5.5 Visual Quality

Highways and bridges affect the visual character of the surrounding landscapes. Changes in transportation facilities are of keen interest to local residents and jurisdictions. This section describes and evaluates the potential effects of the project on existing visual resources and their context. It is based on the Visual Quality and Aesthetics Discipline Report Addendum and Errata (Attachment 7).

How would the project affect visual quality?

Under the Preferred Alternative and all the SDEIS design options, the project would result in wider bridges and roadways that would be shifted from the existing alignment in some areas and raised or lowered. The views most affected would be in the vicinity of the Portage Bay Bridge, the Montlake area, and the wetlands in Washington Park Arboretum. The Preferred Alternative and the SDEIS options would provide lids over SR 520; these lids would result in lost views of the surroundings and open sky for motorists, but would improve visual quality looking toward the lids.

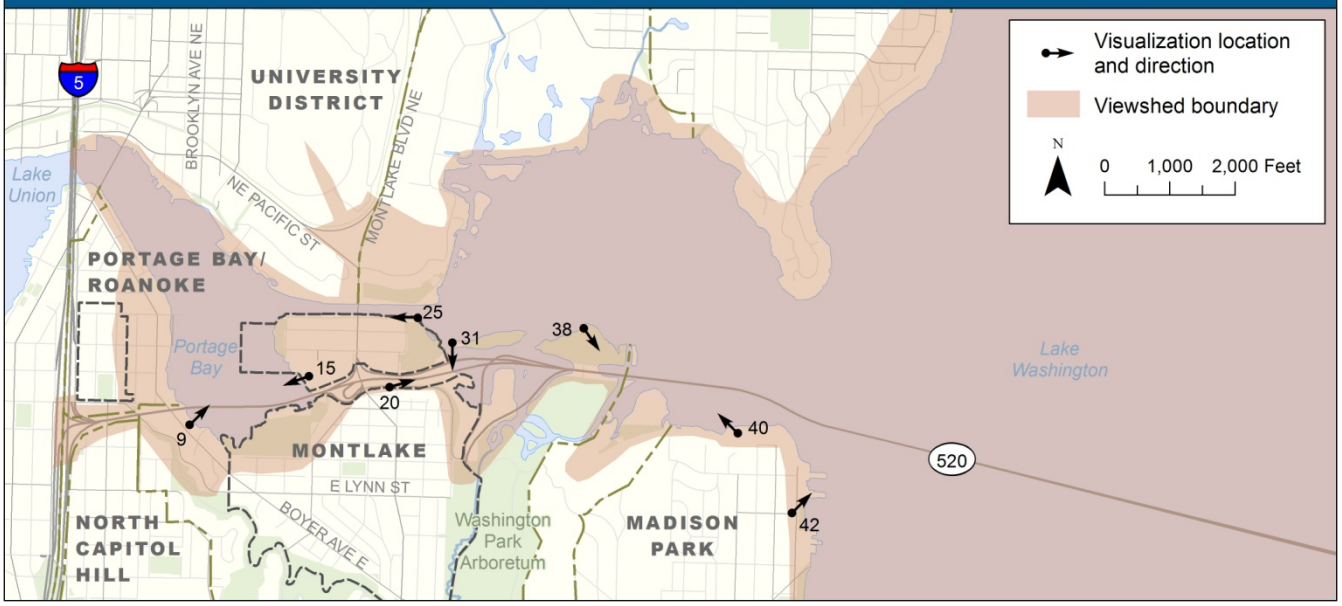
As part of the analysis, the project team selected views and corresponding viewpoints and took photographs for visualizations from these viewpoints. Exhibit 5.5-1 shows the location of the visualizations presented in this section. (The Visual Quality Discipline Report Addendum and Errata in Attachment 7 includes more visualizations than are presented here.) While the visualizations are purposefully limited in their field of view because the focal length of the camera is set to match the human eye field of view (without peripheral vision), the overall visual analysis considers the entire view. The visualizations provide an accurate representation of the scale of a structure in relation to other objects as seen from the viewpoint. Effects on each landscape unit are described in the following sections.

DEFINITION

Visual quality ratings:

- **Vividness:**
  Low = mundane or nondescript landscape; Moderate = some features with striking or attractive attributes
  High = presence of dominant feature or collection of features that is distinctive or memorable
- **Intactness:**
  Low = built features placed without sensitivity to or in conflict with natural or existing setting
  Moderate = -built features somewhat response to natural or existing setting
  High = natural and built components in balance and harmony with each other and their relationship to the landscape
- **Unity**:
  Low = reduced integrity due loss of landscape from view or the prevalence of incompatible structures due to conflicting scales, colors, or purposes
  Moderate = presence of some features not compatible with the existing landscape, or a loss of part of the landscape from view

Exhibit 5.5-1. **Visualization Location and Direction**



Roanoke Landscape Unit

Preferred Alternative

Under the Preferred Alternative (and all SDEIS options), the overall character and quality of this landscape unit would improve as a result of the presence of the 10th Avenue East/Delmar Drive East lid (Table 5.5-1). The visual character of the neighborhoods and commercial area would not change, but the area would be less dominated by the roadway.

Table 5.5-1. Visual Quality in the Roanoke Landscape Unit

	Vividness	Intactness	Unity
Existing	Moderate	Low	High in neighborhoods Low near I-5 and SR 520
Preferred Alternative and all SDEIS options	Moderate	Moderate	Moderate

The 10th Avenue East/Delmar Drive East lid would provide a continuous landscape between neighborhoods. The landscaped lid could also recreate a more substantial connection between Interlaken Park and the reconstructed Bagley Viewpoint. The new Bagley Viewpoint proposed to be on the lid would be different from the original park, but would be designed to take advantage of the extra space created by the lid for the panoramic vista of Lake Washington and the Cascade Mountains. The view is currently screened by tree canopy. The areas to the north and south of the lid surface would be planted to reestablish the tree buffer and the street trees that were removed for construction.

The I-5 bike-pedestrian bridge and the 10th Ave. East/Delmar Dr. East lid under the Preferred Alternative

Options A, K, and L

Options A, K, and L would provide some additional improvement as a result of the I-5 lid, which is not included in the Preferred Alternative. The photos to the right show the bicycle-pedestrian bridge of the Preferred Alternative (upper) and the I-5 lid of Options A, K, and L.

The I-5 lid and the 10th Ave. East/Delmar Dr. East lid under Options A, K, and L

Portage Bay Landscape Unit

Under the Preferred Alternative, as with all the SDEIS options, the overall character and quality of this landscape unit would not change as a result of the new Portage Bay Bridge (Table 5.5-2).

Table 5.5-2. Visual Quality in the Portage Bay Landscape Unit

	Vividness	Intactness	Unity
Existing	High	Moderate	High
Preferred Alternative and all SDEIS options	High	Moderate to high	High

The final span length and column spacing have yet to be determined. Columns of the bridge are now approximately 100 feet apart. As discussed in Chapter 2, pending final design, the span length for the Preferred Alternative would range from 116 feet to 300 feet. For purposes of the visualizations shown on Exhibits 5.5-2 and 5.5-3, the options show a variety of features and column widths to demonstrate possible combinations of features. Final design will include work with community members and the Seattle Design Commission to determine appropriate aesthetic treatment for the bridge.

Exhibit 5.5-2. **View of Portage Bay from NOAA Picnic Lawn (Visualization Location 15)**

Existing View

- 4-lane bridge
- Column spacing at 100 feet on center
- NOAA campus picnic lawn

Preferred Alternative

- 6-lane bridge with westbound managed shoulder
- Bridge design and aesthetic treatments to be determined

Option A

- 6-lane bridge with westbound auxiliary lane
- No noise walls
- Bridge design to be determined

Option K

- 6-lane bridge
- No noise walls
- False arches

Option L

- 6-lane bridge
- Noise walls
- False arches

Exhibit 5.5-3. **View of Portage Bay Bridge Columns (Visualization Location 9)**

Existing View

- 4-lane bridge
- Column spacing at 100 feet on center

Preferred Alternative

- 6-lane bridge with eastbound off-ramp to Montlake
- Bridge re-aligned 40 feet north
- Bridge design and aesthetic treatments to be determined

Option A

- 6-lane bridge with westbound auxiliary lane
- No noise walls
- Bridge design to be determined

Option K

- 6-lane bridge
- No noise walls
- False arches

Option L

- 6-lane bridge
- Noise walls
- False arches

Preferred Alternative

Views around the bridge from low-lying land or from the water would either remain the same as today or be more open. Intactness of views would range from moderate to high depending on the location of the viewpoint.

Under the Preferred Alternative, the east end of the Portage Bay Bridge would remain at its current location on the north side, and views toward the bridge from the NOAA Northwest Fisheries Science Center would not change (see Exhibit 5.5-2). The south side of the new bridge would be closer to the Montlake Playfield than it is currently, but the structure would still be seasonally screened by the existing tree canopy. At the west side of

Portage Bay, the bridge would be wider to the north, which would affect views from the homes next to the north side of the bridge because the bridge would be more dominant in eastward views.

The wider new bridge and the addition of structures such as traffic barriers on top of the bridge structure or arch designs between columns would increase the physical bulk of the bridge (see Exhibit 5.5-3). This would make the bridge somewhat more dominant in north/south or eastward views, but the change would not affect overall visual quality since the bridge is already a dominant feature of the view in those directions. The areas under and around the west end of the bridge would be landscaped after construction and new views, primarily from the water, would open up along Boyer Avenue.

Under the Preferred Alternative, views for drivers on the new Portage Bay Bridge would be diminished from today's views due to the use of the 4-foot-tall traffic barriers and the addition of the planted median. Depending on their height, spacing, and density, small shrubs that would be planted in the median could also obscure side views of the Portage Bay area over the traffic barriers (across the oncoming traffic lanes). Eastward views of the Cascade Mountains and Lake Washington would still be panoramic, but the expansiveness of these views would be reduced by the traffic barriers and median plantings. If the same type and size of traffic barriers (4-foot) were applied to Options A, K, and L, the views from the bridge would be the same as for the Preferred Alternative.

Option A

The visual quality effects of Option A would be similar to the Preferred Alternative. However, under Option A, the east end of the new Portage Bridge near the NOAA facility would be farther north, which would change the character of that part of the campus and would encroach on views over Portage Bay to the west.

The driver's experience of the Portage Bay Bridge would change because of the greater width of the bridge compared to its current width. Both Option A and Option K would include standard traffic barriers (lower than the 4-foot barriers included in the Preferred Alternative). Views would be panoramic eastward as they are today; however the view of open water would decrease if the recommended noise walls were installed that would block lateral views and diminish the panorama.

Option K

Option K would result in effects identical to those of Option A, except that without the Option A auxiliary ramp, the eastern half of the bridge would be 35 feet narrower than under Option A. The decreased width from Option A would noticeably decrease the visual effects on the NOAA campus, but would not be discernible from most other viewpoints.

Option K Suboption

- The addition of an eastbound off-ramp to Montlake Boulevard would be similar to the existing eastbound off-ramp and would not affect any views.

Option L

Option L would result in effects similar to those of Option K except that the presence of noise walls at some locations would make the roadway appear more massive when seen from outside of the roadway. In addition, the recommended noise walls would block lateral views for motorists on the bridge. This would result in an overall reduction in the quality of the scenic views experienced while driving across or looking at the Portage Bay Bridge.

Montlake Landscape Unit

The Preferred Alternative and all of the SDEIS options would result in changes to visual character and quality in the Montlake area (Table 5.5-3).

Table 5.5-3. Visual Quality in the Montlake Landscape Unit

	Vividness	Intactness	Unity
Existing	High	Low	Low
Preferred Alternative	High	Low to moderate	Low to moderate
Option A	High	Low to moderate	Low to moderate
Option K	Moderate to high	Low to moderate	Low
Option L	Moderate to high	Low	Low

The Preferred Alternative, like SDEIS Option A, would change views primarily by enlarging the existing Montlake interchange, while SDEIS Options K and L include additional structures in the McCurdy Park and East Montlake Park areas that would be highly visible to motorists and park users. Option K includes an interchange and tunnel configuration that would require tall retaining walls at the tunnel entrance and columns to support the SR 520 main line. Option L includes an elevated interchange over the main line and a new bridge through East Montlake Park and over the Montlake Cut.

Preferred Alternative

Effects on visual quality in the Montlake area under the Preferred Alternative would be comparable to those of SDEIS Option A in general, but with fewer effects at the NOAA campus. The character of the NOAA Northwest Fisheries Science Center would be changed by the addition of a ramp to the Bill Dawson Trail. This ramp would occupy a portion of the

landscaped east slope and reshape the slope. As with Options K and L, there would be little effect on the visual quality of views from the NOAA campus toward SR 520 because no buildings would be removed from the NOAA facility under the Preferred Alternative. The three-story research buildings would continue to act as a physical barrier and visual buffer against the roadway.

The Preferred Alternative, like all the SDEIS design options, would widen SR 520 to the north and remove mature roadside trees and shrubs that now provide a pleasant green edge along the roadway south of the Shelby-Hamlin neighborhood. The removal of these trees would change the view from several homes and from East Montlake Park.

The Preferred Alternative's 1,400-foot lid would fully cover SR 520, providing visual and spatial connectivity between north and south Montlake (Exhibit 5.5-4). The Montlake lid would hide the freeway, providing positive visual changes for pedestrians, cyclists, and motorists on Montlake Boulevard, Lake Washington Boulevard, and 24th Avenue East, as well as for residents of the homes on Lake Washington Boulevard that currently overlook SR 520. However, the east lid portal and the elevated ramps onto the lid would dramatically change the character and quality of views from East Montlake Park, the Arboretum Waterfront Trail at Marsh Island, and the Waterfront Activities Center at the University of Washington (Exhibit 5.5-5). From these sensitive locations, the structures would be prominent because of their size and because the existing tree buffers would be gone and difficult to replace due to space limitations. The lid walls and elevated ramp columns would also dominate motorists' views from the roadway as they approach or exit the lid.

Similar to the SDEIS design options, the Preferred Alternative would change McCurdy Park, the Museum of History and Industry (MOHAI) building and parking lot, and a portion of East Montlake Park into roadway and a stormwater treatment wetland. The result of this would be high levels of change to the visual character of the landscape from the viewpoint of motorists and adjacent residents. However, the stormwater treatment wetland would be a positive change because replacing the large asphalt parking lot with a natural-appearing wetland would be more consistent with the appearance of the shoreline and wetlands of Union Bay and the Arboretum. Landscape treatment and a new, smaller parking lot to serve park users would restore East Montlake Park's functions and establish visual unity with the surrounding area.

In the MOHAI-East Montlake Park area, the east portal of the Montlake lid would be visible, which would reduce vividness, intactness, and unity for views toward SR 520. Vividness would remain high in the Montlake Cut area because the new bascule bridge would be designed as an appropriate architectural companion to the existing historic bridge. The new bascule

bridge would not be noticeable from Rainier Vista, nor would it affect the Montlake Boulevard NE/Pacific Street NE intersection.

Exhibit 5.5-4. **Looking Northeast from Lake Washington Boulevard toward MOHAI and McCurdy Park Trees (Visualization Location 20)**

Existing View

- 4-lane roadway with transit-only on ramp
- Unused R.H. Thomson Expressway ramps in distance
- 20-foot-high retaining wall on north side of corridor

Preferred Alternative

- Montlake Boulevard lid with westbound off-ramps (white barrier in middle distance)
- Transit stop on lid (green and yellow bus at far left)

Option A

- Partial lid from Montlake Boulevard East to 24th Avenue East
- Landscaping not shown

Option K

- Full lid from Montlake Boulevard to beyond 24th Avenue East
- Vent tower for twin tunnels under Montlake Cut
- Depressed SPUI east of 24th Avenue East
- Landscaping not shown

Option L

- Full lid from Montlake Boulevard to 24th Avenue East
- Bridge over East Montlake Park
- Elevated SPUI east of 24th Avenue East
- HOV direct-access ramps

Exhibit 5.5-5. **Looking South from Pedestrian Bridge between MOHAI and Marsh Island toward SR 520 (Visualization Location 31)**

Existing View

- Lake Washington Boulevard off-ramp in front
- Unused R.H. Thomson Expressway ramps behind
- Lake Washington Boulevard off-ramps at far left
- Mainline lanes at water level
- Shoreline and wetland vegetation

Preferred Alternative

- No ramps to Lake Washington Boulevard
- Westbound general purpose and HOV/transit off-ramps onto lid
- Regional bike and pedestrian path

Option A

- No ramps to Lake Washington Boulevard
- Wider column spacing
- Regional bike and pedestrian path

Option K

- Depressed SPUI east of 24th Avenue East
- Regional bike and pedestrian path
- Mainline at approximately the same level as existing

Option L

- Elevated SPUI east of 24th Avenue East
- Noise walls
- Regional bike and pedestrian path

Option A

Under Option A, the character of the NOAA Northwest Fisheries Science Center would be changed by the removal of buildings and the reduction in the size of the landscaped east slope, which in turn would result in a change in views from the central buildings. Under existing conditions, the research buildings on the south side of the campus act as a physical barrier and visual buffer against the roadway. The replacement of these service buildings with an auxiliary lane and a relocated Bill Dawson Trail would substantially alter the visual quality of views for people who work at the NOAA campus.

Under Option A, widening SR 520 to the north would remove mature roadside trees and shrubs, resulting in visual quality effects similar to those described for the Preferred Alternative. Because the Montlake lid would be smaller and would not extend completely across SR 520, the effects of roadway widening would be more noticeable than with the Preferred Alternative. Option A would also change McCurdy Park, the MOHAI building and parking lot, and a portion of East Montlake Park into roadway and a stormwater treatment wetland. As with the Preferred Alternative, the character of the pond would be consistent with the open space and shoreline context of the surrounding area.

Views of and from the new Montlake bascule bridge under Option A would be the same as those for the Preferred Alternative. Vividness would remain high in the Montlake Cut area because the new bascule bridge would be an appropriate architectural companion to the existing historic bridge.

Option A Suboptions

- The eastbound HOV direct-access ramp from Montlake Boulevard would be visible from distant viewpoints because of its height, and the ramp itself would add to the complexity of the overall structure.

Option K

The below-ground interchange and tunnel configuration of Option K would be experienced as a walled canyon by motorists. The tall retaining walls of the tunnel entrance and the columns supporting the overhead main line would be visible to motorists and park users, with the highest level of visual effects on views from the Arboretum Waterfront Trail at Marsh Island and the Waterfront Activities Center. From these sensitive locations, the structures would dominate views much more than the existing ramps and main line do because of the walls in the water for the SPUI ramps and because the tree buffers would be gone. People in residential areas would not be able to see the interchange area because of the lids and the depth of the excavation.

The tunnel would change the view quality at the Montlake Cut because of the landform under the former MOHAI parking lot and the ventilation towers and stormwater pump stations in East Montlake Park. The taller structures would be visible from some residences on both sides of the interchange.

Option K would also result in very high levels of change to visual character and quality in the southeast campus of the University of Washington. The lowered Montlake Boulevard NE/NE Pacific Street intersection and the tunnel portal would be covered by a partial or full lid. From the motorists' viewpoint, this new configuration would create a complex, multi-layered channel that would block views of the university. However, pedestrians, bicyclists, and light rail users could have an improved visual experience

because they would be separated from vehicular traffic and would have unobstructed views. The project would not affect the view of Mount Rainier from Rainier Vista on the University of Washington campus.

Overall vividness for the Montlake area could remain high if the surface effects of the tunnel did not detract from the character of the Ship Canal, East Montlake Park, and the Waterfront Activities Center. Intactness and unity would decrease in the Montlake residential area because the massive, depressed interchange would not be in balance or consistent with the residential scale and the natural character of the parks and shorelines around it. In the southeast campus area of the university, intactness and unity could increase if the depressed intersection resulted in the removal of overhanging wires, lamps, and signage and created better pedestrian and vehicle orientation and circulation.

Option K Suboption

- Adding the westbound Montlake Boulevard ramp to Option K would result in no measurable differences in the visual impacts described above.

KEY POINT

The Preferred Alternative and all the SDEIS design options would remove the R.H. Thomson Expressway ramps and the existing Lake Washington Boulevard ramp, opening up views, park space, and water. This would result in more natural-appearing land and waterscapes than now exist by providing unimpeded views to and from the roadway of the surrounding natural areas.

Option L

Under Option L, the elevated interchange over the main line and the new bridge through East Montlake Park would be dramatic changes to the Montlake area. As with Option K, the retaining walls and columns would be visible to motorists and park users, with the highest level of visual effects on views from the Arboretum Waterfront Trail at Marsh Island and the Waterfront Activities Center. From these sensitive locations, the structures would dominate views much more than the existing ramps and main line do, in part because the existing tree buffers would be gone and difficult to replace.

The new bascule bridge at the mouth of the Montlake Cut would dramatically change views from residences in the eastern part of the Shelby-Hamlin neighborhood and the Waterfront Activities Center area (Exhibit 5.5-6). The bridge over East Montlake Park would cast shadows, block views, and diminish the natural openness of the shoreline. The new bascule bridge could be noticeable from a number of viewpoints in the Montlake neighborhood, Foster Island, and Laurelhurst. Option L would also result in very high levels of change to visual character and quality in the southeast campus of the University of Washington. The new bascule bridge would pass west of the Canoe House, and part of the University of Washington (UW) Open Space and would be highly visible from these areas. The lowered Montlake Boulevard/NE Pacific Street intersection and bridge landfall would have a similar appearance to Option K.

Exhibit 5.5-6. **Looking West from Northeast Corner of East Montlake Park toward Montlake Bridge (Visualization Location 25)**

Existing View

- Historic bascule drawbridge and Montlake Cut
- High volumes of boat traffic
- Mature vegetation lines both sides of channel
- Viewing deck

Preferred Alternative

- New bascule drawbridge parallel to existing Montlake Bridge
- Design and aesthetic treatments to be determined

Option A

- New bascule drawbridge parallel to existing Montlake Bridge

Option K

- Twin tunnels under Montlake Cut

Option L

- New bascule drawbridge over east mouth of Montlake Cut

Option L Suboption

- Adding northbound capacity on Montlake Boulevard to Option L would result in no measurable differences in the visual effects described above. The added northbound lane on Montlake Boulevard north of the Montlake Cut would not change the existing visual quality along the roadway.

West Approach Landscape Unit

Under the Preferred Alternative and the three SDEIS design options, the west approach bridge through Union Bay and east to Lake Washington would be much wider than the existing structures, which could change boaters' and park users' experience in this area. The west approach would be shifted northward approximately 190 feet farther than the existing structure. Views would change for north Madison Park residences; views of the Laurelhurst hills could possibly be blocked, although more open water in Union Bay would be revealed. Overall, however, visual quality would not change from its existing high level, except with Option K (Table 5.5-4).

Table 5.5-4. Visual Quality in the West Approach Landscape Unit

	Vividness	Intactness	Unity
Existing	High	High	High
Preferred Alternative	High	High	High
Option A	High	High	High
Option K	High	Moderate	Moderate
Option L	High	High	High

Option K would likely diminish views near or on Foster Island because the paved roads and land bridge structure would not be harmonious with the island's existing undeveloped woodlands (Exhibit 5.5-7).

Preferred Alternative

The primary effect from the Preferred Alternative would be the noticeably greater width and height of the west approach as compared to the existing bridge. The profile of the west approach would be raised from its existing height and would provide a constant grade, increasing from 12 feet above the water surface at the Montlake shoreline up to 48 feet at the west transition span of the floating bridge. The increased height would make the bridge slightly more visible from distant viewpoints, such as Husky Stadium or Laurelhurst. The new Arboretum Waterfront Trail under the bridge would provide a more comfortable and pleasant experience than the narrow underpass that exists today because of the increased height and openness afforded by the widely spaced columns. However, the greater height and

Exhibit 5.5-7. **Looking South from Foster Island's North Shoreline toward SR 520 (Visualization Location 38)**

Existing View

- North Foster Island picnic area at shoreline
- Mature woods

Preferred Alternative

- 6-lane bridge at 13 to 15 feet above ground
- No change to North Foster Island

Options A and L

- No change to north Foster Island

Option K

- Land bridge at Foster Island with pedestrian/bicycle pathway

width of the structures would make them a more visually dominant element in this area, especially in the areas directly north and south of the highway. Near the northern shoreline of Foster Island, the effects on visual quality would be less.

In the near to medium term, overall visual quality ratings for the Preferred Alternative in the areas close to the new highway would be lower than those for existing conditions. This is due to the combination of larger structures and the removal of vegetation during construction. The ratings in this area for vividness, intactness, and unity would be diminished until trees and shrubs grew taller and filled in. In 10 to 20 years, after the vegetation had matured, vividness, intactness, and unity would be similar to or higher than their current high ratings. This would also be true for middle and distant views because structures would be seen from the side, minimizing the visual effect of the greater width.

As with all SDEIS options, the Preferred Alternative would remove the R.H. Thomson Expressway ramps, opening views of park landscapes and water bodies and providing a more natural-appearing character than now exists.

The Preferred Alternative's west approach structures would be higher than they are now, making them slightly more visible to north Madison Park residences and other distant viewpoints. For motorists and transit riders, the west approach would continue to provide panoramic or scenic views to Lake Washington and the Cascades when traveling east, and to the Arboretum when traveling west.

Option A

Like the Preferred Alternative, the primary effect from Option A would be due to the greater width and height of the west approach structures. These changes would result in similar visual quality effects as those described above for the Preferred Alternative.

Option A Suboptions

- Adding the Lake Washington Boulevard ramps to Option A would result in some changes to the effects described above. Although the ramps would be located within and adjacent to the main line of SR 520, they would remove some mature poplars and other specimen trees along the east side of Lake Washington Boulevard East. These trees now buffer the view of the roadway from several Montlake homes and the boulevard.
- Changing the profile of Option A to a constant-slope profile in the west approach would result in slight visual changes compared to the effects described above; overall effects would be similar to those of the Preferred Alternative.

Option K

The main effect on visual quality and character from Option K in this area would result from the land bridge at Foster Island. The west approach through Union Bay would be approximately the same height as the existing SR 520 main line. Motorists would experience a much wider, relatively exposed roadway for several years, until replanted shoreline vegetation matured on and around Foster Island.

Of the Preferred Alternative and the SDEIS design options, Option K would result in the highest level of change to the visual quality and character of Foster Island. It would take considerable time for the newly planted landscape on both sides of SR 520 to naturalize as woodlands and reach sufficient height to screen and soften the presence of the concrete structure supporting the land bridge. The four corners of the land bridge would likely always be somewhat visible from parts of Lake Washington, Union Bay, and Husky Stadium because the marsh and wetland vegetation might not be tall enough to completely screen the walls. From the park users' perspective, the north portion of Foster Island would appear to be a somewhat more formalized recreation area than it is today. The south portion of Foster Island would retain most of its woodland character, and

the new path over the lid would be more comfortable and pleasant than going through the existing tunnel. However, roads would be installed for vehicle access to the stormwater pump stations near the land bridge, and this would give the south island a more developed quality.

In the near term, visual quality would be degraded in the Foster Island area until trees and shrubs grew taller and filled in. In 10 to 20 years, vividness, intactness, and unity would be similar to their current high ratings for people traveling on the bridge. From distant viewpoints, vividness, intactness, and unity of this landscape unit would not change substantially. However, intactness and unity from the viewpoints near or on Foster Island could be diminished to low or moderate because the paved roads and land bridge structure are not consistent or harmonious with the island's existing undeveloped woodlands (Exhibit 5.5-7).

Option L

Option L's effects on visual quality and character would be similar to those of Option A. However, the physical presence of the highway would be somewhat more noticeable in the Arboretum because of its greater width (approximately 60 feet wider across Foster Island and approximately 80 feet wider south of Marsh Island. The west approach bridge through Union Bay would be more comparable in height to the existing bridge than the Preferred Alternative or Option A. A minimum of 10 feet of clearance above the Arboretum Waterfront Trail would be provided for park maintenance vehicles and to avoid a confining experience for pedestrians.

Option L Suboption

- Adding left-turn access from Lake Washington Boulevard onto the SPUI south ramp to Option L would result in no measurable differences to visual effects described above because it would not involve additional structures or right-of-way.

Lake Washington Landscape Unit

Changes to the scale and appearance of the west approach and floating bridge would be noticeable when seen from relatively distant shoreline neighborhoods such as Laurelhurst, but would not significantly change the quality or character of those views because the bridge is an existing, small element in the distance (Exhibit 5.5-8). The reduction in the height of the floating bridge for the Preferred Alternative would make views of this structure more similar to existing views than would SDEIS Options A, K, or L (Exhibit 5.5-9). For houses near the bridge in Medina, the northward shift of the alignment would move the columns and roadway closer to houses on the north side and farther from houses on the south side of the east highrise. The overall high quality of those views would not change because the bridge is already a large part of those views (Table 5.5-5).

Table 5.5-5. Visual Quality in the Lake Washington Landscape Unit

	Vividness	Intactness	Unity
Existing	High	High	High
Preferred Alternative and all SDEIS options	High	High	High

Exhibit 5.5-8. **Looking Northwest from Edgewater Apartments toward SR 520 West Approach and Husky Stadium (Visualization Location 40)**

Existing View

- 4-lane bridge
- View of south Union Bay
- Column spacing at 100 feet on center
- Husky Stadium in distance (left of center)
- Boat traffic

Preferred Alternative

- Wider and higher 6-lane bridge
- More open view into north Union Bay
- Column spacing at 250 feet on center
- ITS gantry (visable in front of Husky Stadium roof line)
- Transit bus on bridge (center)

Option A

- 6-lane bridge
- Column spacing at 250 feet on center

Option K

- 6-lane bridge
- Column spacing at 250 feet on center

Option L

- 6-lane bridge
- Column spacing at 250 feet on center
- Noise walls

Exhibit 5.5-9. **Looking Northeast across Lake Washington at Evergreen Point Bridge (Visualization Location 42)**

Existing View

- Shoreline park in Madison Park
- Evergreen Point Bridge and East Approach
- Medina shoreline in distance
- Cascade Mountains far in distance

Preferred Alternative

- Evergreen Point Bridge and East Approach
- Bridge height at mid-span approximately 20 feet above water

Options A, K, and L

- Evergreen Point Bridge and East Approach
- Bridge height at mid-span approximately 30 feet above water

Sweeping views from the Evergreen Point Bridge of the Cascade and Olympic mountains and Mount Rainier, which currently exist only for motorists, would be available to users of the new bicycle/pedestrian path. The path would create a new opportunity for viewing those memorable landscapes because of the slower pace of pedestrians and cyclists. The bicycle/pedestrian path and vantage points would be a new visual element, but small relative to the scale of the bridge.

Views for boaters and kayakers on the lake would change moderately because the column-pontoon structure would raise the roadway, making the structure more noticeable from viewpoints close to the bridge. However, while the bridge structure would be wider and taller, the increased column spacing (from 30 feet apart to 90 feet apart) would open up views of the lake through the structure. As noted above, the change from existing conditions would be least with the Preferred Alternative because of the lower height of the floating structure compared with the SDEIS design options.

Although the bridge maintenance building and dock located directly underneath the new east approach would be noticeable to boaters on the lake, the building would not be visible from most locations because it would be in the bridge abutment, partially buried in the hillside, and screened with vegetation. Views from the lake of the road on the north side of the bridge leading to the facility, dock, and bicycle/pedestrian path passing under the east highrise would be screened by trees.

Eastside Transition Area Landscape Unit

For all options, a swath of mature trees and understory nearly 150 feet wide would be removed on the north side of SR 520 as a result of the northward shift in alignment west of Evergreen Point Road. This would create a more dramatic view westward of Lake Washington and the Olympic Mountains. East of Evergreen Point Road, roadway would replace the grassy slope within WSDOT right-of-way between Fairweather Park and the transit stop.

The portion of the view from shoreline residences that includes the existing bridge might be affected by the greater height of the approach and roadway; however, the bridge is already a major part of views here, and the overall level of change is expected to be low (Table 5.5-6).

Table 5.5-6. Visual Quality in the Eastside Landscape Unit

	Vividness	Intactness	Unity
Existing	High	Low	Low to moderate
Preferred Alternative and all SDEIS options	Moderate to high	Low	Low to moderate

Would the project create new sources of shadow, glare, or light?

Similar to the current roadway configuration, the Preferred Alternative and all SDEIS design options would have continuous lighting along the corridor from I-5 to Foster Island and on bridges across the Montlake Cut. Light levels along the corridor would be similar to existing levels. New lighting would use fixtures that shield sideways glare. It is possible that the loss of tall screening trees could create a situation where some residences receive more stray or direct illumination than they do now.

Over Portage Bay, the increased height of the bridge, high noise walls (under Option L and potentially Option A), and northward displacement of the roadway would create new shadow and shade effects for a few residents immediately north of the Portage Bay Bridge in the Roanoke Park area.

No roadway lighting is proposed on the fixed portions of the bridge east of Foster Island. To minimize effects on the aquatic environment, the floating bridge would not be illuminated except for navigation safety lights and lighting on the bike and pedestrian path on the bridge. The path would have low-wattage, down-cast lamps recessed into walls or barriers next to the travel way for user safety. No new sources of glare would be added because there would be no tall structures such as bridge arches, towers, toll booths, or bridge tender buildings. Shading on Lake Washington itself would increase relative to existing conditions because of the wider and higher roadway.

Based upon current lighting studies, the east approach would be illuminated to meet safety requirements for the transit ramps. At the bridge landfall in Medina, increased height and northward displacement of the roadway would change or increase shadow and shade effects for residents immediately north of the lid. Outside of the roadway, shade and shadowing could change because of the loss of vegetation in some locations. No new sources of glare would be expected, and the proposed noise walls would block most of the light from the east approach roadway.

Overhead lighting, shade, and shadowing at the Evergreen Point Road lid would be similar to existing conditions; therefore, no new effects would be expected. However, because of the northward shift of the bridge and the accompanying loss of vegetation along the east approach, homes near the highway that did not experience spill-over lighting before the project could be exposed to stray light unless noise walls block it or until new screening vegetation grows tall enough.

Effect of Suboptions

Option A Suboptions

- The added Lake Washington Boulevard ramps would not be expected to add light, glare, and shadow effects on the Arboretum because most of the length of the ramps would run along the north and south sides of the main line.
- Adding the HOV direct-access ramp to Option A would result in no measurable differences in the light, glare, and shadow effects described above because it would be located within the right-of-way of the existing Montlake Boulevard interchange.
- Changing the profile of the west approach to match Option L would result in some minor differences in shadow effects.

Option K Suboption

- Adding the suboption to Option K would result in no measurable differences to shadow, glare, and light effects described under the base options because the added ramp would be located within the existing right-of-way of the current Montlake Boulevard interchange.

Option L Suboptions

- Adding capacity to Montlake Boulevard north of the Montlake Cut would result in some minor differences in the location of lighting on this road segment, but would not add substantially to existing light and glare in this area.
- Adding left-turn access from Lake Washington Boulevard onto the SPUI south ramp would result in no measurable differences in the shadow, light, and glare effects described above because it would not involve additional structures or roadway area.

What are the indirect effects of the project on visual quality?

The proposed project would not produce indirect effects on visual quality and aesthetics because all changes to structures, landforms, and vegetation would be confined to direct impacts within the project area along the SR 520 corridor.

What has been done to avoid or minimize negative effects?

During 2010, WSDOT sponsored several technical workgroups with resource agencies, with the intention of refining the Preferred Alternative to further avoid or minimize negative effects. The Parks and Natural Resource technical working groups collaborated on mitigating for impacts on parks, shorelines, wetlands, aquatic habitat, and other natural resources. These discussions have established minimization and mitigation concepts that will be further developed as the design progresses. These concepts, in turn, have influenced planning for the project's landscape and urban design.

In addition to the technical working groups, the workgroup established under Engrossed Substitute Senate Bill (ESSB) 6392 (discussed in Chapters 1 and 2) refined specific areas and elements of the SR 520, I-5 to Medina project Preferred Alternative through a multi-agency process. Based on legislative direction, WSDOT and the Mayor and City Council of the City of Seattle established a workgroup that brought together King County Metro, University of Washington, Sound Transit, and other designees to consider design refinements and transit connections within the Preferred Alternative. These refinements have been included in the landscape and urban design concepts of the Preferred Alternative and could be added to the other options.

The Preferred Alternative incorporates many features that address concerns from communities regarding visual quality or otherwise provide aesthetic benefits. These include the following:

- A narrowed footprint, compared to Option A, across the Portage Bay Bridge and Foster Island, which would reduce visual presence and would minimize clearing of vegetation
- A lower floating bridge profile than the SDEIS options in response to community concerns
- A larger, full-width lid across Montlake Boulevard, providing more area for landscaping as well as increased community open space and visual benefits for nearby residents
- A landscaped median on Portage Bay Bridge to create a boulevard experience

Many of the project's stormwater facilities would be placed underground and out of sight, or if above-ground, would have natural-appearing landscaping, which would be consistent with the parks and open space where they are located. In the Shelby-Hamlin neighborhood, the addition of the stormwater treatment wetland, with appropriate design approaches by stormwater engineers and landscape architects, could be a positive visual change for the neighborhood because the large asphalt parking lot in East Montlake Park would be replaced by a natural-appearing wetland landscape that is in harmony with the adjacent shoreline and bay.

The new bridge operations facility located under the east approach of the Evergreen Point Bridge would be inside the hillside abutment and screened with vegetation. While the addition of this new structure could have a potential negative visual effect for viewers on the lake, such as boaters and nearby neighbors, sensitive design of the maintenance structure will make the building look appropriate in terms of scale, integration, and style to the surroundings.

What would be done to mitigate negative effects that could not be avoided or minimized?

SR 520 Corridor

Under the Preferred Alternative and all options, the following mitigation measures would be performed by WSDOT:

- Establish and follow design guidelines, developed in conjunction with the standards of both state and local jurisdictions, that include visual standards for the corridor. The guidelines and standards would present ways to ensure visual unity and consistency throughout the SR 520 corridor. These include defining the appearance and style of built elements, such as lighting, railings, sign bridges, structures, and walls. The guidelines would also address the use of public art in the corridor, including the process for selection and location of any art in cooperation with municipal and county jurisdictions and art organizations.

DEFINITION

Green Over Gray

An aesthetic and functional approach using vegetative screening to mitigate the visual impact of excessive structures, particularly in traffic corridors.

- Revegetate areas where natural habitat, vegetation, or neighborhood tree screens were removed during construction. These areas would be under Portage Bay Bridge in Roanoke Park; along the roadway in the Eastside study area; and in the Montlake and West Approach Landscape Units, in particular at the NOAA Northwest Fisheries Science Center, East Montlake Park, and the Arboretum. The *Roadside Classification Plan* (WSDOT 2007) requires that areas within the right-of-way and construction easements be revegetated to align with the goals for the designated roadside classification. Mature vegetation would generally be used to revegetate parks and re-establish tree screens in these areas in consultation with local jurisdictions and agencies. Revegetation plans would also provide for adequate irrigation and monitoring until trees and plants are well established.
- Follow the guidelines of the *Roadside Classification Plan* to blend the project into the adjacent land uses, while creating a unified experience for the roadway user. Refer also to the Seattle Department of Transportation's Streetscape Design Guidelines in the *Seattle Right-of-Way Improvement Manual* (City of Seattle 2009.
- Establish landscaping that would be compatible with the character of the existing vegetation, especially along Lake Washington Boulevard, Montlake Boulevard, and through the Washington Park Arboretum, East Montlake Park, Ship Canal Waterside Trail, Arboretum Waterfront Trail, Montlake Playfield, and Interlaken Park/Delmar Drive East.
- Establish guidelines to ensure the design of structures are aesthetically compatible with the surrounding land and waterscapes in scale and architectural style, and unified in appearance.
- Design lid landscapes to reconnect divided communities and provide a consistent and/or continuous visual connection across the SR 520 roadway. Landscape the lids to ensure a unified visual appearance appropriate to the surrounding landscape, including the use of appropriate plant materials, hardscape, and site furnishings that contribute to visual coherence and aesthetics. (An example of this type of effort would be a transitional seating wall and stairs on the north side of the Evergreen Point Road lid, to share elements and characteristics of the lid with Fairweather Park.)
- Replace the Bagley Viewpoint Park either on the new lid or reconstructed bridge. WSDOT would work with the Seattle Parks Department to identify an appropriate site and the original Bagley Viewpoint Park marker and stone would be included at that site.
- Redesign the remaining portion of East Montlake Park in cooperation with the Seattle Parks and Recreation Department. Grass and trees in the south Shelby-Hamlin area would be replaced with trees and screening vegetation to soften the appearance of the new lid wall. Mature and/or larger size trees, shrubs, vines, and groundcovers for

Context Sensitive Design/Solutions

WSDOT has a strong commitment to developing projects in accordance with the Context Sensitive Design/Solutions (CSD/CSS) philosophy. In order to design roadway facilities that fit within their unique contexts and meet the needs of the local communities, WSDOT developed a community involvement program to focus on SR 520 aesthetics.

The first step in this program was the formation of the Design Advisory Group (DAG) whose purpose was to explore and articulate an aesthetic vision for the new SR 520 facilities. The DAG is an important step in the on-going community information and outreach process that will continue through design and construction. The Corridor Aesthetics Handbook (CAH; WSDOT 2006d) is the record of the ideas developed during the DAG workshops. The CAH can be found on WSDOT's website at http://www.wsdot.wa.gov/Projects/SR520Bridge/Library/technical.htm

replacement or enhancement would be selected as appropriate in consultation with Seattle Parks and Recreation. Plantings would be irrigated and monitored until established.

- Design the Canal Reserve (the area between the new regional bicycle/pedestrian path and adjacent residences in the Shelby-Hamlin neighborhood) to be compatible with the location and consistent with corridor visual standards for unity. The treatment would be a fence or vegetation or a combination of both, depending on available space.
- After construction, restore Foster Island, including shoreline and buffer restoration and roadside planting. Development of revegetation plans will require coordination with the Seattle Parks and Recreation Department, the University of Washington, the Muckleshoot Indian Tribe, and the Arboretum Foundation, as identified in the Arboretum Mitigation Plan (Attachment 9). Plans will require mature and/or larger trees, shrubs, plants, and adequate irrigation and monitoring until vegetation is established. Revegetation for the areas where the Lake Washington Boulevard and R.H. Thomson Expressway ramps are to be removed will also be coordinated with these entities.

The mitigation measures recommended by the ESSB 6392 Workgroup and the Arboretum Mitigation Plan that address visual quality and aesthetics are presented below.

Urban Design and Streetscape Options

WSDOT will collaborate with the Seattle Design Commission (SDC), City of Seattle, UW Architectural Commission, Arboretum and Botanical Garden Committee (ABGC), Seattle Bicycle Advisory Board, Seattle Pedestrian Advisory Board, and Seattle neighborhoods to expand and refine an aesthetic vision, establish goals, and suggest design treatments for urban design and streetscapes within the project area. This collaboration will include identifying the existing urban amenities that will remain after construction of SR 520, and co-developing a community engagement process for refining the goals and principles. It will ultimately result in a set of urban design guidelines to inform and direct final design and construction of SR 520.

The following options were developed as part of the ESSB 6392: Design Refinements and Transit Connections Workgroup (see Attachment 16):

"Provide paths at the E. Roanoke Street enhanced I-5 overcrossing and the 10th and Delmar lid which:

- Are in scale and style with surrounding neighborhoods and parks.
- Accommodate diverse users.
- Connect users to north Capitol Hill, downtown Seattle and the University District.

"Provide opportunities for viewing visual resources at:

- Montlake Bascule Bridge – 18-foot wide bicycle and pedestrian path with viewing space mid-span.
- E. Roanoke Street enhanced crossing – improved bicycle and pedestrian access with possible belvedere/viewing areas to downtown Seattle.
- 10th and Delmar lid – incorporation and preservation of the Bagley Viewpoint with raised viewing plaza at east edge of lid.
- Montlake lid – raised viewing area to Washington Park Arboretum and Lake Washington at east edge of lid.

"Provide paths at the Montlake lid which:

- Are in scale and style with the surrounding Montlake neighborhood, Arboretum and Olmsted boulevards.
- Accommodate diverse users and modes (e.g., cyclists, pedestrians, and elderly users).
- Buffer users from the street edge (e.g., planting strips and other aesthetic physical buffers).
- Connect users to locations both on the lid (e.g., transit stops, bicycle lockers, comfort stations, view points, plazas) and to the existing network of local and regional open spaces and paths/trails, including the Arboretum Waterfront Trail, the Lake Washington Loop Trail, East Montlake Park, UW open space, UW main campus, and Sound Transit's University Link UW station.
- Are safe and legible (wayfinding).

"Ensure durability, relevance, beauty, context and maintenance of landscapes by:

- Selecting native vegetation (low maintenance, climate-appropriate) and/or vegetation in keeping with City of Seattle standards and historic context.
- Not placing vegetation in areas where maintenance is difficult or impossible (e.g., Portage Bay Bridge).
- Preserving mature tree canopy at 10th and Delmar lid where possible.
- Replanting the Canal Reserve site.
- Connecting or augmenting Olmsted boulevard aesthetic and Arboretum collections/aesthetic through planting plans that respect Arboretum Master Plan, Olmsted precedents and City of Seattle standards."

Arboretum Mitigation Plan

Based on consultation with the ABGC and the Muckleshoot Indian Tribe, along with WSDOT's technical evaluation, WSDOT has also identified a

suite of projects including aesthetic and landscape enhancements and other design features that could occur within future WSDOT right-of-way areas. WSDOT will continue to work with applicable and interested tribes and the ABGC to fully define and implement appropriate aesthetic treatments for the new crossing of Foster Island. The Arboretum Mitigation Plan is included in Attachment 9 of this Final EIS. Chapter 9 also discusses ABGC coordination efforts and this mitigation plan.