other locations in the study area, so the change in pole height and form would have few viewers. Removal of the underbuild on Coal Creek Parkway and Factoria Boulevard SE would decrease the clutter and potentially improve the visual quality along that portion of the option route (see Figure 3.2-17). Overall, impacts to the visual quality of the aesthetic environment would be less-than-significant.
- Scenic Views:** Most of the scenic views are from the Somerset neighborhood and are of the Olympics, Lake Washington, and the Bellevue and Seattle skylines. There are also scenic views of downtown Seattle and the Olympics from multi-family residential housing off of Factoria Boulevard SE. Both areas are associated with a relatively high population density (see Appendix C). However, the degree of scenic view obstruction is expected to be low in the Somerset neighborhood because the existing transmission line would be unchanged. Impacts along Factoria Boulevard SE could be greater than under existing conditions because the new poles would be 15 feet taller. However, the presence of existing vegetation and other obstructions to scenic views reduces the potential for scenic view obstruction. Impacts to scenic views would be less-than-significant.
- Viewer Sensitivity:** Sensitive viewers along this option route are residential viewers and recreational users. Coal Creek Natural Area is the only recreational resource identified by the City as being used for its natural setting. The project would directly cross the Somerset Recreation Club, Forest Hill Neighborhood Park, Coal Creek Natural Area, and Newport Hills Mini Park. However, these crossings would be in areas where the recreational resources are already crossed by the existing transmission line corridor; therefore, the contrast would be low. Approximately eight trees would be removed near the Coal Creek to Forest Drive segment of the Lower Coal Creek Trail, and approximately 20 trees would be removed near the Coal Creek to SE 60th Street segment of the Lower Coal Creek Trail. In both instances, the tree removal would diminish the natural setting and would make Coal Creek Parkway more visible to trail users. Trees would need to be removed along Richards Road within 30 feet of the transmission line for approximately 550 feet between SE 30th Street and SE 32nd Street. This is not expected to impact the wooded character of Richards Road because the portion of the roadway where trees would be

removed comprises 7 percent of the roadway as a whole. Placement of higher poles in the existing corridor has the potential to impact views from adjacent single-family neighborhoods in the Eastgate Subarea. There is also the potential for inconsistency with the Newport Hills Subarea Plan, which emphasizes the protection of existing trees on slopes and hilltops. Tree removal would occur within the Coal Creek ravine; however, the number of trees removed, when compared to the number of trees within the ravine as a whole, is not expected to impact the aesthetics of Coal Creek to the degree that it would no longer be considered a “distinct visual element” (see Table 3.2-4). The option also traverses the Somerset neighborhood. The Somerset neighborhood has neighborhood covenants that protect views (i.e., the View Guideline for Somerset). These neighborhood covenants represent a “custom” in that they are a form of social contract between residents of the community to follow certain guidelines to protect community interests, in this case residential views. Per the methodology adapted for this analysis, the viewer sensitivity assessment should take into account customs along with other locally adopted guidance for aesthetic and viewer preferences. Therefore, incompatibility between the project and the neighborhood covenants is likely to result in increased viewer awareness of the impact (Section 3.2.3.3). The City of Bellevue Comprehensive Plan states that distinctive neighborhood character within Bellevue’s diverse neighborhoods should be protected (see policies in Table 3.2-4). The distinctive character of the Somerset neighborhood is described and protected through the neighborhood’s View Guideline, which limits building and vegetation height to preserve existing views. The spirit of the guideline is “to preserve the views of a residence, the way they were, when the house was built” (Somerset Community, 2016). (Note that, in context, “the view of a residence” refers to views that can be seen from a residence, rather views looking at the residence.) Under the Oak 1 Option, the existing 115 kV H-frame structures would remain within the existing transmission line corridor, and no visual changes to the Somerset neighborhood are anticipated. In general, viewer sensitivity is moderate.



Existing Pole Height: 80 feet



Proposed Pole Height: 90 feet

Note: Simulated pole heights are site-specific and may differ from the typical pole heights described in Chapter 2 due to topography, etc.
Source: Power Engineers, 2016

Figure 3.2-16. KVP 10, Existing and Proposed Conditions from Factoria Boulevard SE Looking North



Existing Pole Height: 65 feet



Proposed Pole Height: 75-80 feet

Note: Simulated pole heights are site-specific and may differ from the typical pole heights described in Chapter 2 due to topography, etc.
Source: Power Engineers, 2016

Figure 3.2-17. KVP 11, Existing and Proposed Conditions from Coal Creek Parkway Looking Northwest toward the Intersection with Factoria Boulevard SE

3.2.5.10 Bellevue South Segment, Oak 2 Option

Impacts of the Oak 2 Option on the aesthetic environment would be similar to the Oak 1 Option and would be less-than-significant because of the low degree of contrast with the existing aesthetic environment. Although the option would make changes within the Somerset neighborhood, an area with higher visual sensitivity, the degree of contrast would be low because the pole height would only increase by approximately 5 feet, the pole configuration would be the same as existing conditions (H-frame structures), and there would be only a single set of H-frames in the corridor, rather than two sets as at present. Even though viewer sensitivity is high in Somerset, the Oak 2 Option would not result in a substantial change in contrast and therefore would not result in significant adverse impacts.

Impacts to scenic views would be less-than-significant because there would be minimal additional view obstruction beyond existing conditions.



- **Visual Quality of the Aesthetic Environment:** Contrast with the natural environment would occur where new clearings would be required along the following locations: (1) where the typical easement width would be 35 feet (with a range of 30 to 55 feet): SE 30th Street, Factoria Boulevard SE, Richards Road, and Coal Creek Parkway; and (2) where the typical easement width would be 10 feet (with a range of 5 to 25 feet): 124th Avenue SE and SE 38th Street. Contrast with the built environment would be more where new poles are placed (on SE 38th

Street and 124th Avenue SE) versus where transmission poles currently exist (see Figure 3.2-18). However, the SCL transmission line currently abuts 124th Avenue SE, so contrast there would be less. Pole height would increase along Factoria Boulevard SE/Coal Creek Parkway by approximately 15 feet, and on SE 30th Street by approximately 20 feet. Within the existing corridor, pole height would typically increase by 5 feet (the existing pole height is approximately 60 feet within the existing corridor). There would be no change in form within the existing corridor. However, along all of the other portions of the option route, pole configuration would change to various 230 kV configurations (see Chapter 2). Pole height and form would vary throughout the option route. The areas where a change in pole form and height would occur include the substation locations, the intersection of SE 38th Street and Factoria Boulevard SE, and at the intersection of the existing transmission corridor and SE 60th Street. Removal of the underbuild on Coal Creek Parkway and Factoria Boulevard SE would decrease visual clutter and potentially improve the visual quality along those portions of the option route. However, because the lines would still be 115 kV, there would be the potential for underbuild to be placed on the poles in the future. In addition, construction of a 115 kV line on 124th Avenue SE would allow for underbuild to be built in the future where it currently is not supported. This could result in increased visual clutter along 124th Avenue SE. Overall, impacts to the visual quality of the aesthetic environment would be less-than-significant.

- **Scenic Views:** Most of the scenic views are from the Somerset neighborhood and are of the Olympics, Lake Washington, and the Bellevue and Seattle skylines. There are also scenic views of downtown Seattle and the Olympics from multi-family residential housing off of Factoria Boulevard SE. Both areas are associated with a relatively high population density (see Appendix C). However, the degree of scenic view obstruction is expected to be low in the Somerset neighborhood because there is an existing transmission line, and the new line would protrude approximately 5 feet higher than under existing conditions, which would not present a substantial visual change. Impacts could also occur along Factoria Boulevard SE because the new poles would be 15 feet taller than existing poles. However, the presence of existing vegetation and other obstructions to scenic views reduces the potential for scenic view obstruction. Impacts to scenic views would be less-than-significant.
- **Viewer Sensitivity:** Sensitive viewers along this option route are residential viewers and recreational users. Coal Creek Natural Area is the only recreational resource identified by the City as being used for its views or natural setting. Approximately eight trees would be removed near the Coal Creek to Forest Drive segment of the Lower Coal Creek Trail, and approximately 20 trees would be removed near the Coal Creek to SE 60th Street segment of the Lower Coal Creek Trail. In both instances, the tree removal would diminish the natural setting and would make Coal Creek Parkway more visible to trail users. Areas with a high population density include the Somerset neighborhood and the area east and west of Factoria Boulevard SE from approximately I-90 to SE Newport Way (east of Factoria Boulevard SE) and Coal Creek Parkway (west of Factoria Boulevard SE), and south of SE 60th Street to Newcastle Way. Trees would be removed along Richards Road within 30 feet of the transmission line for approximately 550 feet between SE 30th Street and SE 32nd Street. This is not expected to impact the wooded character of Richards Road because the portion of the roadway where trees would be removed comprises 7 percent of the roadway as a whole. The placement of higher poles in the existing corridor also has the potential to impact views from adjacent single-family neighborhoods in the Eastgate Subarea. There is the potential for inconsistency with the Newport Hills Subarea Plan, which emphasizes the protection of existing trees on slopes and hilltops. Tree removal would

occur within the Coal Creek ravine; however, the number of trees removed, when compared to the number of trees within the ravine as a whole, is not expected to impact the aesthetics of Coal Creek to the degree that it would no longer be considered a “distinct visual element” (see Table 3.2-4). The Somerset neighborhood has neighborhood covenants that protect views (see the full explanation in Section 3.2.5.9), which suggests high viewer sensitivity in that area. Overall, viewer sensitivity is moderately high.



Existing Pole Height: N/A



Proposed Pole Height: 70 feet

Note: Simulated pole heights are site-specific and may differ from the typical pole heights described in Chapter 2 due to topography, etc.
Source: Power Engineers, 2016

Figure 3.2-18. KVP 12, Existing and Proposed Conditions from SE 38th Street Looking Southeast

3.2.5.11 Bellevue South Segment, Willow 1 Option

Contrast with the existing aesthetic environment would generally be low because the transmission line would be within the existing corridor. The exception to this is where the option would traverse the Somerset neighborhood. The Somerset neighborhood has covenants that impose height restrictions on trees and buildings, making the existing aesthetic environment within that neighborhood unique in this segment and among other neighborhoods in Bellevue that are affected by the project. As a result of these covenants, building and vegetation height is lower than other areas of the corridor, and the degree of contrast created by the taller poles is substantial. Viewer sensitivity is generally high along this option, particularly where it traverses the Somerset neighborhood and the Coal Creek Natural Area. However, impacts to the Coal Creek Natural Area would be less-than-significant because vegetation removal would be limited. In the Somerset neighborhood, the combination of high viewer sensitivity and substantial contrast created by this option would mean that significant impacts to the visual quality are expected along the that portion of the Willow 1 Option.

Impacts to scenic views would be less-than-significant because only residents located approximately 200 to 400 feet to the east of the transmission corridor (along the portion that would traverse the Somerset neighborhood) would potentially experience scenic view impacts.



- Visual Quality of the Aesthetic Environment:** The option would be fully located within the existing corridor; the corridor has been cleared and managed, and in most areas vegetation would not change substantially. In some portions of the residential areas north and south of the Coal Creek Natural Area, a substantial number of trees in the existing corridor have been identified for potential removal. However, because those areas have long been managed to keep the area clear, viewer sensitivity to each clearing would be low. Therefore, these impacts would be less-than-significant. Contrast with the natural environment may occur where large amounts of vegetation are removed or the poles are taller than the surrounding vegetation. The existing 115 kV lines and approximately 60-foot H-frame structures along the existing corridor would be removed and replaced by one or two monopoles at each location. North of SE Newport Way and south of the Somerset substation, double-circuit 100-foot tall steel monopoles would be used. South of SE Newport Way to the Somerset substation, pairs of single-circuit, 85-foot tall monopoles would be used. Contrast with the built environment is expected to be less-than-significant, except for where the option would cross the Somerset neighborhood. Although the new transmission lines would be within an existing transmission corridor, and the height and form of the transmission line itself would be consistent through that area, there would be a substantial degree of contrast between the low-scale buildings and vegetation within the Somerset neighborhood (see Figure 3.2-19). The Somerset neighborhood has covenants that impose height restrictions and make the existing aesthetic environment within the neighborhood unique. Because the aesthetic environment of the Somerset neighborhood is comprised of height-restricted features, the difference in height between the new poles and the surrounding built environment is more pronounced than in other areas along the segment where buildings and vegetation are taller.
- Scenic Views:** Most of the scenic views are from the Somerset neighborhood and are of the Olympics, Lake Washington, and the Bellevue and Seattle skylines. This is an area with a relatively high population density (see Appendix C). The degree of scenic view obstruction is expected to be higher in the Somerset neighborhood because the poles would protrude approximately 30 feet higher than under existing conditions. This would raise the lines out of the viewshed of some residential viewers and into the viewshed of others. However, only residents located approximately 200 to 400 feet to the east of the transmission corridor (along the portion that would traverse the Somerset neighborhood) would potentially experience scenic view impacts. Therefore, impacts overall would be less-than-significant.
- Viewer Sensitivity:** Sensitive viewers along this option are residential viewers and recreational users. Coal Creek Natural Area is the only recreational resource identified by the City as being used for its natural setting. Approximately 20 trees would be removed near the Coal Creek to SE 60th Street segment of the Lower Coal Creek Trail. In both instances, the tree removal would diminish the natural setting and make Coal Creek Parkway more visible to trail users. Although not identified as being used for their natural settings, the Forest Hill Neighborhood Park and Somerset North Slope Open Space would be directly crossed by the project. Because these recreation areas are already traversed by a transmission line corridor, viewer sensitivity is lower for users entering the corridor. Sensitivity is expected to be high at the Somerset North Slope Open Space, where park users would view a higher degree of contrast as the new transmission line would change in height and form. The placement of higher poles in the existing corridor has the potential to impact views from adjacent single-family neighborhoods in the Eastgate Subarea. However, the increase in pole height (approximately 40 feet) would reduce existing obstruction of scenic views for abutting residences because the wires would be higher, and out of the line of sight from those residences. There is the potential for inconsistency with the Newport Hills

Subarea Plan, which emphasizes the protection of existing trees on slopes and hilltops. Tree removal would occur within the Coal Creek ravine; however, the number of trees removed, when compared to the number of trees within the ravine as a whole, is not expected to impact the aesthetics of Coal Creek to the degree that it would no longer be considered a “distinct visual element” (see Table 3.2-4). The Somerset neighborhood has neighborhood covenants that restrict height to protect views from all residences (as explained above in Section 3.2.5.9). As such, viewer sensitivity to changes in the views from those residences is high. Overall, viewer sensitivity is moderately high, but it is high within the Somerset neighborhood.



Existing Pole Height: 44 feet



Proposed Pole Height: 85 feet

Note: Simulated pole heights are site-specific and may differ from the typical pole heights described in Chapter 2 due to topography, etc.
Source: Power Engineers, 2016

Figure 3.2-19. KVP 13, Existing and Proposed Conditions from Somerset Drive SE Looking West.

3.2.5.12 Bellevue South Segment, Willow 2 Option (PSE's Preferred Alignment)

Impacts of the Willow 2 Option on the aesthetic environment would be less-than-significant where it is within the existing corridor, similar to the impacts of the Willow 1 Option. The portion of the Willow 2 Option that is in a new corridor would contrast with the existing environment, but impacts are expected to be less-than-significant because electrical infrastructure is already present. Viewer sensitivity is generally high in the Coal Creek Natural Area, where vegetation would be removed, but would be less-than-significant because the removal is not extensive. Although the option would make changes within the Somerset neighborhood, an area with higher visual sensitivity, the degree of contrast would be low because the pole height would only increase by approximately 5 to 15 feet, the pole configuration would be the same as existing conditions (H-frame structures), and there would be only one set of H-frames rather than two as at present. Therefore, the Willow 2 Option would not result in substantial contrast with the existing aesthetic environment and would not result in significant adverse impacts.

Impacts to scenic views would be less-than-significant because there would be a low degree of additional view obstruction.



- **Visual Quality of the Aesthetic Environment:** Contrast with the natural environment would occur where new vegetation clearings would be required. This includes along SE Newport Way, Coal Creek Parkway, and Facteria Boulevard SE, where the typical easement width would be 20

feet (with a range of 20 to 30 feet). Contrast with the built environment would be more than existing conditions, but is not expected to be significant because electrical infrastructure is present within much of the new corridor. Pole height would increase within the existing corridor (40–50 feet taller north of SE Newport Way and between Somerset substation and SE 60th Street, 5–15 feet taller between SE Newport Way and Somerset Substation, and 20–35 feet taller south of SE 60th Street); along Newport Way SE (35–40 feet taller); and along Factoria Boulevard SE and Coal Creek Parkway (approximately 15 feet taller). The project would not provide consistent pole height and form throughout the option, but pole height would generally be consistent along each roadway. The areas where a change in pole form and height would occur include the substation locations, the intersection of Newport Way and the existing corridor, the intersection of Factoria Boulevard SE and Newport Way, the intersection of Factoria Boulevard SE and Coal Creek Parkway, and at the intersection of the existing corridor and SE 60th Street. At these locations, visual quality would be impacted but the impacts would be less-than-significant because of low viewer sensitivity due to existing infrastructure. Underbuild would be removed on Newport Way, Factoria Boulevard SE, and Coal Creek Parkway. This removal of the underbuild would decrease the clutter and potentially improve the visual quality along that portion of the option route (see Figure 3.2-20). However, because the new lines would also be 115 kV, there would be the potential for underbuild to be restrung to the new poles in the future, resulting in visual clutter.

- **Scenic Views:** Most of the scenic views are from the Somerset neighborhood and are of the Olympics, Lake Washington, and the Bellevue and Seattle skylines. There are also scenic views of downtown Seattle and the Olympics from multi-family residential housing off of Factoria Boulevard SE. This area has a relatively high population density (see Appendix C). However, the degree of scenic view obstruction is expected to be low in the Somerset neighborhood because the poles would protrude approximately 5–15 feet higher than under existing conditions, which is not a substantial visual change. Existing vegetation and other blockages reduce the potential for scenic view obstruction. Impacts to scenic views would be less-than-significant.
- **Viewer Sensitivity:** Sensitive viewers along this option route are residential viewers and users of the Coal Creek Natural Area. Approximately eight trees would be removed near the Coal Creek to Forest Drive segment of the Lower Coal Creek Trail and approximately 20 trees would be removed near the Coal Creek to SE 60th Street segment of the Lower Coal Creek Trail. In both instances, the tree removal would diminish the natural setting and would make Coal Creek Parkway more visible to trail users. Placement of higher poles in the existing corridor has the potential to impact views from adjacent single-family neighborhoods in the Eastgate Subarea. The increase in pole height (approximately 5–15 feet) would impact a limited degree of scenic views uphill from the transmission line, while residences abutting the existing corridor would have reduced view obstruction due to the wires being higher than their line of sight. There is the potential for inconsistency with the Newport Hills Subarea Plan, which emphasizes the protection of existing trees on slopes and hilltops. Tree removal would occur within the Coal Creek ravine; however, the number of trees removed, when compared to the number of trees within the ravine as a whole, is not expected to impact the aesthetics of Coal Creek to the degree that it would no longer be considered a “distinct visual element” (see Table 3.2-4). The Somerset neighborhood has neighborhood covenants that restrict height to protect views from all residences (as explained above in Section 3.2.5.9). As such, viewer sensitivity to changes in the views from those residences is high. Overall, viewer sensitivity for this option is moderately high.



Existing Pole Height: 40 feet



Proposed Pole Height: 75 feet

Note: Simulated pole heights are site-specific and may differ from the typical pole heights described in Chapter 2 due to topography, etc.
 Source: Power Engineers, 2016

Figure 3.2-20. KVP 14, Existing and Proposed Conditions from SE Newport Way Looking West

3.2.5.13 Comparison of Bellevue South Options

All of the Bellevue South Options have the potential to impact scenic views and aesthetics. The potential impacts of the options for the Bellevue South Segment to these resources are compared below (Table 3.2-6). However, the Willow 1 Option is the only option that would result in significant adverse impacts to scenic views or the aesthetic environment.

In some instances, there is a moderate potential for scenic view impacts due to pole height and placement; however, because the degree of obstruction would be low due to pole spacing and line width, no significant scenic view impacts are anticipated under the proposed project.

The Willow 1 Option would have significant impacts to the aesthetic environment in the Somerset neighborhood due to inconsistency, high viewer sensitivity due to view protection covenants (which are supportive of and consistent with the City of Bellevue’s policy to protect distinctive neighborhood character), and a substantial change in contrast as a result of the project. All of the other options would have minor impacts to the aesthetic environment within the existing corridor. The portions of the Oak 1, Oak 2, and Willow 2 Options that would be in a new corridor would have a higher degree of contrast than in the existing corridor; however, because transmission line infrastructure is already present throughout the Oak 1 and Oak 2 Option routes, these options would not contrast greatly compared to existing conditions. The SE Newport Way portion of the Willow 2 Option has a greater potential for contrast than most other options for this segment because, while electrical infrastructure is present, the existing poles are not as tall as the proposed poles. Implementation of the Willow 2 Option would also result in the removal of underbuild, which would reduce visual clutter along SE Newport Way. However, because the new transmission lines would also be 115 kV, there would be the potential for underbuild to be restrung to the new poles in the future. After the Willow 1 Option, the Oak 1 Option would have the lowest potential for impacts to the aesthetic environment because less new corridor would be required and transmission infrastructure already exists where the new corridor would be constructed. Viewer sensitivity along all of the Bellevue South Options is moderate to high; however, due to the low to moderate potential for impacts to scenic views and the aesthetic environment in all portions except the Somerset neighborhood under the Willow 1 Option, significant impacts are not anticipated.

Table 3.2-6. Comparison of Bellevue South Options

Segment / Option	Impacts to Visual Quality of the Aesthetic Environment	Impacts to Scenic Views	Viewer Sensitivity
Oak 1 Option	Low	Low	Moderate
Oak 2 Option	Low	Low	Moderately High
Willow 1 Option	High	Moderate	High
Willow 2 Option	Low	Low	Moderately High

Scale:

Lower Potential for Impact	Moderate Potential for Impact	Higher Potential for Impact
----------------------------	-------------------------------	-----------------------------

- Visual Quality of the Aesthetic Environment:** In general, the poles and wires are more noticeable where the transmission line is on a ridge with low vegetation (e.g., the portion of the segment north of May Creek) than other conditions where the topography and presence of dense, taller tree stands result in the poles and wires being less visible (e.g., in the May Creek ravine). Currently, the existing poles are minimally noticeable north of May Creek because of their height (approximately 55 feet) and placement within the center of the corridor. Under the proposed project, the poles would nearly double in height (to approximately 100 feet) and would be placed farther from the center of the corridor than the existing poles, making them more visible from residential streets and less likely to be concealed by vegetation due to their proximity to residences. This, when coupled with the placement of the line on the top of a ridge, would result in the poles contrasting more with the surrounding houses and utility infrastructure due to the pronounced prominence of the transmission line. This would significantly change the residential character of the surrounding neighborhood as the transmission line would become a defining visual feature for the neighborhood (see Figure 3.2-21). Therefore, although transmission lines already exist in the corridor, and the new transmission line would have consistent height and form throughout the segment, the degree of contrast with the built environment would be significant within the residential portion of Newcastle. However, within the May Creek ravine, project-related impacts to the visual quality of the aesthetic environment would be less-than-significant because the topography and presence of dense vegetation would reduce the degree of contrast between the project and the surrounding aesthetic environment.
- Scenic Views:** Most views from the Olympus neighborhood are of the Cascades, the Olympics, and in some places Mount Rainier. There is the potential for residential views of the Cascades, Cougar Mountain, and potentially Mount Rainier to be impacted, some of which could occur in places with high population density (see Appendix C). However, the degree of scenic view obstruction is expected to be low due to the presence of other obstructions, such as trees and buildings, and the limited number of pole locations. No scenic views from parks, trails, or outdoor recreation facilities would be impacted. Impacts to scenic views would be less-than-significant.
- Viewer Sensitivity:** Primary viewers are residential viewers and users of Lake Boren Park, Lake Boren Esplanade, May Creek Park, May Creek Trail, Cross Town Trail, and Olympus Trail. Because the project would be on a ridge, it would be visible by much of the Newcastle population. The highest density of residential viewers in the study area along the Newcastle Segment is in the north portion of Newcastle, between Newcastle Way and SE 80th Way (see Appendix C). Although viewer sensitivity is lower within the existing corridor than elsewhere in Newcastle, overall viewer sensitivity is high, based on the extent of affected viewers and the recently adopted policies regarding aesthetic impacts from transmission lines. The City of Newcastle Comprehensive Plan protects the scale and character of existing neighborhoods through policies that call for transmission lines to be sited and designed to minimize visual impacts to adjacent land uses (City of Newcastle, 2016). From some vantage points, such as from Lake Boren Park, the distance from the line would diminish the perceptible differences in height and inconsistency with the surrounding built environment (see Figure 3.2-22). However, within the neighborhoods surrounding the transmission line, the new transmission line would become a defining visual feature and significantly change the residential character of the area (see Figure 3.2-21). Therefore, the project would be inconsistent with the Newcastle Comprehensive Plan.



Existing Pole Height: 55 feet



Proposed Pole Height: 95 feet

Note: Simulated pole heights are site-specific and may differ from the typical pole heights described in Chapter 2 due to topography, etc.
Source: Power Engineers, 2016

Figure 3.2-21. KVP 15, Existing and Proposed Conditions from 128th Ave SE Looking Northeast



Existing Pole Height: 50 feet



Proposed Pole Height: 95 feet

Note: Simulated pole heights are site-specific and may differ from the typical pole heights described in Chapter 2 due to topography, etc.
Source: Power Engineers, 2016

Figure 3.2-22. KVP 16, Existing and Proposed Conditions from Lake Boren Park Looking Southwest

3.2.5.15 Renton Segment

Overall, impacts to the aesthetic environment from the Renton Segment would be less-than-significant. Although the poles would be 30 to 45 feet taller and larger in diameter than existing poles, the segment would be located within PSE's existing corridor, resulting in low contrast with existing conditions. Overall, viewer sensitivity is low because no policies specifically address aesthetic impacts from transmission lines, although general policies do address general aesthetic qualities and public views. Impacts to the aesthetic environment would be less-than-significant.

Impacts to scenic views would also be less-than-significant because the degree of additional obstruction would be minimal compared with existing conditions.



- **Visual Quality of the Aesthetic Environment:** Contrast with the natural environment would be high as there is little vegetation along the segment, except near Honey Creek and the Cedar River. Near the creek and river, the poles would blend with the natural environment because they would have similar height and form as the abutting tree stands. Although the corridor width would not change, tree removal would be required, particularly on the upper slopes of the Cedar River ravine and within the Honey Creek ravine. None of the trees in the Cedar River ravine would need to be removed because the transmission line would be well above the tops of trees (as is the case with the existing line), and would meet PSE requirements (The Watershed Company,

2016). In general, the poles are more visible when the transmission line is located on a ridge with low vegetation (such as the Liberty Ridge neighborhood), or in areas where it is generally flat and adjacent to a roadway (e.g., Renton Technical College) than other topographic and vegetation conditions (see Figures 3.2-23 and 3.2-24). Poles and wires are marginally visible from within ravines (such as the Cedar River ravine). This would continue to be the case under the project. Contrast with the built environment would be slightly more than existing conditions because the poles would be taller (30 feet taller than the existing poles north of Honey Creek, and 45 feet taller south of Honey Creek); the pole diameter would also be wider than existing poles, but the number of poles would be reduced. Changes to the built environment would be less-than-significant because transmission lines already exist in the corridor; however, they would be replaced with a new transmission line with a different height and form.

North of the Honey Creek ravine, the line would consist of paired single-circuit monopoles. South of Honey Creek the line would consist of double-circuit monopoles approximately 15 feet taller than the paired monopoles to the north. However, this change in project form and height would occur in an area with few viewers. Elsewhere along the segment, the height and form would be consistent. The poles in all locations would be taller than the existing poles. The form would also change from an H-frame configuration to a monopole configuration, changing the look of the transmission line. Some viewers may positively perceive the increased height of the poles because the lines would be moved up and out of their line of sight, while others would not view the change as beneficial.

The project could require that the existing SCL transmission line be raised in two locations along this segment: one location just south of the intersection of 126th Avenue SE with NE 25th Street, and one location within the Cedar River ravine. The SCL pole type would be changed from a lattice tower to a monopole. The current SCL transmission line contrasts strongly with the surrounding built environment at 126th Avenue SE and NE 25th Street and the natural environment surrounding the Cedar River ravine. Therefore, even though the towers adjacent to the PSE transmission line crossing would be approximately 12 feet taller, it is unlikely the change would be highly perceptible, except the change in pole type. In general, visual clutter would be reduced due to the reduction in the number of poles. Overall, impacts to the visual quality of the aesthetic environment would be less-than-significant.

- **Scenic Views:** Areas with the highest density of scenic views are in Liberty Ridge and on Talbot Hill (areas with medium to low population density). The only public recreation site from which scenic views have the potential to be impacted is along the Cedar River Trail. However, changes to the existing corridor are not expected to result in significant impacts. The height and location of the proposed poles and transmission line would not obscure views of the Cedar River from the trail. Raising the SCL poles immediately to the north and south of the crossings with the project is not expected to obscure scenic views. The crossing to the north would be in a flat location surrounded by single-family residences, and therefore the lines would continue to be overhead. The crossing within the Cedar River ravine would also not have significant impacts because it is surrounded by tall, dense vegetation. Impacts to scenic views would be less-than-significant.

Viewer Sensitivity: Primary viewers are residential viewers and recreational users of the Cedar River Park, Cedar River Trail, Honey Creek Open Space, Philip Arnold Park, and Riverview Park. No new poles would be placed within these parks, so changes to the aesthetics for these viewers would be associated with any clearing or changes in the height and appearance of the transmission line. The height of the poles would be 30 to 45 feet taller than existing poles, but not noticeable because they would be 500 to 1,200 feet away from these parks and behind vegetation. No clearing would be required where the project crosses the Cedar River Park, Cedar River Trail, and Riverview Park because the topography of the Cedar River ravine provides sufficient clearance between the lines and the vegetation below. Figure 3.2-25 shows the appearance of the lines from the Cedar River Trail, as well as the existing pole structure from the trail. The distance between the trail and the pole (approximately 1,000 feet) would make the change in form (from two adjacent wooden H-frame structures to one taller steel monopole) less noticeable. The height of the lines is expected to stay the same. Although the diameter of the wires would be slightly larger, it is not expected that the difference would be perceivable from the trail (Figure 3.2-25) (also see Appendix C, which includes a figure that compares the diameters of the existing wire and the new wires in the proposed project). The City of Renton Comprehensive Plan protects natural forms, vegetation, distinctive stands of trees, natural slopes, and scenic areas that “contribute to the City’s identity, preserve property values, and visually define the community neighborhoods” (City of Renton, 2015a). Changes to the appearance of those features would be minor because an existing corridor would be used (see Figure 3.2-24). In general, viewer sensitivity is moderate along the Cedar River Trail and low elsewhere.



Existing Pole Height: 55 feet



Proposed Pole Height: 90 feet

Note: Simulated pole heights are site-specific and may differ from the typical pole heights described in Chapter 2 due to topography, etc.
Source: Power Engineers, 2016

Figure 3.2-23. KVP 17, Existing and Proposed Conditions from Monroe Avenue Looking North



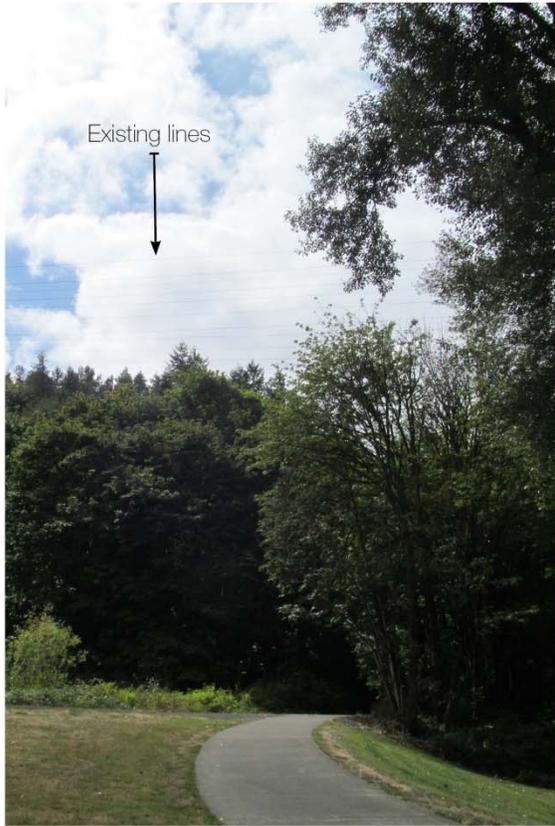
Existing Pole Height: 50-70 feet



Proposed Pole Height: 90 feet

Note: Simulated pole heights are site-specific and may differ from the typical pole heights described in Chapter 2 due to topography, etc.
Source: Power Engineers, 2016

Figure 3.2-24. KVP 18, Existing and Proposed Conditions from Glenwood Court SE Looking North



View of the existing transmission lines from the Cedar River Trail



View of the existing pole structure from the Cedar River Trail

Figure 3.2-25. Existing Views from the Cedar River Trail

3.2.6 Mitigation Measures

For scenic views and the aesthetic environment, regulations and comprehensive plan policies were reviewed to identify mitigation measures. Mitigation measures specified by code would be required, whereas mitigation measures based on comprehensive plan policies would be at the discretion of the applicant to adopt or the local jurisdictions to impose as a condition of project approval. All mitigation measures would be determined during the permitting process, but may be applied prior to construction, during construction, or during operation of the project. For instance, some mitigation measures (such as co-locating utilities with existing utility corridors whenever possible) have already been incorporated into the project design. Conversely, PSE may make commitments to certain measures (such as using landscaping to screen above-ground utility facilities to diminish visual impacts) but may not actually execute them until the project has been constructed.

3.2.6.1 Regulatory Requirements

All of the segments and options within the City of Bellevue would need to meet the following regulations. (Note: the cities of Redmond, Newcastle, and Renton do not have regulations that directly address mitigation of impacts to scenic views or the aesthetic environment that would be produced by this project.) These regulations provide some mitigation of project-related impacts to the aesthetic environment, and would be implemented during the design stage (prior to construction) and as long-term mitigation strategies (e.g., maintenance of screening vegetation). The applicable regulations are presented below based on the stage when they would be applied. Each jurisdiction's discretionary decision-making will be informed by the analysis and comparison of options presented above, in the context of the alternatives analysis required under SEPA and comparison of other impacts for options under review. The following would be required to incorporate in the design prior to construction.

Prior to Construction

- Design and align new or expanded utility systems to minimize impacts to natural systems and features and minimize grading within the shoreline (City of Bellevue LUC 20.25E.070).
- Within the shoreline environment, co-locate underground new or expanded utility systems within existing or planned improved rights-of-way, driveways, and/or utility corridors whenever possible (City of Bellevue LUC 20.25E.070).
- Sight-screen electrical utility facilities through landscaping and fencing (BCC 20.20.255).
- Within the shoreline environment, where the visual quality of the shoreline or surrounding neighborhood will be negatively impacted, new or expanded utility systems and facilities should incorporate screening and landscaping sufficient to maintain the shoreline aesthetic quality (City of Bellevue LUC 20.25E.070).

3.2.6.2 Potential Mitigation Measures

Potential mitigation measures are summarized below based on City of Bellevue and City of Newcastle's comprehensive plans. (Note: plans and policies of the cities of Redmond and Renton do not directly address mitigation of impacts to scenic views or the aesthetic environment that would be produced by this project. However, general policies in all communities support application of the measures listed below.) The applicable policies are presented based on the stage at which they would be applied. Additional mitigation measures are also proposed by the EIS Consultant Team based on their ability to reduce contrast.

Prior to Construction

- Consolidate utility facilities and co-locate multiple utilities (City of Newcastle Plan Policy UT-P3).
- Implement new and expanded transmission and substation facilities in such a manner that they are compatible and consistent with the local context and the land use pattern established in the Comprehensive Plan (City of Bellevue Plan Policy UT-95).
- Design, construct, and maintain facilities to minimize their impact on surrounding neighborhoods (City of Bellevue Plan Policy UT-8).
- Conduct a siting analysis for new facilities and expanded facilities at sensitive sites (areas in close proximity to residentially-zoned districts) (City of Bellevue Plan Policy UT-96).
- New development should install a dense visual vegetative screen along Richards Road (City of Bellevue Plan Policy S-RV-31).
- Consider neighborhood character in planting appropriate varieties and trimming tree limbs around overhead lines (City of Newcastle Plan Policy UT-P9).
- Design overhead transmission lines in a manner that is aesthetically compatible with surrounding land uses (City of Newcastle Plan Policy UT-P10). This could include design measures such as changes to pole height, spacing, location, or color.
- Minimize visual and other impacts of transmission towers and overhead transmission lines on adjacent land uses through careful siting and design (City of Newcastle Plan Policy UT-P14).
- Design transmission structures to minimize aesthetic impacts appropriate to the immediate surrounding area whenever practical (City of Newcastle Plan Policy UT-P16).
- Underground sections of the transmission lines where unavoidable significant impacts to scenic views or the aesthetic environment would otherwise occur.
- Position poles and adjust pole height to minimize impacts to the greatest extent possible. In Newcastle, a variance from the setback requirements would allow the poles to be positioned farther away from the houses. This would also allow for shorter poles.
- Specify poles with an aesthetic treatment (such as paint or patina) to reduce contrast with the surrounding environment.

During Construction

- Replace trees to the greatest extent possible.

During Operation

- Limit disturbance to vegetation within major utility transmission corridors to what is necessary for the safety and maintenance of transmission facilities (City of Newcastle Plan Policy UT-P8). In areas where vegetation disturbance is unavoidable, replant with vegetation that would be compatible with vegetation clearance requirements, preventing future vegetation removal or maintenance in the future.
- Use landscape screening of above-ground utility facilities to diminish visual impacts (City of Newcastle Plan Policy UT-P20).