Item No. SS 2(a)
July 19, 2010

CITY COUNCIL STUDY SESSION ITEM

SUBJECT:
East Link: Review and discuss the City's B7 analysis, the 112th Avenue SE design options, and the Hospital Station options.

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Transportation Department

FISCAL IMPACT:
N/A

POLICY ISSUES:
On April 22, the Sound Transit Board revised their preliminary preferred alternative for the East Link Project. Their revised preliminary preferred alternative included the B2M option in South Bellevue, travelling along Bellevue Way and 112th Avenue Southeast from I-90 to downtown Bellevue. The City and Sound Transit have collaborated to evaluate six alternatives for the routing of light rail on 112th Avenue. Policy considerations related to each of the alternatives include urban design integration, traffic operations, noise and visual impacts, displacements and construction impacts.

Additionally, Sound Transit has evaluated four station location options for the Hospital Station, located near the intersection of the BNSF corridor and NE 8th Street. Policy considerations related to the station location include access to employment sites and the station, supporting implementation of adopted land use plans in Wilburton, property impacts, and environmental impacts.

During this same period, the City pursued additional analysis of issues related to the B7 alignment, the City Council's preferred route for Segment B of the East Link Project. Areas of analysis included review of environmental analysis and constructability issues, assessment of Mercer Slough wetland functions and values, and alternative South Bellevue Station locations. Policy considerations include transit access, park and environmental impacts, traffic operations, displacements and construction impacts.

The City Council has articulated its preferences and policy direction regarding the East Link Project through its communications to Sound Transit, amendments to the Comprehensive Plan, and parallel planning processes. These City actions provide the basis for continued advocacy for City preferences and cooperative project development with Sound Transit.

DIRECTION NEEDED FROM COUNCIL:
X Action
X Discussion
X Information

City staff and consultants will present a brief summary of the findings of the additional analysis of the B7 alignment, followed by Council discussion at the Study Session.

Staff will also briefly review the 112th design options and Hospital Station options. On July 22, the Sound Transit Board will identify its preferred 112th options for more detailed study in a Supplemental Draft Environmental Impact Statement (SDEIS). The Board will also select a Hospital Station option for further design. This is an opportunity for Council to provide input to the Sound Transit Board on the design choices to be advanced for further study in the SDEIS.

BACKGROUND/ANALYSIS:

Sound Transit has been working for several years to develop the East Link light rail project and the City has been involved throughout that process to represent Bellevue's interests. The voter approved project will connect Bellevue with Overlake, Mercer Island and Seattle, as well as areas in north and south King County when it opens in 2020/21. Sound Transit is responsible for project development and delivery and is currently focused on completion of environmental review and preliminary engineering. The City is actively involved and seeks to influence the alignment and design to reflect City goals and objectives.

Sound Transit's April 2010 revised preference (Attachment 2) is largely consistent with the City's in the Bel-Red Corridor and downtown Bellevue. In Bel-Red, the preference is the D2A alternative. In downtown, the preference is the C9T 110th Avenue NE tunnel alternative, with the C11A 108th Avenue NE at-grade alternative also advancing in case funding for the C9T alternative does not materialize. In South Bellevue, the Sound Transit Board identified the B2M option as their preferred alternative as a means of achieving $75-100 million in cost savings over the B3S alternative, which was the previously identified Preferred Alternative for Sound Transit. The Bellevue City Council's preference in South Bellevue is the B7 option (Attachment 1).

City's B7 Analysis

In May, the City Council directed staff to pursue four contracts to address the need for additional information and an independent review of existing information related to the B7 alignment. The work also included a peer review of the B2M noise analysis. The analysis will contribute to the City's review and feedback on Sound Transit's SDEIS (anticipated in Fall 2010) and Sound Transit's ultimate alignment selection (anticipated in mid-2011). The following section summarizes the scope and status of the analysis:

Peer Review of the DEIS B7 Alignment Analysis

- Review B7 DEIS analysis for consistency with industry standards and best practices, including methodologies, assumptions, and data sources; and evaluate overall sufficiency and completeness of DEIS B7 analysis.
- Review B7 engineering drawings and assess constructability.
- Identify critical elements for further analysis, if B7 is advanced for additional study.

Status: The review is complete and a summary of the findings is included as Attachment 3. The full report is provided under separate cover and will be available on the City's website at: http://www.bellevuewa.gov/light-rail.htm.

Mercer Slough Wetlands Functional Assessment

- Conduct a logical and defensible assessment of the functions and values of the Mercer Slough wetlands and habitat, based on available scientific data, field work, and best professional judgment.
- Create a comparative matrix illustrating functions and values for each of two proposed light rail alignment areas to compare and contrast the implications of alignments in each area.

Status: The Mercer Slough assessment requires independent field work and analysis and, as a result, a full report and findings are were not available as of the printing of these Council agenda materials. Staff will provide an update on this work on Monday.

South Bellevue Station Alternative Location Analysis

- Develop planning level concept drawings and cost estimates for two alternate South Bellevue station locations
- Evaluate major issues associated with the relocation of the station, including access, capacity of the park-and-ride, displacements, and environmental and regulatory issues

Status: The analysis is complete and a summary of the findings is included as Attachment 4. The full report is provided under separate cover and will be available on the City's website at: http://www.bellevuewa.gov/light-rail.htm.

East Link Noise Analysis Peer Review

- B2M: Review Sound Transit data collection, methods, and analysis for the six alternatives under consideration. Confirm sufficiency of analysis and reasonableness of reported results. Assess proposed mitigation and propose alternate and/or additional mitigation measures as appropriate.
- B7: Make recommendations on items to consider in upcoming update of B7 noise analysis for FEIS. (The B7 DEIS noise analysis review was postponed because the analysis is outdated because of changes to I-405 and new available Central Link operating data. Sound Transit will update the analysis for the SDEIS and FEIS.)
- Respond to noise-related technical questions identified by the City Council.

Status: The noise analysis peer review is complete. A summary of the findings is included as Attachment 5. The full report is provided under separate cover and will be available on the City's website at: http://www.bellevuewa.gov/light-rail.htm

City staff and consultants will present a brief summary of the findings, followed by Council discussion at the Study Session.

112th Avenue SE and Hospital Station Design Options

B2M 112th Avenue Design Options

The Board directed Sound Transit staff to analyze design options for the B2M routing on 112th Avenue and requested City participation in this evaluation. Sound Transit and City staff identified six options for public consideration:

1) Center running to Main Street Tunnel

2) Westside running to Main Street Tunnel
3) Center running to NE 2nd Street Tunnel
4) Eastside running to NE 2nd Street Tunnel
5) Center running to at-grade
6) Westside running to at-grade.

Sound Transit produced the *112th Avenue Light Rail Options Design Report* (provided to Council June 24, 2010), with review and input from City staff. Sound Transit staff presented the results of this analysis to Council on July 6, 2010.

On July 22, 2010, the Sound Transit Board is scheduled to identify 112th options to advance for further study in the SDEIS, expected to be released this fall. Tonight is an opportunity for Council to provide input to ST on the design choices along this corridor to advance for further study in the SDEIS.

Community Outreach – 112th Options

Over the past two months, Sound Transit and City staff have jointly engaged in extensive community outreach regarding the six alignment options that Sound Transit has proposed for their preferred light rail route along 112th Avenue. City staff has been consistent and clear throughout this effort with the public and with Sound Transit that the City's preferred alignment continues to be B7. City staff have helped with engaging the community on the 112th alignments because the Sound Transit Board will choose which of the options will go forward in the environmental review process on July 22. The past two months have been the critical window of opportunity for this community outreach effort.

The purpose of conducting the community outreach was:

- to increase awareness of Sound Transit's new preferred alignment along 112th Avenue,
- to provide information about the six alignment options,
- to ensure that those potentially affected by the proposed alignments had an opportunity to register their comments and concerns, and
- to explore which of the six alignment options might be the best fit for the community in the event 112th Avenue is us ultimately selected as the preferred alignment.

Outreach Activities

The outreach effort has consisted of the following activities:

1. Interviews with leaders from affected neighborhood and homeowner associations were conducted by Bellevue's Neighborhood Outreach and Mediation staff. Meetings were held with Surrey Downs, Bellefield Residential Park, Bellecrest, Carriage Place and Carriage Hills Condominiums, and Enatai. Sound Transit staff joined Bellevue staff in meetings with the Bellevue Athletic Club. Follow-up briefings with Sound Transit were held with stakeholders that requested them.
2. Sound Transit staff went door-to-door in Surrey Downs, the Bellefields Residential Park, and the condos on 112th Avenue SE in mid-May to distribute flyers about the upcoming meetings and to encourage people to attend.
3. Neighborhood drop-in sessions at the Tully's on Main Street were staffed by Sound Transit and City of Bellevue over three days in late May and early June. There were drawings of the different options for 112th as well as comment forms.
4. A series of three workshops was held at City Hall beginning in mid-June and running through early July. The first workshop was an open house/presentation format that provided a description about each of the options under consideration for 112th and asked

people for their questions and concerns about specific options for 112th in general. The second workshop was a panel format to present the findings of the Concept Design Report prepared by Sound Transit's consultant team. There was a question and answer component to the presentation. The third workshop used an electronic audience response system and small group format to discuss the differences among the various options and indicate preferences, if any, of participants. This was not intended to be and should not be construed as a scientific survey or statistically valid poll. While the audience response system results give information regarding the preferences of that particular audience of about 95 citizens, its primary function was to help generate discussion about why people preferred aspects of one option over another.

5. The last activity was an open house at Bellevue City Hall on July 14th to present the feedback received to date, answer questions about the options and the process, and collect any additional comments.

Summary of feedback

With the exception of Citizens for Responsible Transit, a mixed group of primarily Enatai residents, all participating neighborhood stakeholder groups – Surrey Downs, Bellecrest, Bellefield, Carriage Hills, Carriage Place, and Friends of Enatai – expressed strong preference for a B-7 East Link route. Despite this preference, most participants agreed to participate in discussions of the 112th Avenue alignment, without giving up their preference for B-7. At the same time, there were also individuals who supported the B2M alignment in attendance at the workshops.

In considering the various options and impacts of the 112th Avenue alignment, the neighborhood leaders expressed the strongest concerns about: noise, access, traffic circulation, visual impacts, construction impacts, and loss of neighborhood ambience. Concerns about impacts on Surrey Downs Park and the general green appearance of 112th Avenue also were frequently raised. Acquisition figured into the discussion, but in different ways for different residential developments. Residents of Bellefield, on the southern end of 112th, opposed any acquisition within their neighborhood, while residents of the Carriage Hills and Carriage Place condominiums on the northern portion of the route leaned toward total acquisition.

Similar themes were echoed throughout the various outreach efforts, including workshops, and in the correspondence received by staff. Residents were most concerned about: (1) noise and the ability of Sound Transit to mitigate noise adequately; (2) access to local streets, and limitations on turning movements from streets and driveways; (3) traffic impacts as vehicle traffic competes with train travel on 112th and/or finds new routes; (4) alteration of the visual quality of the neighborhood; (5) noise, dirt and traffic impacts during the construction period, and; (6) perceived impacts on both the enjoyment and value of private property.

The third and final workshop solicited input from the audience of approximately 95 participants on their preferences among the various alignment alternatives using an audience response system. This group, while not a statistically valid sample, expressed some initial preferences between the alternate alignments.

1) In the section between the Bellevue Way/112th "Y" and SE 15th, stronger support for an east side running alignment rather than center running alignment.
2) In the area between SE 6th and the proposed tunnel, the east side retained cut alignment and west side running alignment received some support (with the retained cut garnering slightly more support) while there was little support for a center running alignment.

3) There was little support for the two alignments with elevated sections serving the at-grade downtown alignment.
4) There was a preference for a 2nd Street tunnel rather than a Main street tunnel.

Sound Transit staff also prepared a summary (Attachment 6) of the community input collected during the 112th Avenue workshops.

Many property owners directly abutting 112th Avenue have expressed their preferences. The Bellevue Athletic Club (BAC) strongly opposes the retained cut and center running alignments, which the BAC believes would have significant adverse impacts on their property. Of the 112th Avenue alignments, the BAC favors the west side running. Overall, the BAC favors B7.

The City also received correspondence from the Presidents of both the Carriage Hills and Carriage Place condominiums located on 112th Avenue. They both expressed a preference for the alignment on the west side, and indicated that a majority of the owners in their associations shared this opinion. They stated that the other alignments would have such severe impacts on their properties that the west side alignment, which would actually displace them, would be preferable. Overall, B7 is their first preference.

Hospital Station Options
City and Sound Transit staff have also been working collaboratively on four Hospital Station design options, in response to the Sound Transit Board of Directors' April 22 motion. This motion called for an evaluation of station location design variations. As a result, four options have been identified and evaluated:

- Option A – North of Northeast 8th Street (as assumed in the East Link Draft Environmental Impact Statement), an elevated station immediately north of Northeast 8th Street in the Burlington Northern Santa Fe Railroad right of way (BNSF).
- Option B – Span Northeast 8th Street, an elevated station spanning Northeast 8th Street in the BNSF corridor with station access both north and south of Northeast 8th Street.
- Option C – South of Northeast 10th Street, an elevated station approximately 300 feet north of Northeast 8th Street in the BNSF corridor.
- Option D – At-grade north of Northeast 10th Street, an at-grade station approximately 800 feet north of Northeast 8th Street in the BNSF corridor.

The *Evaluation of Hospital Station Options* report was provided to Council on June 24, 2010. On July 6, Sound Transit staff presented a comparison of the options, including differentiating factors such as potential business displacements, access to hospitals and other nearby businesses and residences, and other considerations. Council further discussed the options at the July 12 Study Session.

As with the 112th Avenue options, the Sound Transit Board of Directors is expected to select a preferred alternative for the Hospital Station on July 22.

Community Outreach – Hospital Station
City staff collaborated with Sound Transit over the last month to meet with the community regarding the four options for the location of the Hospital Station. The purpose of the outreach was to increase awareness of the location options being evaluated for the Hospital Station and to gather comments and concerns from businesses, residents and potential users who may be impacted by the station location.

Outreach efforts included meetings with interested property owners, businesses, and the representatives of Group Health, Overlake Hospital Medical Center and Seattle Children's Hospital. An open house was held at Bellevue City Hall on July 13 that outlined the station location options and the results of the walking analysis conducted by City staff and provided an opportunity to answer questions about the station location options and collect additional comments.

Options A and B were favored by many stakeholders because the location on or straddling NE 8th Street. In addition, Option B would provide easy access to the Wilburton area by not requiring users to cross NE 8th St. Option C was seen as the best alternative by some stakeholders for serving the medical/hospital district, if an additional proposed pedestrian walkway could be provided on an easement at the north end of the Whole Foods site. However, the proximity of Option C to businesses to the east of the station site was seen as detrimental because it results in the permanent loss of half of the 140 parking spaces. The closeness of Option C to Lake Bellevue was also seen as detrimental because of potential soil and drainage impacts. In the event that the additional pedestrian walkway could not be provided, then Option C was seen as less desirable because it was further away from NE 8th St than Options A and B and therefore less visible.

Most of the feedback received indicated that Option D was the least promising alternative due lack of visibility and distance from the Wilburton area and the medical facilities, as well as the proximity to nearby condominiums. One exception was that Option D was favored by Bellevue Network on Aging because of its at-grade configuration not requiring the use of elevators to access the platforms.

Upcoming Milestones

On July 22, the Sound Transit Board will identify its preferred 112th options for more detailed study in a Supplemental Draft Environmental Impact Statement (SDEIS). The Board will also select a Hospital Station option for further design.

Sound Transit is expected to release a supplemental Draft Environmental Impact Statement in fall 2010. This will include a detailed impact analysis for the B2M option from I-90 to Main Street, the C9T and C11A downtown options, the Hospital Station (if different than the current preference) and design variations incorporated into the Bel-Red Corridor, including a retained cut 120th Station and the revised Overlake Village Station adjacent to the SR 520 corridor.

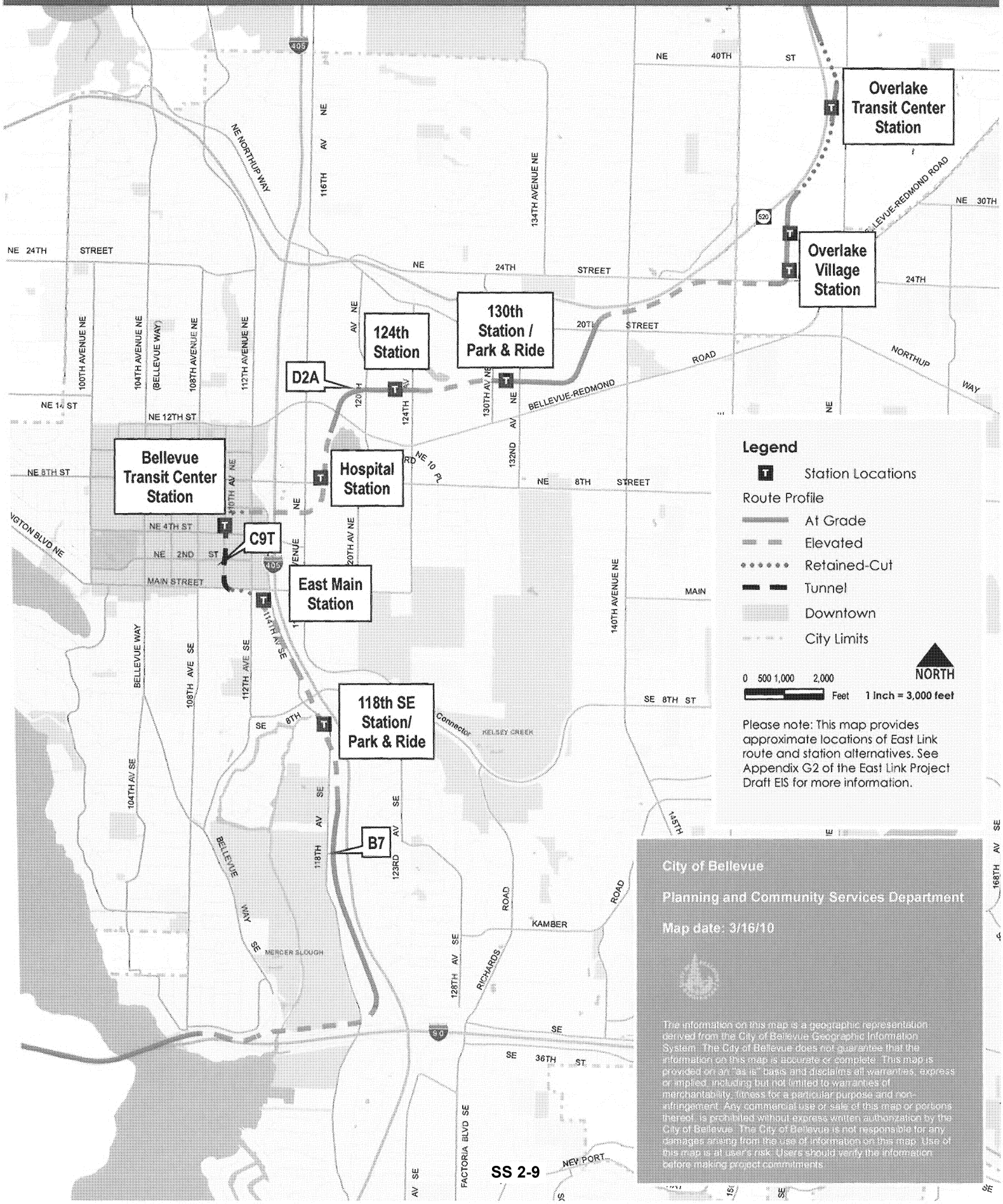
ATTACHMENTS:

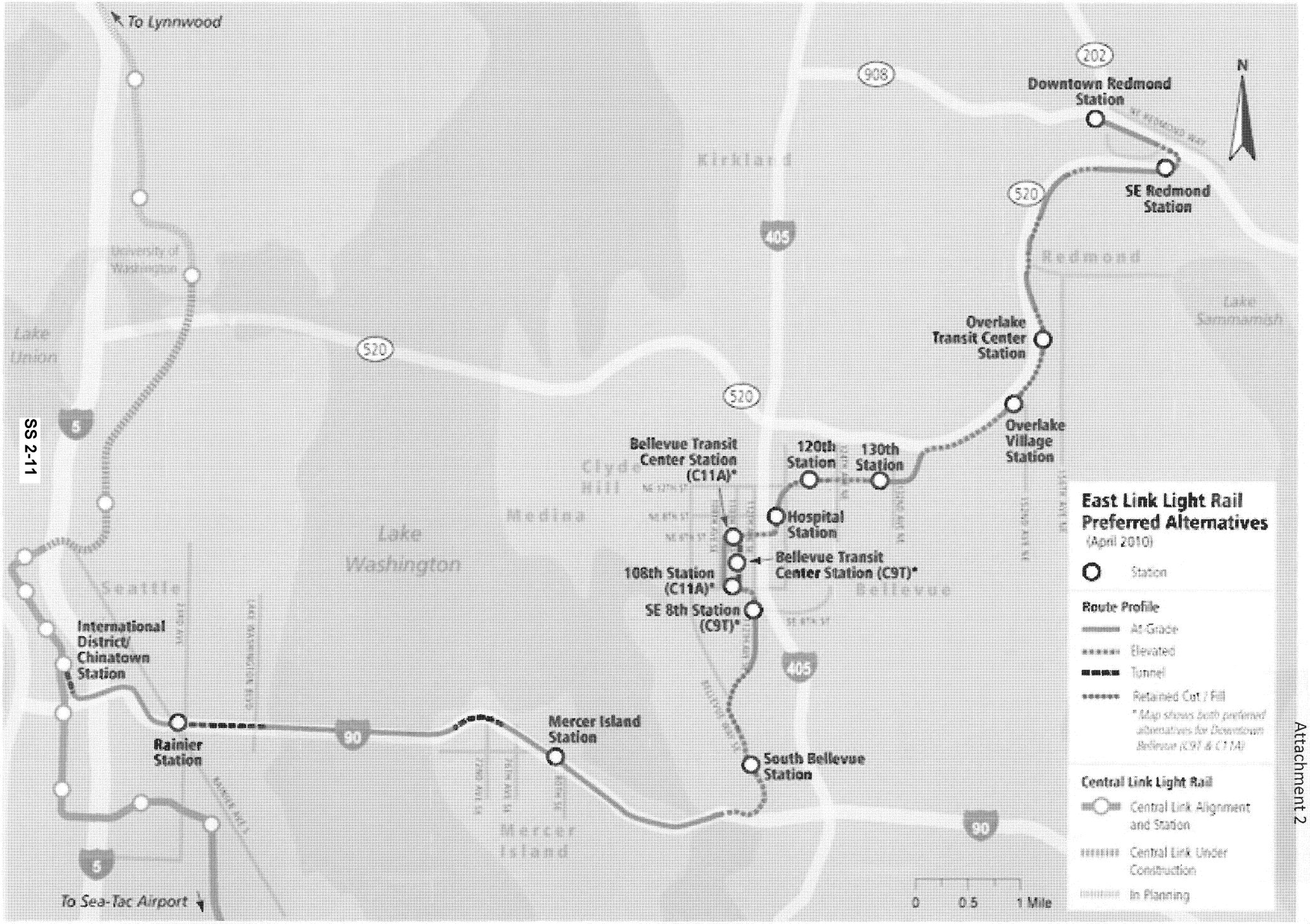
1) Bellevue's Preferred East Link Light Rail Route Map (March 2010)
2) Sound Transit's East Link Project Preferred Alternative Map (April 2010)
3) Summary of Peer Review of the DEIS B7 Alignment Analysis
4) Summary of South Bellevue Station Alternative Location Analysis
5) Summary of East Link Noise Analysis Peer Review
6) East Link Light Rail 112th Avenue Options Community Workshop Summary Report

PROVIDED UNDER SEPARATE COVER (Available online at: http://www.bellevuewa.gov/light-rail.htm)

1) East Link Noise Analysis Peer Review Final Report
2) South Bellevue Station Alternative Location Analysis Final Report
3) Peer Review of the DEIS B7 Alignment Analysis Final Report

Bellevue's Preferred East Link Light Rail Route
B7-C9T-D2A





SS 2-11

Attachment 2

Executive Summary
of the
City of Bellevue's Peer Review of Segment B7 of Sound Transit's East Link Light Rail Project

Bellevue, Washington

Prepared for:

CITY OF BELLEVUE

BLVX000000069

Prepared by:

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July 2010

1.0 Introduction

In March 2010, the Bellevue City Council (Council) updated its routing preference for Segment B (I-90 to SE 6th Street) of Sound Transit's East Link Light Rail Transit (LRT) Project to the B7 alignment. Council members have numerous questions about Sound Transit's data and analysis on the B7 alignment and are seeking an independent review of the analysis to evaluate its accuracy and completeness. Additionally, the Council would like to identify the critical areas for additional design and study, were B7 to be advanced for further analysis and engineering.

1.1 Purpose

David Evans and Associates, Inc. (DEA) has been tasked to conduct a peer review of Sound Transit's environmental analysis and conceptual engineering of the East Link B7 alternative to evaluate the sufficiency of analysis and identify areas for additional analysis and refinement.

1.2 Approach

The overall work approach, as directed by the City, was as follows:

1) Review the East Link Draft Environmental Impact Statement (DEIS) methodologies for individual discipline areas for best practices and consistency with industry standards. Review assumptions for reasonableness and consistency with local practices and industry standards. Industry standards included FTA environmental procedures as codified in CFR 49, Part 622 – Environmental Impact and Related Procedures. These procedures incorporate by reference Title 23 CFR – Federal Highway Administration (FHWA).

2) Review data sources for accuracy and completeness.

3) Review B7 conceptual engineering plans included in the DEIS and assess constructability of the design.

4) Evaluate overall sufficiency and completeness of the body of the B7 analysis for this stage of the project; compare to evaluation of other alignments in the DEIS and studies from other projects developed for the alignment selection stage of the environmental process.

5) Identify critical areas for additional analysis and refinement.

2.0 Conclusions

2.1 Draft Environmental Impact Statement

2.1.1 Traffic

The methodology used to analyze impacts in Chapter 3 Transportation Environment and Consequences was consistently applied to the B Segment Alternatives. The methodology resulted in three areas where the resulting analysis of the alternatives was either more conservative or less conservative.

Station Sizing

Park-and-Ride stations were not sized to match forecast ridership, rather they were sized based upon the development potential of the site (existing or acquired). This resulted in the South Bellevue Park-and-Ride being smaller than anticipated demand and the 118th Avenue Park-and-Ride being larger than anticipated demand. This method, while consistent, resulted in station costs that were not proportional to ridership forecasts for each station.

Station Impacts to Arterial Streets

The methodology used to evaluate station area arterial and intersection impacts was based on the station size (provided parking) not the forecast number of auto trips generated. This method results in a traffic forecast smaller than the ridership demand model for South Bellevue (station size is smaller than forecast demand) and a traffic forecast larger than the station demand (station size is bigger than forecast demand) at 118th Avenue. This results in underestimating impacts at South Bellevue and overestimating impacts at 118th Avenue.

Arterial and Intersection Operations Analysis

The HCM methodology used to evaluate intersection operations does not address observed queue spillback impacts on both South Bellevue Way and SE 8th from adjacent intersections and freeway ramp meters. This effect is more pronounced at South Bellevue, but occurs at SE 8th as well. The HCM methodology does not provide a worst-case analysis of the impacts of increased traffic on the arterials at these locations.

Intersection Mitigation

No mitigation is proposed for the South Bellevue Park-and-Ride access. The proposed mitigation at SE 8th is based upon an outdated intersection plan that does not reflect recent changes to I-405. The HCM methodology is limited as it applies to the analysis of intersections because it does not take into account the mitigation of additional queuing at either location.

2.1.2 Other Resources

DEA's review finds that Sound Transit's East Link DEIS fairly compares the B7 alignment with other Segment B alternatives. The technical approach and methodologies used to evaluate the environmental impacts of B7 are generally consistent with professional standards in the various disciplines. However, several specific items were identified as lacking, which DEA would typically expect in an EIS analyzing a project as large as East Link, and that, in most cases, are required by various guidance documents. These items are identified below:

Land Use – The DEIS did not highlight major differences in consistency with regional and local plans, goals, and policies between the No Build and Build Alternatives.

Visual and Aesthetic Resources – The DEIS did not provide a cross-walk between the standard FHWA numerical rankings and the visual quality categories used in the DEIS, so that the reader could understand what constitutes a significant visual impact.

Ecosystem Resources – The DEIS did not clearly explain and define the footprint of the project so the reader can easily understand what constitutes a permanent versus a short term impact.

Historic and Archaeological Resources – The archaeological field survey conducted as part of the DEIS did not include any of the publicly accessible portions of Mercer Slough adjacent to the B7 alignment.

2.2 Conceptual Engineering

DEA's review finds that the Conceptual Design drawings contained in the East Link DEIS exhibit the level of design and detail which would be expected for a light rail transit line at this stage of project development. Further, the level of design work appears similar between the B7 and B3 alignments. DEA's review of Sound Transit's Capital Cost Estimate for B7 finds that the estimate is supported by a Basis of the Estimate which explains the underlying assumptions and estimating methodology and provides a fair comparison of the estimated costs of the B7 and B3 alternatives. DEA finds that Exhibit 2-24 "At-Grade Track with Planned Trail in Former BNSF Railway Right-of-Way" that accompanies the description of B7 in Chapter 2 of the DEIS does not accurately represent the typical conditions found within the BNSF corridor and that a more accurate representation is presented in drawing B7 – KX02 found in Appendix G-1 of the DEIS. DEA's constructability review finds that B7 will be complicated by the construction of the elevated trackway structures in Mercer Slough and construction of extensive retaining structures and substantial regrading needed to accommodate the trackway and trail within the existing BNSF corridor which has limited access.

South Bellevue Station Alternative Location Analysis, June 2010

EXECUTIVE SUMMARY

This study considered the feasibility of having a station along Sound Transit's light rail B-7 alignment in the vicinity of Bellevue Way SE. The B7 alignment as currently defined does not have a station in this area.

The station includes four major components: light rail platforms; bus transit station including active and layover bays; parking garage for 1,400 cars and Access van area including drop off and layover. In addition to these major components the station will have all the support function spaces typically found in Sound Transit's Link Light Rail, Regional Express Bus and parking garage transit facilities. Pedestrian connections including vertical circulation and sky bridges are provided as required by the relationship of the primary function areas. There will be vehicular access for both buses and privately owned vehicles from Bellevue Way SE and access for bicyclist and pedestrians from existing trails and other city streets.

Vehicle access to the station will be through the use of right turns off Bellevue Way to avoid the need for a signalization at Bellevue Way / SE 30th Street intersection. This access will be provided through the use of grade separation and flyover ramps as required. Local vehicle access to SE 30th; 113th Avenue SE and the Sweyolocken boat launch and city pump station is maintained although turning movements may be modified in some cases.

Initially six alternatives were screened and two were considered for additional analysis. Alternative A-2 is located on the west wide of Bellevue Way SE between 113th Ave SE, and is south of SE 30th Street. Alternative C is situated over the I-90 / Bellevue Way SE interchange ramps.

Alternative A-2:

- Requires acquiring 13 residential parcels, 12 with houses.
- Impacts neighborhood character by moving residential edge from WSDOT right-of-way to 113th Ave. SE
- Significant excavation in hillside would result in high traffic loads during construction.
- Tucked into hillside, minimal viewshed impact from adjacent residences.
- Reasonable vehicular access to and from Bellevue Way SE.

- Moderately long pedestrian connections between bus and rail platforms.
- Very long pedestrian walk from north end of garage to rail platforms
- Approximate Station Cost: $170m

Alternative C:

- Requires acquiring at least 1 residential parcel.
- Entire facility is over the top of active WSDOT I-90 ramps resulting in significant viewshed impact from adjacent residences.
- Facility would be constructed on poor soils adding unpredictability and expense.
- Located on WSDOT right-of-way; approvals may result in substantial unplanned costs.
- Requires phased construction over active ramps causing traffic problems during construction.
- WSDOT would classify the structure over the ramps as a tunnel. Stringent ventilation, lighting and fire life safety measures would be required.
- Proximity to Mercer Slough Park will result in more mitigation.
- Blockage of single exit that serves facility would shutdown facility for vehicles.
- Access from Bellevue Way will require grade separation of the northbound lanes at the SE 30th Street Intersection.
- Approximate Station Cost: $210m

For comparison, the costs for the B2M South Bellevue Station located at the existing Park & Ride is approximately $130 million. The costs for the B-7, 118th Ave SE Station is approximately $114 million.

SOUTH BELLEVUE LRT STATION STUDY

ALTERNATIVE A-2

JULY 14, 2010

kpff

JULY 14, 2010

SOUTH BELLEVUE LRT STATION STUDY
ALTERNATIVE C

CITY OF BELLEVUE WASHINGTON

THE GREENBUSCH GROUP, INC.

DATE: July 13, 2010

TO: *City of Bellevue Mayor Davidson, Deputy Mayor Lee*
City Council Members Balducci, Chelminiak, Degginger, Robertson, and Wallace

FROM: *Julie Wiebusch*

RE: *Summary of Acoustical Peer Review B2M Conceptual Design Report*

Transmitted by: ☐ Mail ☒ Delivery ☐ Fax ☐ E-mail

The Conceptual Design Report is a screening document for six B2M options, to assist in identifying the preferred alignment. The Report identifies potential noise impacts for each option, the level of impact and various mitigation approaches. The Report concludes that all options can be mitigated to FTA criteria. The selected option will be further studied for the SDEIS.

This Peer Review examined the following elements:

- Location of sound measurements to establish the pre-project ambient.
- Sources of potential noise associated with the project.
- Methodology used in the prediction of project noise.
- Elements included in the predicted project noise levels.
- Potential mitigation proposed
- Resulting mitigated noise levels for each of the proposed alignments.

The screening process, in general, identified appropriate types of mitigation. This Peer Review concludes:

- Prediction methodology appears to be consistent with industry standards.
- Sounds associated with crossing bells and train horns were averaged over a 24-hour period. An average does not fully reveal the noise level the community experiences.
- Wheel impact at crossover switches and discontinuous sections of track were also averaged.
- Reflected sound off of noise walls, retained cuts, etc. was not included.
- Sound Transit is applying knowledge gained at Central Link to East Link design.
  - Louder train data has been used in the model.
  - Sound levels from bells and track irregularities have been included.
- Michael Minor has included the following mitigation in his evaluation:
  - All ST trains have sound reducing wheel skirts.
  - ST will include lubrication on all curves where wheel squeal is identified.
  - Sound walls, either at trackside or along the right-of-way
  - "Special" noise reducing trackwork at the crossovers.
  - Retained cuts will provide natural berming.
  - Residential Sound Insulation (last resort)

The Study states that all interior "impacts" will be mitigated. Very little effect is gained from sound walls for elevated properties that have a view over the top of the wall. Sound Insulation (acoustical windows, added insulation, ventilation, etc.) is an appropriate approach for these units and is listed as the mitigation for several upper floor units on multi-

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family dwellings. However, exterior impacts will not be mitigated for these units. The exterior sound level will not be reduced for:

- exterior decks or roof decks facing the alignment
- Open windows/doors facing alignment.
- Potential infiltration through stove hood vents/dryer vents, etc.

An evaluation of the B7 alignment is not included in this Peer Review. Elements included in the original DEIS do not reflect current conditions. Modifications to I-405 have occurred, which may affect the ambient conditions. The DEIS study was also based on train noise data from Portland Light Rail. Noise measurements of the operational trains along the Central Link corridor are around 4 dBA louder than originally predicted. The DEIS model assumed the lower train sound levels, the SDEIS will be used to further review this alignment with current conditions.

East Link Light Rail

112th Avenue Options
Community Workshop Summary Report

Workshop 1 – June 15, 2010
Workshop 2 – June 29, 2010
Workshop 3 – July 7, 2010

DRAFT

SOUNDTRANSIT
RIDE THE WAVE

CITY OF BELLEVUE WASHINGTON

Workshop Overview

Sound Transit and the City of Bellevue hosted community workshops on June 15, June 29 and July 7, 2010 to present information and gather community input on the six design options for light rail on 112th Avenue in Bellevue. All workshops were held from 6:30 p.m. to 8:30 p.m. at Bellevue City Hall.

Format

Workshop 1 – Understanding 112th Avenue Options and Community Interests

The purpose of workshop 1 was to introduce the new 112th alignments to the community and gather community input. The workshop began with a 30 minute open house for participants to view drawings of the options, speak with staff and provide initial comments. Next, Sound Transit and the City provided a presentation describing the decision process, reasons for re-evaluating the preferred alternative, a brief overview of the six 112th Avenue alignment options, and highlighted next steps. After the presentation, attendees participated in break-out sessions. During these sessions, technical staff from Sound Transit and the City of Bellevue reviewed the options and took questions and comments on flip charts.

A total of 102 community members signed in.

Workshop 2 – Evaluating the 112th Avenue Options

The purpose of Workshop 2 was to present the evaluation results in the *112th Avenue Alignment Options Concept Design Report*, which provides information about each of the design options being considered for 112th Avenue and will help decision-makers identify an option that balances costs and potential impacts.

From 6:30 p.m. to 8:30 p.m. Sound Transit staff presented the key findings of the Concept Design Report. Presentation topics included cost, visuals (conceptual illustrations), transportation, displacements, noise, wetlands, park, and construction impacts. A question and answer session followed the presentation of each topic area.

Information boards were on display for the duration of the meeting in an adjacent room in an open house format. Technical staff were available to help review the 112th Avenue options and take public comment.

A total of 96 community members signed in.

Workshop 3 – Identifying Community Preferences on 112th Avenue

The third workshop provided community members an opportunity to compare and analyze key features of the six East Link 112th Avenue design options, share preferences for light rail options on 112th Avenue, and engage in small group discussions with project staff and community members on the key features and trade-offs for each option under review.

The workshop utilized a combination of formal presentation and small group discussions. During the presentation, Sound Transit staff presented a slide show containing illustrations of different sections and viewpoints of the 112th Avenue alignments. Participants indicated their preferences at each viewpoint using an Audience Response System. The system was employed as another way of gathering input and taking a pulse of community views. After responding to a set of questions through the Audience Response System, participants discussed key features, trade-offs and preferences in small groups.

Information boards were on display in the concourse throughout the workshop where technical staff were available to help review the 112th Avenue options and take public comment.

A total of 105 community members signed in.

Public Comments

Sound Transit received verbal comments at the workshops in small group discussions and during the open house portion of the workshops. Participants also provided written comments using workbooks and comment forms as well as emails to project staff members. The comments summarized below were submitted at the workshop or by email or mail following the meeting. Verbatim transcriptions of all comments are available upon request.

The following highlight the type of comments provided at the workshops, and in comment forms and emails.

Workshop #1

- No clear preferred alignment, but common likes and dislikes included:
    - More support for a retained cut / grade separation along 112th Avenue (Option 4), though some concerns exist about safety and visual impacts
    - Concerns regarding property acquisition of a westside running alignment, though some preference for the buffer that would be provided for the adjacent neighborhood. (Option 2)
    - Preference for NE 2nd Street portal into downtown (Option 3 and 4)
    - Little support for the at-grade alignment on 108th (Options 5 and 6)
    - Little support for an elevated track (Options 5 and 6)
    - Little support for a center-running alignment (Options 1, 3, 5)
- Opposition to at-grade crossings
- Mixed support for proposed SE 8th Street Station

- Concerns about traffic impacts, especially with at-grade alignments
- Concerns about noise in residential neighborhoods, especially from warning bells and from track "wheel squeal," especially on elevated structures
- Concerns about access restrictions to and from streets connecting with 112th Avenue
- Desire for more information about cost and associated tradeoffs between different options
- Concerns about impacts to community assets such as Winters House, Blueberry Farm, Mercer Slough and to businesses along the alignment
- Concerns about inadequate parking at stations and therefore, parking impacts on surrounding neighborhoods
- Concerns about visual impacts to homes and businesses on 112th Avenue
- Concerns regarding disruptions from construction, especially noise
- Some interest in creating a hybrid alternative with the best features of the six options under consideration
- Notwithstanding Sound Transit's preference for the 112th Avenue route, continued though not unanimous support for the B7 alternative

Workshop #2

The following highlight questions provided during the question and answer portion of the presentation as well as comments provided via comment forms.

Visual

- Interest in seeing rendering of stations, SE 8th in particular
- Desire for analysis of visual impacts of noise walls
- Questions about safety and visual impact of barriers with retained cut options

Cost

- Interest in cost comparison between the 112th Avenue and B7 alternatives
- Request for cost information to be presented as absolutes instead of as cost reductions

Transportation

- Question about traffic capacity/level of service on 112th Avenue
- Concerns about neighborhood access as a result of right-in/right-out restrictions (specific questions asked about SE 4th St, SE 1st St)
- Concerns about safety at track crossings and along at-grade alignments
- Concerns about emergency vehicle and commercial vehicle access on 112th Avenue

Displacements

- Concern about level of uncertainty for property owners until final decision on alignment
- Concerns about negative impact on property values, especially on homes that Sound Transit will not acquire for the project
- Legal questions about disclosure requirements for property sales
- Questions about impact of business displacements on city tax revenue
- Questions about the property acquisition process and Sound Transit communication with property owners regarding property acquisitions

Noise

- Questions about frequency of trains and resulting noise
- Questions about noise measuring methodology, estimates and allowable noise levels
- Desire for information about available mitigation strategies and effectiveness
- Interest in using cost savings from less expensive alternatives for additional noise mitigation
- Request for indoor and outdoor noise measurements, as well as measurements during winter months

Wetlands and Parks

- Concerns about impacts to Surrey Downs Park and wetlands
- Questions about effect of high water table on construction

Construction Impacts

- Questions about duration of construction, especially the differences between alignment options

General Comments

- Interest in workshop focused on B7
- Questions about the decision-making process and coordination between Sound Transit and the City of Bellevue
- Notwithstanding Sound Transit's preference for the 112th Avenue route, continued though not unanimous support for the B7 alternative
- Questions about City of Bellevue representation on the Sound Transit Board
- Interest in an alignment that best supports future expansion of light rail

Workshop #3

The following highlight the type of comments provided in comment forms submitted at the workshop and summary of participant responses to the small group discussions.

Tunnel Options (Options 1-4)

- More support for Option 4 and for an east-running alignment in general, although some requested starting the retained cut south of SE 8th Street in order to mitigate SE 8th traffic impacts. Supporters of Option 4 indicated their preference for Option 4 due to the following:
    - Fewer residential, business, noise, visual, and traffic impacts
    - Preserves vegetation in median on 112th Avenue
    - Support of below grade/retained cut design
- Some support for west-running alignment. Those in support of this alignment commented that it would have fewer impacts to the Bellevue Club and hotel properties along 112th Avenue.
- Least support for a center-running alignment (Options 1 and 3), though cost-savings of Option 3 was viewed as a benefit
- Opposition to proposed SE 8th Street Station
- Opposition to at-grade crossings
- Concern regarding high number of displacements and proximity of light rail to neighborhoods for Option 2

- Concerns about noise and visual impacts

At-Grade Options (Options 5 and 6)

- Little support for the at-grade alignment in downtown Bellevue, including a lack of participation using the audience response system and during the table discussion
- Concern regarding segment of elevated track needed to reach 108th Avenue
- Concern about traffic impacts
- Concern about pedestrian safety
- Concern regarding the high number of displacements and access impacts at SE 4th Street (Option 6)

Tunnel Location (Main Street or 2nd Street)

- More support for a NE 2nd Street portal into downtown. Supporters indicated their preference for the 2nd Street Portal due to the following:
    - Fewer impacts to neighborhoods, businesses, and parks
    - Less disruptive to traffic
    - Provides for a better pedestrian experience
    - Avoids impacts to Main Street character and access
- Those in favor of the Main Street location commented that it was a less costly option and that it allowed for a westside running alignment

General Comments

- Concerns about traffic impacts on 112th Avenue and neighborhood access
- Concerns about noise, safety, and visual impacts
- Concerns about crossing gates, bells, and signals
- Concerns about impacts to wetlands from stormwater runoff

- Requests for full noise mitigation, including noise insulation and window replacement, use of quieter trains or rubber wheels, sound absorbing barriers, and below grade track design
- Some interest in considering an alignment on 116th Avenue instead of 112th
- Residents at Carriage Hills Condominiums expressed specific concerns with any center or east side running alignment due to visual, noise and access impacts as well as the affect to property values
- Notwithstanding Sound Transit's preference for the 112th Avenue route, continued though not unanimous support for the B7 alternative

Audience Response System Results

Sound Transit staff presented a slide show containing illustrations of different sections and viewpoints of the 112th Avenue alignments. Participants indicated their preferences for key features of each viewpoint using an Audience Response System. However, some participants indicated that the choices were not presented clearly enough in order to make an informed response, while others declined to participate in the exercise. Other considerations include that the results should be viewed as representing only a small segment of the community and not a community "vote." The system was employed as another way of gathering input and taking a pulse of community views. Following is a summary of participant responses.

1. What is your preference looking northeast from Bellevue Way and 112th Ave SE?

	Responses (percent)	Responses (count)
Side Running	62.24%	61
Switch to Center Running	21.43%	21
No preference	16.33%	16
Totals	100%	98

2. What is your preference looking South at 112th Ave SE and SE 15th St?

	Responses (percent)	Responses (count)
At grade to Center Running	7.37%	7
Side Running	66.32%	63
Grade Separated to Center Running	15.79%	15
No preference	10.53%	10
Totals	100%	95

3. What is your preference looking North at 112th Ave SE from SE 6th St?

	Responses (percent)	Responses (count)
West Side Running	37.11%	36
Center Running	7.22%	7
Retained Cut	53.61%	52
No preference	2.06%	2
Totals	100%	97

4. What is your preference looking North East from SE 1st Place?

	Responses (percent)	Responses (count)
Center Running to At Grade Downtown	27.91%	24
Westside Running to At Grade Downtown	47.67%	41
No preference	24.42%	21
Totals	100%	86

5. Which At-Grade option do you prefer?

	Responses (percent)	Responses (count)
Center Running to At Grade Downtown	25.81%	16
Westside Running to At Grade Downtown	54.84%	34
No preference	19.35%	12
Totals	100%	62*

*Note – some participants abstained from selecting a preference for the at-grade alternatives in downtown Bellevue.

6. What is your preference looking Northeast from SE 1st Place?

	Responses (percent)	Responses (count)
Center Running to Main St Tunnel	33.33%	24
Westside Running to Main St Tunnel	56.94%	41
No preference	9.72%	7
Totals	100%	72

7. What is your preference looking Northeast from SE 1st Place?

	Responses (percent)	Responses (count)
Center Running to 2nd St Tunnel	16.25%	13
Retained Cut to 2nd St Tunnel	73.75%	59
No preference	10%	8
Totals	100%	80

8. What is your preference looking Northwest at 112th Ave and 2nd Street?

		Responses (percent)	Responses (count)
Center Running to 2nd St Tunnel		11.11%	8
Retained Cut to 2nd St Tunnel		80.56%	58
No preference		8.33%	6
	Totals	100%	72

9. Do you prefer...?

		Responses (percent)	Responses (count)
Main Street Tunnel		30.38%	24
2nd Street Tunnel		67.09%	53
No Preference		2.53%	2
	Totals	100%	79

10. Which Tunnel option do you prefer?

		Responses (percent)	Responses (count)
Center Running to Main St Tunnel		4.82%	4
Westside Running to Main St Tunnel		37.35%	31
Center Running to 2nd St Tunnel		3.61%	3
Retained Cut to 2nd St Tunnel		54.22%	45
No preference		0%	0
	Totals	100%	83

Next Steps

The Sound Transit Board is expected to use both public input and the technical report findings to identify the preferred 112th Avenue design option at its meeting on July 22, 2010. Sound Transit will hold its last public meeting as part of the outreach for the 112th Avenue alignments at an open house on July 14. In addition, a City of Bellevue City Council briefing is scheduled for July 19.

Sound Transit will release a Supplemental Draft Environmental Impact Statement (EIS) in the fall of 2010, which will evaluate new alternatives developed since publication of the Draft EIS in late 2008, including the preferred 112th Avenue design options.

Sound Transit will release the Final EIS in 2011. The Final EIS evaluates the preferred alternative and all alternatives considered in the EIS, responds to Draft EIS comments and describes proposed mitigation commitments. The Sound Transit Board will make a decision on the project to be built in 2011. Construction will begin in 2014, with service beginning in 2021.