City of Bellevue

East Link Light Rail B7/C9T to NE 2nd Portal (B7 – Revised) Alternative

TM10 – Early Environmental Screening

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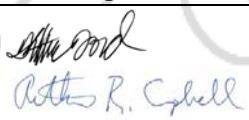
		Signature			
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Appendices

1 Executive summary

An early environmental screening has been carried out to provide a comparison of the environmental impacts of the Sound Transit B7/C9T alternative and the City of Bellevue B7-Revised alternative. The purpose of the early environmental screening analysis is to support the City's decision on whether to move forward into a more detailed phase of design and environmental analysis for the B7-Revised alternative.

The early environmental screening analysis is focused on seven key environmental issues and is intended to be mostly qualitative. The screening evaluation was conducted to a level of detail sufficient to provide input to the City's decision-making process regarding whether continued evaluation of the B7-Revised alternative is warranted. The early environmental screening relies on information from the East Link Project Draft Environmental Impact Statement (DEIS) published in December 2008 and the Supplemental Draft Environmental Impact Statement (SDEIS) published in November 2010, and other previous studies. The key findings are outlined below. Table 6 summarizes the results of the evaluation.

Key findings of environmental screening

Overall, the Bellevue B7-Revised alternative would have greater environmental impacts than the Sound Transit B7/C9T alternative. The main environmental differences between the alternatives are associated with addition of the A-2 Station and the change from elevated to at-grade guideway adjacent to Sturtevant Creek to accommodate a relocated East Main Station. The impacts noted below would be in addition to impacts of the Sound Transit B7/C9T alternative.

A-2 Station

- Fill would be placed in 0.26 acres of the Mercer Slough Nature Park, which also is wetland. About 0.18 acres of wetland buffer also would be filled. Mitigation would be required to offset the loss of these resources.
- About 4.9 acres of new impervious area would be added, including 4.1 acres of pollutant-generating impervious area that would require treatment to protect water quality in Mercer Slough..
- Views would change for residents living west of 113th Avenue SE and recreationists in Mercer Slough Nature Park.
- Twelve (12) residences in the Enatai neighborhood would be acquired.

Sturtevant Creek

- The existing creek channel, which provides good-quality habitat for coho salmon and peamouth chub, would be displaced by the retaining wall and fill for the at-grade guideway.
- The total area of stream buffer would be reduced by about one-third by the fill for the guideway.
- Mitigation for these effects would include constructing a new creek channel and enhancing the remaining creek buffer.
  - The reconstructed channel would provide improvements to instream habitat for fish (e.g., greater pool frequency, additional instream structure and cover, and improved substrate), compared to the existing stream.
  - The remaining stream buffer area would be densely vegetated with native plants to provide improved riparian functions in the stream corridor, compared to the existing buffer.

2 Background

2.1 Project description

The East Link project is an extension to Sound Transit's Link light rail system that will provide light rail service across Lake Washington, linking Seattle, Bellevue, and Redmond (Overlake).

For the segment of East Link between the Lake Washington crossing and downtown Bellevue, Sound Transit has developed the B7 alternative to a conceptual engineering level of design (approximately five percent design) as part of the Draft Environmental Impact Statement (DEIS) for the project which was issued in December 2008.

A Supplemental Draft EIS, which analyzes new alternatives developed since the DEIS, was published in November 2010. That supplemental document includes updated conceptual engineering for the Sound Transit B7 alternative and a C9T alternative that could connect B7 to a station at the Bellevue Transit Center. A Final EIS is expected in the summer of 2011.

At the September 13, 2010, Bellevue City Council Study Session, the council discussed the need for design variations and for additional analysis of revised East Link B7 and C9T alternatives. The objectives of the additional analysis would be to improve performance, to reduce impacts, and to reduce costs, as compared with the Sound Transit B7 and C9T alternatives. As a result of that discussion the council initiated the development of a modified B7 alternative ("B7-Revised"). The council directed City staff to develop an "apples-to-apples" comparison of the Sound Transit B7 and C9T alternatives with a B7-Revised alternative. ARUP were commissioned by the City to develop the B7-Revised alternative.

The B7-Revised alternative begins at the transition from East Link Segment A to Segment B at the east shore of Lake Washington and connects with a new elevated station (A-2 Station) over south Bellevue Way/I-90 ramps. The alignment continues east from the station along the north side of I-90 and turns north into the BNSF corridor with an at-grade profile. The alignment transitions to elevated as it leaves the BNSF corridor, crosses over SE 8th Street, and transitions back to at-grade prior to a new station (East Main Station) just south of Main Street on the current Red Lion Hotel site. The alignment crosses under Main Street and turns west on the current Sheraton Hotel site before entering a tunnel portal at NE 2nd Street. The B7-Revised alternative is approximately three miles long with a combination of at-grade, elevated, and open-cut sections.

2.2 Technical memo scope

The early environmental screening analysis is the first phase of a two-phase effort to assess the impacts of the B7-Revised alternative and to compare it to the B7/C9T alternative. The purpose of the early environmental screening analysis is to support the City's decision (referred to as the "tipping point" decision) on whether to move forward into a more detailed phase of design and environmental analysis for the B7-Revised alternative. The early environmental screening

analysis is focused on a shortlist of environmental issues determined by the team to be "critical" to the City's decision. Those issues are related to wetlands, aquatic habitat, impervious area, visual quality, neighborhood character, parks/Section 4(f) and 6(f), and displacements. The early environmental screening phase is intended to be mostly qualitative, and conducted to a level of detail sufficient to provide input to the tipping point decision regarding whether continued evaluation of the B7-Revised alternative is warranted.

The early environmental screening analysis is based on existing, available information obtained from Sound Transit and the City of Bellevue. The early screening analysis included limited site reconnaissance to gain familiarity with the study area. Fieldwork to support the quantitative analysis of impacts will be conducted "post tipping-point" if the City decides to move into the second phase of analysis. Study methods for each of the environmental elements analyzed for the early environmental screening are described in Section 3 of this memo.

This technical memo should be read in conjunction with the other technical memos produced for this study, in particular:

- Station Concept Report (TM03)
- South Bellevue Traffic Impacts (TM04)
- Early Concept Alignment (TM06)
- Right of Way (TM08)
- Noise (TM09)

2.3 Technical memo objectives

The purpose of the Early Environmental Screening Tech Memo is to describe key environmental effects of the B7-Revised alternative to support the tipping point decision. Objectives include the following:

- Identify design differences between the Sound Transit B7 alternative and the Bellevue B7-Revised alternative that would substantively change the environmental effects of the East Link Light Rail Project.
- Describe environmental effects of the B7-Revised alternative at an equivalent level of concept design as the B7 alternative in the DEIS and SDEIS.

2.4 Key meetings and background documents

Relevant meetings for this technical memo are noted below:

Date	Meeting	Reference (Minutes)
December 16, 2010	City of Bellevue kick-off meeting	Ref: Kick-off Minutes-Issue 2 Issue Date: 1/10/2011
January 13, 2011	B7-Revised optimization workshop	Ref: Optimization Workshop Minutes Issue 2 Issue Date: 2/2/2011
February 3, 2011	Staff Check-in 3 – Station and Alignment Update	Ref: Staff Check-in 3 Minutes (Draft 2) Issue Date: 2/16/2011
February 7, 2011	Staff Check-in 4 – Sturtevant Creek options	Not finalized at time of submittal
February 24, 2011	Staff Check-in 5 – Station, Sturtevant, Public Meeting	Not finalized at time of submittal.

Table 1 - Relevant meetings

Relevant documents and reports used to support the analysis include the following:

Document	Referred to in Technical Memo as:	Relevance to Technical Memo:
Central Puget Sound Regional Transit Authority, (November 2005). *Sound Transit Link Light Rail Design Criteria, Chapter 9. Stations.* Seattle, WA: Sound Transit.	Sound Transit Link Light Rail Station Design Criteria	Establishes Sound Transit landscaping objectives and design parameters for trackways
Central Puget Sound Regional Transit Authority, Washington State Department of Transportation, and Federal Transit Administration, et al (December 2008). *East Link Project: Draft Environmental Impact Statement.* Seattle, WA: Sound Transit.	DEIS	Describes environmental evaluation of alternatives performed by Sound Transit
Central Puget Sound Regional Transit Authority, Washington State Department of Transportation, and Federal Transit Administration, et al (October 2010). *East Link Project: Supplemental Draft Environmental Impact Statement.* Seattle, WA: Sound Transit.	SDEIS	Describes environmental evaluation of alternatives performed by Sound Transit
Central Puget Sound Regional Transit Authority, (June 2010). *112th Avenue Light Rail Options Concept Design Report.* Seattle, WA, Sound Transit.	112th Avenue Concept Design Report	Describes environmental evaluation of alignment options on 112th performed by Sound Transit
David Evans Associates (July 2010). *Final Report for the City of Bellevue's Peer Review of Segment B7 of Sound Transit's East Link Light Rail Project.* Bellevue, WA: City of Bellevue Transportation Department.	City of Bellevue B7 Peer Review	Provides peer review of environmental analysis conducted of Sound Transit's EIS evaluation of the B7 alternative
KPFF (July 2010). *South Bellevue Station: Alternative Location Analysis.* Bellevue, WA: City of Bellevue Transportation Department.	SBSALA	Provides environmental screening information on A-2 Station concept
OTAK (July 2010). *Technical Memorandum: Analysis of Potential Impacts from Sound Transit on Mercer Slough*. Bellevue, WA: City of Bellevue Transportation Department.	OTAK memorandum	Establishes City of Bellevue position on environmental impacts to Mercer Slough
City of Bellevue (July 2010). *Technical Memorandum: What are the relative impacts of the two light rail alignments (B7 and B2M) on salmon?* Bellevue, WA: City of Bellevue.	Salmon impact memorandum	Establishes City of Bellevue position on salmon impacts of B7 and B2M

Table 2 - Relevant documents and reports

3 Methodology

The project team has been directed by Bellevue City Council to prepare an "apples-to-apples" comparison of the B7/C9T alternative evaluated in the East Link Project DEIS and SDEIS with the B7-Revised alternative. Such a comparison requires consistency of three elements – base data and information, key assumptions, and methodology.

For the early environmental screening analysis, the project team selected key resource impacts that differentiate between the B7/C9T and B7-Revised alternatives at specific locations where concept design features are substantially different. Key resources include wetlands, aquatic habitat, impervious area, visual quality, neighborhood character, parks/Section 4(f) and 6(f), and displacements. The early environmental screening analysis used the same base data and key assumptions as the East Link Project DEIS and SDEIS. Analysis methods for the early environmental screening memo are different than the methods used in the DEIS and SDEIS. The early environmental screening phase is mostly qualitative; and the specific methods are described in Section 3.3. If the City moves into the second phase of design and analysis for B7-Revised, then the environmental analysis will use methods similar to the DEIS and SDEIS to quantify impacts to the key resources. The level of analysis detail in the second phase will be similar to the 112th Avenue Light Rail Options Concept Design Report.

The following tables and narrative outline the methods used for the early environmental screening.

3.1 Base data and information

B7/C9T	B7-Revised	"Apples-to-Apples"	Comments
General data – East Link Project DEIS and Appendices	Same	Yes	Review of recent aerial photos (Google Earth 2010) indicates that DEIS ecosystem resource mapping likely accurately depicts current conditions in areas affected by B7-Revised alternative, including A-2 Station area.
East Link Chapter 2 typical designs for track and stations	Same	Yes	
A-2 Station data – The A-2 Station was not part of the B7/C9T alternative.	South Bellevue Station Alternative Location Analysis (Bellevue, 2010)	No	Description of existing conditions in the report is based on East Link DEIS and Ecosystems Technical Report. No additional field work was performed for the analysis.

Table 3 - Comparison with Sound Transit DEIS and SDEIS base data and information

3.2 Key assumptions

B7/C9T	B7-Revised	"Apples-to-Apples"	Comment
Long-term impacts are the same as permanent impacts.	Same	Yes	
The project limit is the width of the trackway (30 feet) and LRT stations (approximately 60 feet by 380 feet).	Same	Yes	
The project limit equals the area of permanent impact for at-grade and elevated trackway, stations, park-and-ride lots, and new roads.	Same	Yes	
Shading by elevated structures would be a permanent impact.	Same	Yes	
Effects of operational noise on wildlife would be expected to be relatively minor compared to existing traffic noise.	Same	Yes	
Areas of Mercer Slough Nature Park that were purchased using Land and Water Conservation Funds (LWCF) Act monies are not affected	Same	Yes	
Elevated crossing of Mercer Slough East would be free-spanning; support column and borings would be located outside of the ordinary high water mark.	Same	Yes	
Temporary work trestle (if adopted) would be constructed in Mercer Slough Park and wetlands. All vegetation would be cleared and construction duration would exceed one year.	Same	Yes	

B7/C9T	B7-Revised	"Apples-to-Apples"	Comment
Project impervious areas include new tracks and guideways, stations, park-and-ride lots, and roads (DEIS, App H-3, pg. 4-2). Tunnel does not add impervious area (DEIS, App H-3, pg. 4-7).	Same	Yes	
Project-related parking lots and road realignments are considered PGIS. The guideway and stations are classified as non-PGIS (DEIS, App H-3, pg. 4-7)	Same	Yes	
Stormwater from project-related PGIS would be treated to at least basic treatment level. None of the alternatives would substantially degrade water quality from existing conditions (DEIS, App H-3, pg. 4-7)	Same	Yes	
The SDEIS did not identify environmental effects of C9T to Sturtevant Creek at the Hilton Hotel. For the portion of B7-Revised within Segment C, The DEIS analysis for C8E is the basis for comparison of the effects at this location.	Same	Yes	

Table 4 - Comparison with Sound Transit DEIS and SDEIS key assumptions

3.3 Methodology

B7/C9T	B7-Revised	"Apples-to-Apples"	Comment
Quantitative, digital calculation methods used for DEIS analysis of wetlands, upland vegetation and wildlife, aquatic habitat, impervious area, parks, and displacements	Qualitative for early environmental screening assessment	No	Assessment for final report will be quantitative in line with ST 112th Avenue Concept Report
FHWA methodology used to assess changes in visual quality		No	

Table 5 - Comparison with Sound Transit DEIS and SDEIS methodology

Section 4 of this early environmental screening technical memo includes a comparison of the Bellevue B7-Revised alternative to the Sound Transit B7 alternative for selected key resources:

- wetlands
- aquatic habitat
- impervious area
- visual quality
- neighborhood character
- parks/section 4(f) properties
- displacements

Upland vegetation and wildlife (including high-value habitat and special status species) also was considered for inclusion because the B7-Revised alternative would be in close proximity to the high-value habitat in and adjacent to Mercer Slough Nature Park. The DEIS indicated that no permanent effects are expected to federally and state threatened and endangered, candidate, or species of concern (DEIS Appendix H3, pg. 4-19 – 4-20). The B7-Revised facilities would not be closer to the potential habitats for species noted in the DEIS – marbled murrelet, bald eagle, peregrine falcon, olive-sided flycatcher, and willow flycatcher. Review of effects to these resources indicated that distinguishing differences between the B7 and B7-Revised alternatives are minimal and this resource was dropped from the early environmental screening memo.

For all of the screening criteria, a more detailed analysis of impacts will be conducted if the subsequent phase of analysis of B7-Revised takes place.

3.3.1 Screening criteria

Wetlands were considered in the early environmental screening analysis because the B7-Revised alternative includes the A-2 Station, a large facility that would encroach into the Mercer Slough Nature Park wetlands and wetland buffers. Wetland base maps from the East Link Project DEIS were provided by Sound

Transit for use by the project team. The B7-Revised concept level design for the A-2 Station facilities was overlaid on the Sound Transit wetland maps and an approximate area of permanent wetland and wetland buffer impact was calculated. The concept level design does not include grading information; the impact calculation is based on the concept level facility footprint. Temporary impacts were not estimated or calculated for the early environmental screening, similar to methods for the 112th Avenue Light Rail Options Concept Design Report. No additional field work was conducted for the early environmental screening. The elevated guideway alignment for the B7/C9T and B7-Revised alternatives through the Mercer Slough Nature Park wetlands from approximately Mercer Slough to the BNSF right of way are essentially the same; therefore, wetland impacts were not considered a distinguishing factor for this portion of the alternatives. However, the project team is studying construction methods that could reduce wetland impacts for both alternatives. These construction methods are described in the early concept alignment memo.

Aquatic Habitat was considered in the early environmental screening analysis because the B7-Revised alternative proposes an at-grade alignment parallel to Sturtevant Creek in the vicinity of the Hilton Hotel, instead of the elevated alignment included in the B7/C9T alternative. The memorandum authors visited the Hilton Hotel site, prepared comparative cross-section concepts for the alternatives, and met with City of Bellevue staff to discuss permitting feasibility of an at-grade alignment involving relocation of the stream channel. Estimates of channel length to be relocated and riparian buffer restoration potential are based on concept level designs for the alternatives and professional experience with stream channel reconstruction.

Impervious Area was considered in the early environmental screening analysis because they are a significant source of pollutants in stormwater runoff and the proposed A-2 Station facilities would create substantial new impervious area. For purposes of the early environmental screening, the memorandum authors focused on the differences in pollutant-generating impervious surface area associated with the A-2 Station and the 118th SE Station.

Visual Quality was considered in the early environmental screening analysis because the B7-Revised alternative includes the A-2 Station, a large transit facility that would likely impact an adjacent residential community. In assessing effects on visual quality to support early environmental screening, the memorandum authors visited the B7-Revised corridor, reviewed previous visual assessments conducted by Sound Transit on the B7 corridor and by others for the A-2 Station, and used professional judgment to estimate likely environmental effects. No formal visual quality analysis using FHWA or similar methodology was conducted for this screening.

Neighborhood Character was considered in the early environmental screening analysis because the B7-Revised alternative includes the A-2 Station, a large transit facility that would likely impact an adjacent residential community. In assessing effects on neighborhood character, the memorandum authors visited the B7-Revised corridor and obtained input from City of Bellevue planners familiar with the potentially impacted neighborhoods.

Parks/Section 4(f) and 6(f) effects were considered in the early environmental screening analysis because a portion of a vehicle ramp associated with the A-2

Station extends into Mercer Slough Nature Park, the B7-Revised corridor extends along the south side of the park, and the corridor is also located in close proximity to the east side of the park. In assessing Section 4(f) effects, the memorandum authors visited the corridor, reviewed the East Link Section 4(f) evaluation conducted by Sound Transit, and compared the B7 and B7-Revised alternatives in the vicinity of Mercer Slough Nature Park and other 4(f) resources that were identified by Sound Transit as being potentially affected by the B7 alternative. The memorandum authors used this comparison, along with an estimate of the area within Mercer Slough Nature Park affected by the A-2 Station ramp, to estimate effects on 4(f) resources. A formal Section 4(f) evaluation of the B7-Revised alternative was not conducted.

Displacements were considered in the early environmental screening analysis because after review of the B7-Revised concept, it was evident that the number and location of displacements varied substantially primarily in three areas – the A-2 Station site of the B7-Revised alternative; the 118th Station site of the B7 alternative, and the East Main Station site near the boundary between the B and C segments of the overall East Link corridor. Alignment maps of the B7-Revised alternative were overlain on parcels maps to determine probable parcel acquisitions. Site visits identified the nature of displacements involved with these acquisitions.

4 Comparison of B7/C9T and B7-Revised

This section of the early environmental screening technical memo is organized to focus on selected locations where project features of the B7/C9T and B7-Revised alternatives differ substantially. These locations include station sites A-2, 118th SE, and East Main; the BNSF right of way; and Sturtevant Creek at the Hilton. A subsection also is included for the Mercer Slough/I-90 guideway, because ongoing study of construction methods has identified an opportunity for a substantial reduction of construction impacts to the Mercer Slough Nature Park wetlands.

Table 6 summarizes the overall effects of the Sound Transit B7/C9T alternative and the City of Bellevue B7-Revised alternative for the environmental elements evaluated.

Criteria	Measure	Sound Transit B7/C9T alternative			City of Bellevue B7-Revised alternative		
		B7	C9T (SE 6th Street to BTC)	Total B7/C9T	B7-Revised	C9T-Revised (SE 6th Street to BTC)	Total B7-Revised
Wetlands	Wetlands affected (acres)	1.8	0	1.8	2.1	0	2.1
	Wetland buffer affected (acres)	0.8	0	0.8	1.0	0	1.0
Aquatic habitat	Number of stream crossings and level of disturbance	1 elevated	1 elevated • Potential for support columns in stream buffer or channel; partial stream relocation is potential	2 elevated • Potential partial stream relocation • Potential support columns in stream buffer or channel	1 elevated	1 at-grade • Retaining walls in stream buffer or channel; stream relocation is certain	1 elevated/ 1 at-grade • Stream relocation is certain • Retaining wall in buffer and channel
Impervious Area [1]	Pollutant-generating impervious surface (PGIS)	2.9	0	2.9	4.1	0	4.1
Visual quality	Decrease in visual quality compared to existing conditions?	No	No	No	Yes	No	Yes
Neighborhood character	Change in neighborhood character compared to existing conditions?	No • Few business displacements. • Elevated structure could be viewed from I-90 Trail • Overall, neighborhood quality and social interactions would be maintained.	No • Some business displacements • Elevated structure would be viewed by businesses and residents. • Overall, neighborhood character would not be adversely affected.	No	Yes • A-2 Station would add intense new activity center in neighborhood. • Substantial change in views for residences on west side of 113th Avenue SE. • Changes in traffic patterns on 113th Avenue SE with merging of local traffic and transit traffic	No • Some business displacements • At-grade structure would be viewed by businesses and residents. • Overall, neighborhood character would not be adversely affected.	Yes
Parks/Section 4(f) and 6(f)	Permanent impact – (acres before mitigation)	1	0.1	1.1	1.3	0	1.3
Displacements [2]	No of residences	0	0	0	12	0	12
	No. of businesses	6	8	14	1	8	9

Table 6 - Summary of the B7-Revised Early Environmental Screening Evaluation

Notes to Table 6

1 Evaluation of PGIS for the early environmental screening focused only on the A-2 Station and SE 118th Station. The PGIS quantity reported for the Sound Transit B7 alternative (DEIS pg 4.9-11) is assumed to result from development of the SE 118th Station. The PGIS quantity reported for the Bellevue B7-Revised alternative would result from development of the A-2 Station. All other development for both alternatives between the connection with Segment A and Segment C at SE 6th Street would be elevated guideway – a non-PGIS facility.

2 Updated displacements information provided by Sound Transit in April, 2011 is included in this early environmental screening memo.

4.1 A-2 Station

The study area for the A-2 Station starts at the transition from the East Link A segment to the B segment at the east shore of Lake Washington, and extends to the west bank of Mercer Slough East (just east of Bellevue Way SE). The B7/C9T and B7-Revised alternatives would be on an elevated structure in this portion of the alignment. The impacts of constructing the elevated track are discussed in the East Link Project DEIS and are not a distinguishing factor between the alternatives. Impacts of the A-2 Station parking structure, transit center, access roads, and station platform would be in addition to impacts of the Sound Transit B7 alternative.

The B7-Revised alternative includes a structured park and ride lot, transit center, and elevated LRT platform – collectively referred to as the A-2 Station – near the intersection of I-90 and Bellevue Way SE. The B7/C9T alternative does not include a station at this location and the permanent environmental effects of the A-2 Station are an important distinguishing factor between the alternatives.

The proposed A-2 Station parking structure and transit center would be built in an area that currently is residential, bounded by 113th Avenue SE, SE 30th Street, and Bellevue Way SE and the I-90 on-ramp. The elevated LRT platform would be built in conjunction with the elevated guideway over the I-90 ramps and extend eastward to about Mercer Slough East. A narrow wetland area extends along the banks of Mercer Slough East. The elevated center platform station would be approximately 60 feet wide and 380 feet long. The access road from northbound Bellevue Way SE to the parking area and transit center would loop eastward and over Bellevue Way SE, extending into Mercer Slough Nature Park and Category I wetlands.

4.1.1 Wetlands and wetland buffers

Impacts of support columns for an elevated guideway were assessed for this location in the East Link Project DEIS. The B7 alternative could potentially affect the I-90 Seismic Retrofit Wetland Mitigation Site along the west bank of Mercer Slough East (DEIS pg. 4.8-15), depending on the placement of support columns. The LRT center platform proposed as part of the B7-Revised alternative at the A-2 Station would require more support columns than the elevated guideway to accommodate the additional platform width. Construction of the support columns and platform would disturb a greater area of soil and vegetation in the Mercer Slough wetland buffer and would have a greater potential to disturb the wetland mitigation site. Impacts to the wetland and buffer would be minimized through column placement.

The northbound vehicle access ramp from Bellevue Way SE to the A-2 Station parking structure and transit center would require placing fill in about 0.26 acres of Category 1 wetland and 0.18 acres of wetland buffer east of SE 30th Street near the blueberry farm.

Compensatory mitigation for wetland impacts would be provided, consistent with mitigation commitments in the East Link DEIS (DEIS Appendix H3, pg. 5-3). Mitigation would be consistent with the replacement ratios required by the City of Bellevue. To the extent possible, compensatory mitigation sites would be identified close to impacts and compensate for lost values in-kind. Sound Transit determined that there are mitigation opportunities within the study area that are expected to meet required mitigation ratios. For this screening memo, the authors assume that sufficient opportunities exist to compensate for the additional impacts of the A-2 Station facilities. The specific compensatory mitigation would be determined during final design and project permitting.

Land clearing and excavation for the A-2 Station facilities could affect approximately 5.58 acres and excavate about 127,000 cubic yards of material. These activities, combined with materials handling and transport during construction, would increase the potential for runoff and sedimentation into the Mercer Slough wetlands. BMPs would be employed to minimize the potential for soil erosion and sedimentation, and to protect sensitive resources.

4.1.2 Aquatic habitat

The East Link Project DEIS indicated that shading by the elevated guideway over the mouth of Mercer Slough East would have some impact on the slough and adjacent riparian vegetation, degrading shoreline edge habitat and lowering large woody debris input potential for the width of the bridge structure (DEIS, App H-3, pg 4-10). Shading effects were assumed in the DEIS to cover an area 30 feet wide for the length of the elevated structure. The A-2 Station LRT platform would be constructed on an elevated portion of the B7-Revised track. The greater width of the platform (60 feet versus 30 feet for the B7 guideway) would shade double the area of wetland and aquatic habitat for the 380–foot length of the platform.

Portions of the A-2 Station would be constructed over or very close to Mercer Slough. Construction activities could degrade water quality in Mercer Slough from runoff of sediment and pollutants. Construction of the B7 elevated guideway at this location would have the same potential as B7-Revised for sedimentation effect on Mercer Slough, however the longer construction duration and greater area of ground disturbance for the A-2 Station platform would increase the potential for runoff of pollutants to the slough. BMPs would be employed to minimize the potential for soil erosion and sedimentation, and to protect water quality.

4.1.3 Impervious area

The Sound Transit B7 alternative would add impervious surface in the A-2 Station study area associated with the elevated track and guideway. None of the impervious area would be considered pollutant-generating impervious surface (PGIS) under the applicable regulatory requirements. Light rail tracks and guideways have no motor vehicle traffic or other sources of pollution-generating activities and therefore are considered non-pollutant generating impervious surfaces (non-PGIS). No stormwater treatment facilities would be required for the

B7 alternative in the A-2 Station study area. Runoff from the B7 alternative guideway in the A-2 Station study area could be routed directly to Mercer Slough, a flow control-exempt water body per Washington State Department of Ecology designation, without any detention required (DEIS pg. 4.9-12).

The A-2 Station facilities would create about 4.89 acres of impervious area, including about 4.12 acres of PGIS from the transit center (with separated kiss and ride), transit ramp, half of Level 4 Parking, the deceleration lane on northbound Bellevue Way, and the new road connecting northbound Bellevue Way to the Transit Center. The PGIS would increase the potential for contaminants in site runoff to reach adjacent surface waters. Stormwater management of site runoff would have to meet the requirements of the Ecology Manual, as codified by the City of Bellevue. Within WSDOT right-of-way, the requirements of the Highway Runoff Manual (WSDOT 2010) would have to be met. Similar to the analysis in the DEIS, runoff from PGIS would require basic water quality treatment, reducing project effects on Mercer Slough water quality. A pollutant loading analysis would be needed to determine if the A-2 Station would worsen runoff quality to Mercer Slough even with treatment as required. The LRT platform would not impact long-term water quality because the platform, similar to the elevated guideway, would not be subject to motor vehicle traffic or other sources of pollution and is therefore classified as non-PGIS. Similar to the DEIS findings for runoff in this area, runoff from the A-2 Station facilities, including treated runoff from PGIS and untreated runoff from non-PGIS, could be routed directly to Mercer Slough without need for flow control

4.1.4 Visual quality

A detailed visual analysis was not conducted for this preliminary environmental assessment.

The A-2 Station park-and-ride site slopes down generally toward the east and is currently occupied by single-family residences. The site is heavily vegetated with trees and shrubs and, in views from the east, forms a strong visual contrast with the gray tones and bold forms of I-90 and Bellevue Way at the base of the slope.

The preferred A-2 park-and-ride facility concept would be below the level of 113th Avenue SE at its south end and approximately 15 feet above its level at the north end. The transit center at the south end and the upper level of parking at the north end will be open and visible, and will be lit at night. Some light spillover may affect residences on the west side of 113th Avenue SE. There will be a change in view for residences on the west side of 113th particularly opposite the north portion of the structure.

The east face of the park-and-ride structure will be up to 40 feet above Bellevue Way and the semi-circular ramp structure between Bellevue Way and the park-and-ride structure will extend about 230 feet east of and above the level of Bellevue Way. In addition, a pedestrian bridge will extend from the southeast corner of the park-and-ride structure to the A-2 Station located over the I-90 Bellevue Way off-ramps. These structures will result in a dramatic change in views seen from Bellevue Way and areas east of Bellevue Way. This change in

visual character of the site will be evident to visitors to the Mercer Slough Nature Park, particularly those users of the boat ramp adjacent to the Sweyolocken pump station and on the nature trail that extends parallel to the entrance road to the pump station / boat ramp and that crosses the entrance road and extends south. For other users of the park, the degree to which this visual change will be prominent in their views will vary substantially depending on location and, in part, season because of the dense, largely deciduous vegetation in the park.

Visual impacts, especially on the residential area along the west side of 113th, could be significant, although landscaping and appropriate facility and lighting design would provide some mitigation of those impacts. However, at the present conceptual stage of site layout for the A-2 Station, structure design and site landscaping details are not available, and the extent to which these visual impacts would be mitigated is uncertain.

4.1.5 Neighborhood character

The A-2 Station site is located in the southeast portion of the Enatai neighborhood, an area of primarily single-family residences. The southeast edge of the Enatai neighborhood along I-90 and Bellevue Way is demarcated by the abrupt visual and land use change that occurs at the base of the slope below the A-2 Station site. The A-2 Station, as a physically large, transit-oriented facility, would share visual and related physical characteristics and general activity levels with the dominantly transportation-related landscape bordering the south and southeast sides of the Enatai neighborhood. The result of the construction and operation of the A-2 Station at this location would, in effect, shift the neighborhood edge from Bellevue Way to 113th Avenue SE.

The A-2 Station would substantially change the neighborhood character of 113th Avenue SE primarily because of changes in views for residences on the west side of 113th and changes in the aesthetic character of 113th with the merging of local residential traffic and transit traffic at the north end of the site and the addition of a new intense activity center in the neighborhood. Extensive mitigation (landscaping, structure and lighting design) would be necessary to mitigate expected impacts to the residential community along 113th. At the present conceptual stage of site layout for the A-2 Station, structure and lighting design details and site landscaping details are not available, and the extent to which impacts on the character of the residential community adjacent to the A-2 Station site would be mitigated is uncertain.

4.1.6 Parks/Section 4(f) and 6(f) resources

A Section 4(f) evaluation has not been conducted for this preliminary assessment of the B7-Revised alternative.

The vehicle access ramps between Bellevue Way SE and the A-2 Station park-and-ride facility would convert about 0.26 acres of Mercer Slough Nature Park from its current park use to transportation uses. Under Section 4(f), this use of Section 4(f) land, including consideration of any proposed measures to avoid,

minimize, or mitigate the use, would be considered *de minimis* if the use "will not adversely affect the activities, features, and attributes" of the park, and if the City of Bellevue, the agency with jurisdiction over the park, concurs with the *de minimis* finding. The ramp would eliminate a portion of the periphery loop trail that extends along the border of the park and could temporarily eliminate access to the Sweyolocken boat launch at the end of the access road to the Sweyolocken pump station. The B7-Revised alternative would include the mitigation of relocating, before ramp construction begins, the portion of the periphery trail that would be eliminated, thereby maintaining continuous user access along the trail. Access to the Sweyolocken pump station and boat launch would be maintained during construction of the ramp with only minimal, short-term disruptions. Based on these considerations, the use of Mercer Slough Nature Park resulting from construction of the A-2 facility ramp and the guideway along the park's south edge (see Section 4.2 below) would likely be *de minimis*.

If, however, the use of the park were not considered *de minimis*, Sound Transit would need to determine whether there are any design alternatives to the use of Mercer Slough Nature Park that are both feasible and prudent. If no feasible and prudent alternatives exist for the ramp design, then the design would need to be evaluated and modified, if feasible, to minimize the area taken from the park. The map in Attachment 1 in Appendix A – Section 4(f) / Section 6 (f) Supplemental Evaluation to the East Link SDEIS shows boundaries of Section 6(f) parcels. Based on this map, the ramp would not require taking any 6(f) property, which is located primarily east of Mercer Slough at this location.

4.1.7 Displacements

The A-2 Station would result in the displacement of 12 residences on the east side of 113th Avenue SE.

4.2 Mercer Slough/I-90 guideway

The horizontal alignment of the elevated guideway from the A-2 Station platform to 118th Avenue SE is similar for the B7 and B7-Revised alternatives. The vertical profiles of the two alternatives also are similar. At the guideway crossing over Mercer Slough East, the B7 alternative is about 75 feet above the slough and the B7-Revised alternative is about 85 feet above the slough. The increased elevation of the B7-Revised structure over the slough results from criteria for siting the LRT platform.

The East Link Project DEIS assumed that the guideway crossing at the open water Mercer Slough would be a free-spanning structure with support columns located outside of the ordinary high water mark, and that impacts on aquatic resources would be minimal (DEIS Appendix H3, pg. 408). Construction would, however, be close to the water and would damage riparian vegetation and pose a risk of sediment transport into Mercer Slough. A temporary work trestle would likely be constructed in Mercer Slough Nature Park to accommodate construction, and a 100-foot-wide corridor would be cleared of vegetation. The DEIS assumed the impact of the trestle on ecosystem and park resources would be temporary. A

permanent impact equal to the 30-foot width of the guideway structure also was assumed. If similar construction methods are used for the B7-Revised alternative, then for this screening-level analysis the impacts, including Section 4(f) use effects, would be the same as the B7 alternative.

The project team is studying alternative construction methods to minimize the environmental impacts of guideway construction. One method under consideration is use of an erection gantry to construct the guideway "top-down". The gantry would start on one side of the wetland/slough complex, sequentially constructing the support columns and guideway structure. This method would eliminate the need for a work trestle and substantially minimize the amount of vegetation clearing and ground disturbance in the Mercer Slough Nature Park wetlands during construction. Additional description of alternative construction methods is included in TM06 Early Concept Alignment. Sound Transit's original Section 4(f) evaluation concluded that the use of Mercer Slough Nature Park under the B7 alternative would be *de minimis*, and, as these alternative construction methods would result in less use of the park than what was assumed in the Section 4(f) evaluation, the Section 4(f) finding would likely continue to be *de minimis*.

4.3 BNSF Right-of-Way

The BNSF right of way study area includes the portion of B7-Revised extending from 118th Avenue SE northward approximately 2.1 miles to the point where the alignment exits the BNSF right of way at approximately within the right of way. This portion of the B7-Revised alternative was included for evaluation in the early environmental screening because the City of Bellevue is considering options for accommodating a trail and heavy rail that were not evaluated in the East Link Project DEIS.

The horizontal alignment and vertical profile of this portion of the B7-Revised alternative is nearly the same as B7/C9T. Impacts of the two alternatives are expected to be similar for wetlands, aquatic habitat, impervious area, visual quality, and neighborhood character, and no further discussion of these resources is included in the early environmental screening memo.

The B7-Revised alternative is slightly different at its crossing of 118th Avenue SE, resulting in additional displacements. The options under consideration for accommodating a trail and heavy rail also differ between the alternatives. Parks/Section 4(f) and 6(f) and Displacements are evaluated for the BNSF study area.

4.3.1 Parks/Section 4(f) and 6(f)

The East Link DEIS did not note any Section 4(f) or 6(f) impacts along this segment. The BNSF Greenway, a major north-south trail shown in the 2010 Bellevue Parks & Open Space System Plan, has been planned to be co-located with transit in the BNSF corridor. As a planned significant recreational facility on what is a publicly-owned property now that the Port of Seattle has completed its

acquisition of the BNSF right-of-way, the BNSF Greenway is potentially a Section 4(f) resource. So long as the design of light rail within the BNSF corridor does not preclude eventual installation of the greenway as planned, no Section 4(f) impact would occur.

4.3.2 Displacements

Sound Transit identified 1 business that would be displaced in this portion of the B7 alternative. The B7-Revised alternative would also result in the displacement of one business immediately to the north of I-90.

4.4 118th SE Station

The study area for the 118th SE Station extends from where the alignment leaves the BNSF right of way in the vicinity of The Stor-House, north for about 0.9 miles to SE 8th Street. This portion of the alternative would be elevated. The B7/C9T alternative includes the 118th SE Station just south of Kelsey Creek and the SE 8th Street interchange on I-405. The 118th SE Station would include an elevated center LRT platform, structured parking for 1000 vehicles, and transit center.

The B7-Revised alternative would also be elevated and does not include the 118th SE Station. The horizontal alignment of B7-Revised would be closer to I-405 than B7/C9T and the vertical profile of the alternatives would be similar.

4.4.1 Wetlands and wetland buffer

Both alternatives would go through the 118th Avenue SE wetlands north of The Stor-House between 118th Avenue SE and I-405. The horizontal alignments at this location are slightly different but impacts would be similar because the length of guideway through the wetland is the same.

4.4.2 Aquatic habitat

The B7/C9T elevated guideway would pass over a culverted section of Kelsey Creek, about 50 feet from the Kelsey Creek fish ladder. The East Link Project DEIS indicates that no impacts to the creek are expected (DEIS Appendix H3, pg. 4-8). The B7-Revised alternative also would be elevated and about 125 feet from the fish ladder. Similarly, no impacts to the aquatic habitat and fish are expected.

4.4.3 Impervious area

The analysis of impervious area for the 118th SE Station study area is qualitative for the early environmental screening. Data provided in the East Link Project DEIS and appendices is reported as total numbers by project segment. The DEIS indicates that the B7 alternative would create a total of 3.9 acres of new impervious area and 2.9 total acres of PGIS (existing and new) (DEIS pg 4.9-11). The PGIS quantity reported for the Sound Transit B7 alternative is assumed to result from development of the SE 118th Station. All other development between

the connection with Segment A and Segment C at SE 6th Street would be elevated guideway – a non-PGIS facility.

If the 118th SE Station were not developed and the area was traversed on an elevated guideway as proposed with the B7-Revised alternative, then existing and new PGIS would not be accounted for at this location because the elevated guideway is considered a non-PGIS facility. Information in Table 6 reflects this outcome – new and existing PGIS for the B7-Revised alternative does not include a quantity for this site.

For purposes of the early environmental screening, a judgement was not made about runoff quality with or without the 118th SE Station. Most of the proposed station site is currently covered with impervious surfaces, with substantial areas used for vehicle traffic and parking that would be considered PGIS in evaluating potential changes in stormwater runoff quality relative to existing conditions. The proposed layout of the 118th SE Station suggests that a similar magnitude of impervious area and PGIS would be created with the station. Development of a station at this site would likely trigger stormwater treatment requirements for a portion of it, whereas there is probably not much if any stormwater treatment occurring in the existing condition. However, there is not enough disparity evident in the areas of existing and potential future impervious surfaces at the site to make a judgment that water quality of runoff could be improved if the station were built there. Additional mapping and quantification will be conducted in the second phase of the City's analysis of the B7-Revised alternative to make a more precise comparison.

4.4.4 Visual quality

The East Link DEIS concluded that the B7 alternative would not result in a substantive change in visual quality along the BNSF corridor and its immediate surroundings. Alternative B7-Revised would result in similarly minimal visual impacts, although because B7-Revised does not include a station at 118th, the visual impacts would be somewhat less than the visual impacts resulting from B7.

4.4.5 Parks/Section 4(f) and 6(f)

Neither alternative would affect Section 4(f) resources in the area of the 118th SE Station.

4.4.6 Neighborhood character

The East Link DEIS concluded that this segment of B7 would have little impact on neighborhood quality, and B7-Revised, with a similar alignment, would also have little impact on nearby neighborhoods.

4.4.7 Displacements

The East Link DEIS identified 5 businesses that would be displaced in the area of the 118th SE Station. The B7- Revised alternative would not result in displacement of any businesses at this location.

4.5 Sturtevant Creek at Hilton Hotel

Bellevue's B7-Revised alternative includes a portion of Segment C identified in the East Link DEIS and SDEIS. For purposes of this technical memo, B7-Revised north of SE 6th Street is compared to the C9T alternative described in the East Link SDEIS.

The East Link SDEIS indicates that the C9T alternative at Sturtevant Creek would follow the same alignment as several DEIS alternatives (C2T, C3T, C4A, C7E, C8E). The impacts identified in the DEIS for Sturtevant Creek at the Hilton Hotel are assumed to apply to C9T and form the basis for comparison at this location. The primary difference between the B7/C9T and B7-Revised alternatives at this location is that B7/C9T is elevated approximately 60 feet above ground and B7-Revised is at-grade north of SE 4th Street, retained by a wall on the creek (west) side of the alignment. The at-grade B7-Revised alternative is located slightly farther east and closer to the I-405 right of way than B7/C9T.The East Link Project DEIS indicates that the reach of Sturtevant Creek north of SE 6th Street represents virtually the only usable habitat in Sturtevant Creek for salmonids. The gradient is slightly steeper than downstream, supporting a pool/riffle complex with some clean gravel in riffles. Although there is ample shade due to large bordering trees, all of the streamside cover of trees or shrubs has been cleared and lawns have been established on both sides of the stream. Despite this, habitat quality is considered good because there are pools and riffles with moderately clean gravel (DEIS, App H3, pg. 3-8). The upstream end of this reach ends at a fish-impassable culvert under I-405. Coho salmon (a federal species of concern and WDFW priority species) is known to use Sturtevant Creek up to the I-405 culvert and peamouth chub (a native resident species) is known to spawn in Sturtevant Creek.

4.5.1 Aquatic habitat

The East Link Project SDEIS indicates that the C9T alternative would be aligned over or very close to Sturtevant Creek, paralleling it as an elevated structure in the reach adjacent to the Hilton Hotel, similar to alternatives analyzed in the DEIS. The East Link DEIS states that during construction it may be possible to avoid touching the creek and to place support columns outside of the creek channel, and an effort would be made to do so (DEIS App H3, pg. 4-8). If avoidance is not possible, the channel would need to be realigned. The DEIS states that if the channel needs to be realigned, there would be direct but temporary impacts on the best habitat in Sturtevant Creek accessible to anadromous salmonids. The statement of long-term (permanent) impacts of the B7/C9T alternative (DEIS App H3, pg. 4-10) indicates that if the Sturtevant Creek channel is realigned in the reach adjacent to the Hilton Hotel, the habitat value could be improved with a new

constructed channel. The DEIS states that, in the long term, "habitat could be improved in terms of channel morphology (i.e., pool frequency, in-stream structure, riparian vegetation, and substrate type). However, this may be compromised somewhat by the impacts of the elevated structure shading on riparian vegetation and the channel. Biological productivity and LWD recruitment may be diminished (DEIS, App H3, pg. 4-10). Support columns likely would be located in the creek's riparian buffer zone (DEIS Ch 4.9, pg. 4.9-13).

The B7-Revised alternative would be at grade in the area of Sturtevant Creek adjacent to the Hilton Hotel. The horizontal alignment is slightly closer to the I-405 right of way than the C9T elevated alignment to help minimize encroachment of the at-grade alignment into the creek buffer. The at-grade section would be constructed on fill retained by a 4- to 6-foot-high wall on the west (Hilton Hotel) side of the alignment. It is likely that the retaining wall would be within the creek bed in some locations, making it necessary to relocate the creek. There is sufficient area between the Hilton Hotel and the retaining wall location to relocate the creek channel and provide substantial improvements to habitat functions, similar to the potential habitat improvements identified in the East Link Project DEIS. The alternative would bridge the creek just downstream of twin culverts that convey Sturtevant Creek under I-405.

Differences between the alternative designs and environmental effects include:

- **Horizontal alignment –** Although B7-Revised is slightly farther east, the difference is not great enough to differentiate between the alternatives. This design refinement helps to minimize encroachment of the at-grade guideway into the creek buffer, but is not great enough to substantially reduce the permanent impacts of the B7-Revised alternative.
- **Vertical alignment –** The environmental impacts of an elevated versus at-grade alignment would differentiate the alternatives, especially if the elevated guideway can be sited to avoid relocation of the stream. The elevated guideway design provides some flexibility for siting support columns outside the stream channel, which could avoid the need to realign the stream. Sound Transit acknowledged in the DEIS that stream relocation may be necessary, but would avoid placing support columns in the stream channel to the extent practical (DEIS, pg 4.9-13). In contrast, the at-grade alignment would require stream realignment. Mitigation to compensate for impacts to instream habitat and the stream buffer would be required for both alternatives. Mitigation actions would differ depending on the extent of disturbance to Sturtevant Creek and the buffer. More specific information on impacts is described below.
- **Instream habitat –** This section includes effects to instream habitat only. Buffer impacts are discussed separately.

  If the B7/C9T elevated alternative can be designed to avoid relocating the stream, then the potential for degrading existing instream habitat for fish would be less than with the B7-Revised at-grade alternative. Depending on where support columns for B7/C9T are placed and the necessary work zone around the columns for construction, there could be some construction effects

on the channel and restoration of those areas would be necessary. The DEIS analysis suggests that Sound Transit considers this the most probable scenario. However, if some of the stream must be reconstructed in a different location, then similar but less extensive habitat disturbance could occur with B7/C9T than B7-Revised. Mitigation to offset the effects of disturbing instream habitat would be required. Potential measures could include enhancements to instream habitat in disturbed areas, such as adding instream structures and cover for fish, and augmenting the streambed substrate with gravels. The extent of instream habitat restoration and enhancement would depend on the locations of support columns and area of construction disturbance. Overall, less instream habitat mitigation would be needed for the B7/C9T alternative than the B7-Revised alternative. The B7/C9T elevated guideway would be about 60 feet above the stream where it crosses the upstream end of this reach at the I-405 culvert, and the culvert could remain in place. Impacts to instream habitat and fish resulting from this crossing are not expected.

The B7-Revised alternative would require relocation of the stream. The final location of the west retaining wall for the at-grade guideway likely would be within the existing stream channel in some or all of the reach adjacent to the Hilton Hotel. Construction of the retaining wall would affect a large area, so it is assumed that all of the existing stream channel and instream habitat would be disturbed during construction. Required mitigation would include constructing a realigned stream channel to replace the existing channel. The new channel would be designed to provide instream habitat improvements for fish compared to the existing stream, including greater pool frequency, additional in-stream structure and cover, improved substrate, and enhanced buffer vegetation near the stream edge (discussed in the next subsection). The B7-Revised alternative would cross the stream on a bridge at the upstream end of this reach at the I-405 culvert. The culvert could remain in place similar to the B7/C9T alternative, but the guideway bridge would be much lower – about 10 feet above the stream. Because of the lower height, less buffer vegetation is expected to grow along the stream under the bridge, when compared to the elevated structure. Otherwise, this lower crossing at the I-5 culvert would not have a substantially different impact on fish habitat and aquatic species than the B7/C9T elevated structure. The bridge footings would be set back far enough from the stream channel as to not interfere with migration of the stream channel. If necessary, the stream banks could be stabilized with bioengineered measures (e.g., large woody material) to prevent erosion.

- **Stream Buffer** – The width and condition of the permanent stream buffer is an important distinguishing difference between the B7/C9T and B7-Revised alternatives at this location. The undeveloped area between the Hilton Hotel and 114th Avenue SE is about 90 feet wide, comprising essentially all the existing stream buffer. Both alternatives would require removal of vegetation in the existing buffer and reduce the area available for buffer adjacent to the creek. Sturtevant Creek on the Hilton Hotel site is classified as a Type F stream and, because the site is developed, requires a 50-foot buffer on either side of the creek per Bellevue code (LUC 20.25H.075.D.2.a.ii) (equal to 100

feet of total buffer width). The code limits modifications to a Type F stream buffer to 25 feet (LUC 20.25H.090.A) (equal to 50 feet of total buffer width).

Many of the existing tall trees would be removed for construction of both alternatives. The B7-Revised alternative likely would require removal of more existing trees because creek relocation is a certainty with this alternative.

The B7/C9T elevated guideway would allow for a wider buffer area than the B7-Revised at-grade guideway, regardless of whether the stream is relocated. With the B7/C9T alternative, the total width of buffer would remain about 90 feet and the total area of buffer would be reduced by the footprint of support columns for the elevated guideway. Shrubs and trees could be planted underneath the elevated guideway and be allowed to grow as tall as the guideway (25 – 45 feet). With the B7-Revised at-grade guideway, the total width of buffer would be about 50 to 60 feet and the total area of stream buffer on the Hilton Hotel site would be reduced by about one-third. Additional buffer mitigation, including possibly offsite mitigation, could be required by the City of Bellevue to compensate for the reduced area of buffer.

- **Permits** – Local, state, and federal regulations would apply to the work in and adjacent to Sturtevant Creek. The Muckleshoot Tribe also has strong interest in Bellevue's streams, and would consult with permitting agencies during approval processes.

  Bellevue's Land Use Code (LUC 20.25H.055.C) defines performance standards for new essential public facilities such as East Link that affect critical areas like Sturtevant Creek and its buffer. The East Link facility could be allowed if there is no technically feasible alternative with less impact on the creek or buffer. The determination of technical feasibility would consider factors such as the function and objective of the new facility and whether those functions could be achieved outside of the critical area or critical area buffer; whether the cost of avoiding the impact is substantially disproportionate as compared to the environmental impact of the disturbance; and the ability to mitigate both permanent and temporary effects.

  Project team members met with City staff to discuss permitting feasibility. The initial discussion suggested that the B7-Revised alternative potentially could be considered under these code requirements. The evaluation of costs and the ability to mitigate impacts will be key to this consideration.

4.6 East Main Station

B7/C9T and B7-Revised differ at the East Main Station in the following ways:

- B7/C9T is elevated from SE 6th Street to a tunnel portal at Main Street. B7-Revised is elevated from SE 6th Street to SE 4th Street and then at- or below-grade within a retained cut to a tunnel portal at NE 2nd Street.

- C9T has an elevated East Main Station on the Sheraton Hotel site. B7-Revised has a partially below-grade East Main Station on the Sheraton hotel site.

The East Main Station site is fully developed. Wetlands and aquatic habitat are not discussed for this location.

4.6.1 Impervious area

The C9T and B7-Revised alternatives would have similar facility characteristics with respect to potential effects on water quality. Both alternatives include a station with minimal associated parking. The C9T elevated guideway and station, and the B7-Revised at-grade guideway and station are both considered non-PGIS facilities because they are not exposed to vehicle traffic. Therefore the differences between the alternatives in operational effects would be minor and could be dealt with through design.

4.6.2 Visual quality

The East Link DEIS and SDEIS did not describe any substantive visual impacts that would result from the C9T alternative along and south of Main Street. South of Main Street, at the Red Lion site, the C9T alternative included an elevated station. The B7-Revised alternative in this segment would also not have substantial visual effects and, compared to the C9T alternative, the visual effects of the B7-Revised alternative would be somewhat less because of the lower vertical profile. Rather than an elevated station, the B7-Revised alternative includes a below grade station in a retained trench on the Sheraton parcel, which would have less visual impact.

4.6.3 Parks/Section 4(f) and 6(f)

The East Link DEIS does not identify any Section 4(f) or Section 6(f) effects along the C9T segment south of Main Street, including the East Main Station location. The nearest Section 4(f) property to C9T is the potential Surrey Downs Historic District, which is sufficiently distant from the light rail alignment that the DEIS concluded would not be adversely affected. The B7-Revised alternative similarly would not have any Section 4(f) or 6(f) effects.

4.6.4 Neighborhood character

Neighborhood Character: The East Link DEIS did not identify significant neighborhood impacts resulting from the C9T alternative between SE 6 and 2nd streets, and the impacts resulting from the B7-Revised alternative in this area would be similar.

4.6.5 Displacements

The C9T alternative (connecting to the B7 alternative) would require the displacement of the Red Lion Hotel (the site of the East Main Station under the

B7/C9T alternative) and also five businesses along the south side of Main Street between 112th Avenue SE and 110th Place SE just west of where the C9T alternative would enter a cut and cover tunnel. The B7-Revised alternative would require the acquisition and displacement of the Red Lion Hotel and the Sheraton complex (Sheraton Hotel, Azteca restaurant, and Bellevue Grill restaurant) as well as five businesses located along the north side of 2nd Street NE.

5 Conclusions

5.1 Key findings of environmental screening

Overall, the Bellevue B7-Revised alternative would have greater environmental impacts than the Sound Transit B7/C9T alternative. The main environmental differences between the alternatives are associated with addition of the A-2 Station and the change from elevated to at-grade guideway adjacent to Sturtevant Creek to accommodate a relocated East Main Station. The impacts noted below would be in addition to impacts of the Sound Transit B7/C9T alternative.

5.2 A-2 Station

- Fill would be placed in 0.26 acres of the Mercer Slough Nature Park, which also is wetland. About 0.18 acres of wetland buffer also would be filled. Mitigation would be required to offset the loss of these resources.
- About 4.9 acres of new impervious area would be added, including 4.1 acres of pollutant-generating impervious area that would require treatment to protect water quality in Mercer Slough.
- Views would change for residents living west of 113th Avenue SE and recreationists in Mercer Slough Nature Park.
- Twelve (12) residences in the Enatai neighborhood would be acquired.

5.3 Sturtevant Creek

- The existing creek channel, which provides good-quality habitat for coho salmon and peamouth chub, would be displaced by the retaining wall and fill for the at-grade guideway.
- The total area of stream buffer would be reduced by about one-third by the fill for the guideway.
- Mitigation for these effects would include constructing a new creek channel and enhancing the remaining creek buffer.
  - The reconstructed channel would provide improvements to instream habitat for fish (e.g., greater pool frequency, additional instream structure and cover, and improved substrate), compared to the existing stream.
  - The remaining stream buffer area would be densely vegetated with native plants to provide improved riparian functions in the stream corridor, compared to the existing buffer.