Design & Mitigation Permit Application for
East Link Light Rail Project
120th Station and Spring District

Submitted to:
The City of Bellevue
Development Services Department
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SOUNDTRANSIT

Table of Contents

Figures

Attachments

Acronyms and Abbreviations

BCC	Bellevue City Code
CAC	Citizens Advisory Committee
CDP	Collaborative Design Process
DAVE	Design and Value Engineering Team
DCM	Design Criteria Manual
FEIS	Final Environmental Impact Statement
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
LUC	Bellevue Land Use Code
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
PE	Preliminary Engineering
RLRT	Regional Light Rail Transit
ROD	Record of Decision
SEPA	State Environmental Policy Act
SSDP	Shoreline Substantial Development Permit
TPSS	Traction Power Sub-Station

1.0 Project Planning

1.1 Background – East Link Light Rail Project

Sound Transit (ST) is a regional transit authority created pursuant to RCW 81.104 and 81.112 and authorized to implement high capacity transit systems within its boundaries in Pierce, King, and Snohomish counties. On November 4, 2008, Central Puget Sound area voters approved the Sound Transit 2 plan (ST2 plan), a package of transit improvements and expansions including increased bus service, increased commuter rail service, an expansion of link light rail, and improved access to transportation facilities. (See **Attachment A**)

The expansion of link light rail approved in the ST2 plan includes the East Link Project. The East Link Project extends the light rail system approximately 14 miles between Seattle and the east side of Lake Washington as shown on the attached system plan (see **Attachment B**) and includes 10 stations serving Seattle, Mercer Island, South Bellevue, downtown Bellevue, Bel-Red and Overlake areas in Redmond. The Growth Management Act (RCW 36.70A) provides that regional transportation facilities are essential public facilities and the City has acknowledged this fact through recent revisions to the Bellevue Land Use Code (LUC). Sound Transit is implementing the East Link Project pursuant to its statutory authority and the voter approved ST2 plan.

Since the approval of the ST2 plan in 2008, the City of Bellevue (City) and Sound Transit have been committed to working together in a collaborative manner in order to achieve the shared goals of reducing costs and delivering a quality project on schedule and in compliance with applicable codes and regulations. Consistent with these shared goals, on November 15, 2011, the City and Sound Transit executed two agreements: (1) an Umbrella Memorandum of Understanding (MOU), and (2) a Transit Way Agreement. Taken together, these agreements outline the general terms and conditions for development of the East Link Project in the City. The MOU identified specific funding contributions, joint commitments to develop a collaborative design process and to work together to identify cost-saving modifications, and a commitment by the City to process land use code amendments to accommodate light rail and consolidate the permit process.

On February 28, 2013, as provided in the MOU, the City adopted regulatory changes to the LUC by creating the Light Rail Overlay District (new Chapter 20.25M LUC) that governs permit decisions for “Regional Light Rail Transit Facilities (RLRT Facility).”

On April 22, 2013, the City Council passed Resolution No. 8576 endorsing modifications for inclusion in the Project and approving the alignment location and general profile of the Project for the purposes of Chapter 20.25M LUC**.** As a result of this Council action, RLRT Facilities are now permitted land uses in all land use districts throughout the City. On April 25, 2013, the Sound Transit Board adopted Resolution No. R2013-09 selecting the route, profiles and station locations for the East Link Project, including those modifications identified by the City in Resolution No. 8576.

On June 21, 2013, the City and Sound Transit executed amendments to the MOU and Transit Way Agreement incorporating the modifications. (See Sound Transit Motion No. M2013-27 and City Resolution No. 8596) In addition, the Collaborative Design Process (CDP) included more than 50 technical working group meetings. A complete copy of the CDP Management Plan is included as **Attachment C.**

The process of designing the East Link Project has spanned several years, and extensive outreach to the community; a complete federal and state environmental analysis; and hundreds of public meetings, hearings, and open houses with the cities of Seattle, Mercer Island, Bellevue, and Redmond, neighbors and other stakeholders, as well as numerous Bellevue City Council meetings and actions. A summary of the Community Outreach efforts completed for the Project is provided in **Attachment D** and http://www.soundtransit.org/Projects-and-Plans/East-Link-Extension/East-Link-Extension-document-archive. This site is updated periodically throughout the Project timeline.

The East Link Project is now in the final design stage, and Sound Transit is seeking City approval of multiple Design and Mitigation Permits (DMPs). As provided in Chapter 20.25M LUC, the DMP is the single, consolidated project permit issued by the City in response to an application to develop a RLRT facility or portion thereof. The key elements of the East Link Project that are located within the City's boundaries include approximately 6 miles of new light rail track, 6 stations, and 2 parking facilities, as well as other structures and facilities described in Exhibit C-1 to the MOU. For the purposes of this DMP Application, the term "Project" refers only to those elements of the East Link Project that are located within the City of Bellevue.

As described further below, the Facilities proposed in this DMP Application generally include the portions of the Project from the 120th Station (located just east of 120th Avenue NE) to the west side of 124th Avenue NE (See **Figure 1**). As part of the E335 contract package, the guideway within this segment will be constructed in a trenched (or retained cut/fill) condition, and the Station will be constructed in a retained cut with side platforms. The significant project components considered in this DMP Application include the following:

a. Approximately 0.21 mile of retained cut/fill track guideway.

b. One (1) RLRT Station (120th Station).

c. One (1) Bridge Structure over 123rd Avenue NE

1.2 Environmental Evaluation and Procedures

Sound Transit has complied with both the State Environmental Policy Act (SEPA) and the National Environmental Policy Act (NEPA) by conducting an evaluation of the potential environmental impacts of the East Link Project. On July 15, 2011, Sound Transit issued the East Link Project Final Environmental Impact Statement (FEIS). The Federal Transit Administration

(FTA) issued its Record of Decision (ROD) on the East Link Project on November 11, 2011, and the Federal Highway Administration issued its ROD on November 17, 2011. On March 26, 2013, Sound Transit completed and published the East Link Extension 2013 SEPA Addendum. Copies of these environmental documents have been shared with the City, and are publicly available. As provided in the MOU, the City has agreed to use the East Link Project Environmental Documents for its review and decisions on permit applications related to the East Link Project. Building a Better Bellevue, an association of Bellevue homeowners, residents, businesses and neighborhood groups, challenged Sound Transit's compliance with federal law in a lawsuit filed in the United States District Court for Western Washington. The Court found that Sound Transit's environmental evaluation and analysis was reasonable and that the decision-making was the result of a careful and deliberative process. The Court dismissed this legal challenge on March 7, 2013 (See **Attachment E**).

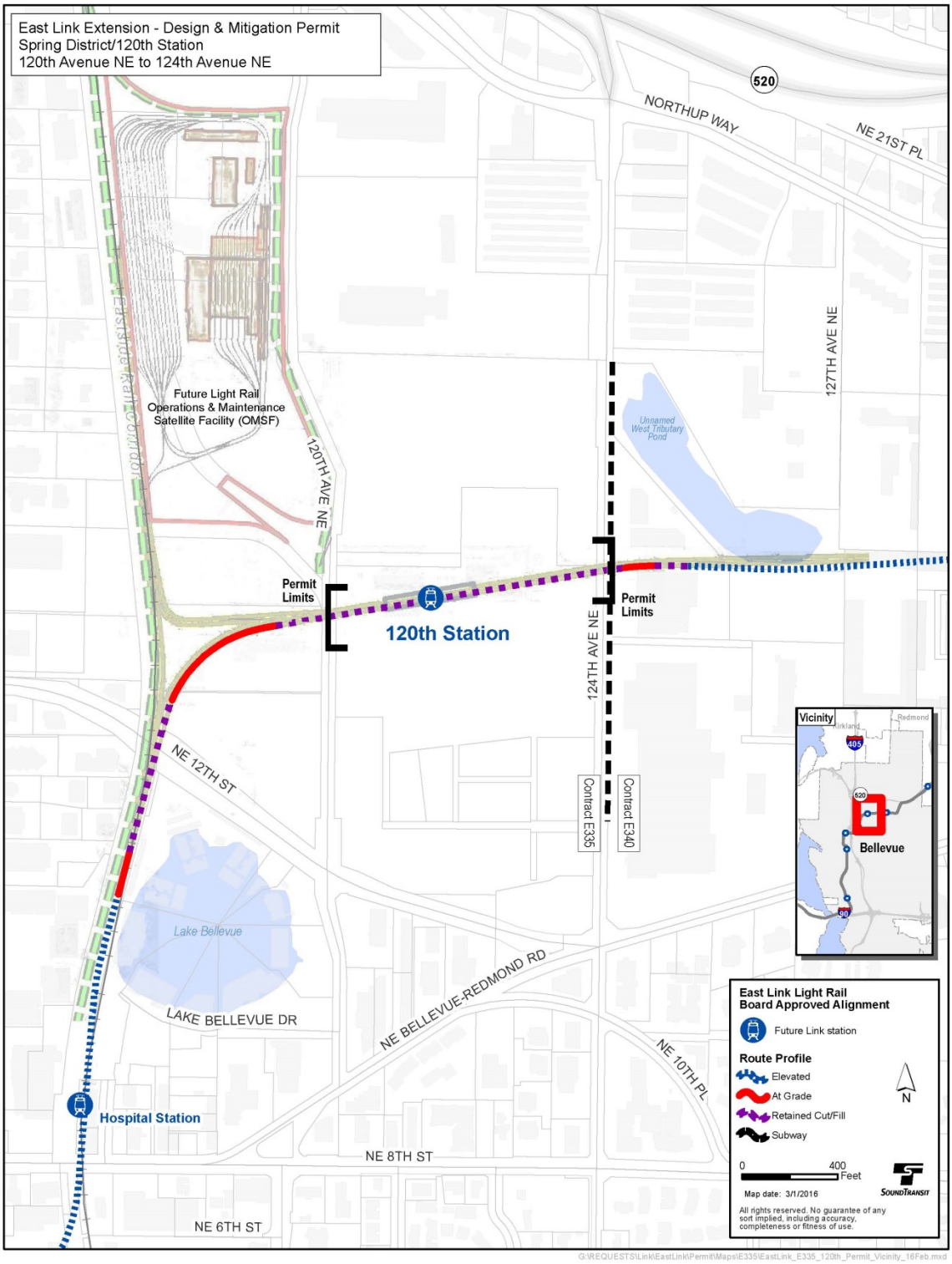
Sound Transit is the "lead agency" for purposes of the Project's compliance with the State Environmental Policy Act (SEPA) RCW Chapter 43.21C. As provided in the MOU, the City agreed that the Project has been subject to procedural and substantive SEPA compliance through issuance of the following environmental documents, which comprise the "Project Environmental Documents," incorporated herein by reference:

a. East Link Project Final Environmental Impact Statement, July 15, 2011
b. East Link Records of Decision (FTA and FHWA, November 2011)
c. SEPA Addendum to the FEIS, March 26, 2013
d. The related documents referenced in the FEIS, RODS, or SEPA Addendum including but not limited to those submitted by the City.

Pursuant to the MOU and WAC 197-11-600 (adopted by reference in BCC 22.02.020), as supplemented by BCC 22.02.037, the parties agreed that the Project Environmental Documents will be used by the City unchanged for its review and decisions on permit applications related to the Project, unless otherwise indicated pursuant to WAC 197-11-600 and BCC 22.02.037.

The FTA, acting as the lead agency under the National Environmental Policy Act (NEPA), issued its ROD in November 2011, which includes the environmental commitments for the Project. See **Attachment F** for a summary of applicable mitigation measures contained in the ROD. **Attachment G** provides references from the FEIS and ROD that respond to the City's land use codes.

Figure 1. East Link Project Vicinity Map – Approximately NE 8th Street to 124th Avenue NE



The Project Environmental Documents provide detailed information regarding the potential environmental impacts associated with the Project and details regarding mitigation measures to which Sound Transit has committed, including potential short term construction-related impacts and proposed mitigation measures specifically related to this Project. These commitments have been incorporated into the Project as proposed in this application, and Sound Transit will implement them or provide funding for their implementation. Copies of the applicable FEIS Technical Report sections and the entire ROD can be provided upon request.

East Link Timeline

August 2006 - Sound Transit begins the environmental scoping process for the East Link Project.

November 4, 2008 - Central Puget Sound area voters approved the Sound Transit 2 plan (ST2 plan), a package of transit improvements and expansions including increased bus service, increased commuter rail service, an expansion of link light rail, and improved access to transportation facilities.

July 15, 2011 - Sound Transit issued the East Link Project FEIS.

November 11, 2011 - The FTA issued its ROD on the East Link Project.

November 15, 2011 - The City and Sound Transit executed two agreements: (1) an Umbrella MOU, and (2) a Transit Way Agreement which, taken together, outline the general terms and conditions for development of the East Link Project in the City.

November 17, 2011 - Federal Highway Administration issued its ROD on the East Link Project.

March 2012 - The CDP and Design and Value Engineering (DAVE) meetings began.

February 28, 2013 - As provided in the MOU, the City adopted regulatory changes to the LUC by creating the Light Rail Overlay District (new Chapter 20.25M) that governs permit decisions for "Regional Light Rail Transit Facilities (RLRT Facility)."

March 26, 2013 - Sound Transit completed and published the East Link Extension 2013 SEPA Addendum.

April 22, 2013 - The City Council passed Resolution No. 8576 endorsing modifications for inclusion in the East Link Project and approving the alignment and general profile and station locations for the East Link Project for the purposes of LUC 20.25M.

April 25, 2013 - The Sound Transit Board adopted Resolution No. R2013-09, selecting the route, profiles and station locations for the East Link Project, including those modifications identified by the City in Resolution No. 8576.

June 21, 2013 - The City and Sound Transit executed amendments to the MOU and Transit Way Agreement incorporating the modifications described in Sound Transit Motion No. M2013-27 and Bellevue Resolution No. 8576.

December 20, 2013 - After a year and half and approximately 50 CDP/DAVE meetings; design for the E335 section of the East Link Project reaches the 60% design level.

April 23, 2015 – The E340 DMP was accepted and issued by the City of Bellevue.

May 6, 2015 – The City of Bellevue and Sound Transit executes the Amended and Restated Umbrella Memorandum of Understanding (MOU).

October 19, 2015 – The E335 section of the East Link Project reaches the 90% design level.

January 22, 2015 – The E340 DMP was accepted and issued by the City of Bellevue.

March 8, 2016 – The 100% design level of the E335 section, including the first Progress Print of the 120th Station and Spring District, of the East Link Project is complete.

1.3 Project Description –120th Station and Spring District Design and Mitigation Permit

The City's approval of the alignment location and profile of the Project in Resolution No. 8576 made RLRT Facilities permitted uses in all land use districts. Therefore, LUC 20.25M.030.C allows Sound Transit to seek approval of RLRT Facilities through the DMP review process. Under this DMP Application, Sound Transit seeks a DMP for approximately 0.21 mile of the Project.

The alignment for the portion of the Project covered by this DMP application commences at the east side of 120th Avenue NE in a retained cut/fill condition under 120th Avenue NE. (See **Figure 1**). The retained cut/fill guideway continues east and ends at the east side of 124th Avenue NE. See the following animation of the East Link Project alignment at the following web site: http://www.soundtransit.org/Projects-and-Plans/East-Link-Extension/East-Link-Extension-document-archive/Video---East-Link-animation. The map in **Attachment B** shows the entirety of the East Link Alignment, as shown in the animation.

The major components of Project design, such as the alignment and the location of the station, have been determined through the process outlined in Section 2.1. Sound Transit has preliminarily divided the 6-mile Project into five separate design packages to be prepared by the final design consultants on a staggered schedule; see **Attachment H**. The portion of the Project

covered by this DMP Application is part of the E335 design package, the remainder of which is covered in another DMP Application. Due to delayed design efforts, the section between 120th Avenue NE and 124th Avenue NE is not currently as complete as the rest of E335, but the intention is to advance design so that it is at the same level once the IFB stage is complete.

Each of the contract packages has been designed collaboratively with the City with an eye towards submitting a complete mitigation proposal along with each DMP application, consistent with the City's vision for the Spring District. The design plans addressed in this DMP Application include the design-enhancement, mitigation, and cost-saving measures identified and incorporated through the CDP.

The two construction staging areas listed below are in close proximity to the segment within this DMP, and are as also shown in **Attachment I**:

1. West of 116th Avenue NE, at 555 116th Avenue NE
2. East of 116th Avenue NE, at 620 116th Avenue NE, part of the BNSF Railroad corridor, and one large property bordered by 120th Avenue NE

2.0 Regulatory Framework

2.1 Pre-Application Design Process and Remaining Approvals

The Facilities proposed in this DMP Application resulted from many years of collaboration and public decision-making. Prior to the preparation of this DMP Application, Sound Transit and the City engaged in continuous and regular discussions regarding the design of this portion of the Project to ensure a high-quality, appropriately mitigated, cost-effective and feasible design for all DMP Applications. Various mitigation measures have been identified and will be incorporated into the Project design to maximize quality of design, functionality, cost-effectiveness and efficiency.

Because portions of the overall East Link Project will be located within the City's shoreline areas, a Shoreline Substantial Development Permit (SSDP) is required under State law and the City's Shoreline Master Program. See LUC 20.25M.030.D.1; Chapter 173-26, WAC. However, no shorelines are present within this segment. Sound Transit submitted a separate SSDP and Shoreline Variance application to the City in August of 2014, which includes mitigation measures to address the East Link Project's potential impacts to the shoreline and associated wetlands and/or streams. The City, on November 6, 2014, issued the SSDP and Variance applications under permit numbers 13-135764 WG and 13-135765 LS, respectively.

2.2 Collaborative Design Process

The Collaborative Design Process (CDP) established pursuant to the MOU provides the fundamental approach to intergovernmental cooperation for final design of the Project. Through the CDP, the City and Sound Transit committed to work together in a collaborative manner throughout the Project final design process in order to achieve the goal of delivering a quality project on schedule and in compliance with the applicable codes and regulations. The major goals of the CDP include the following:

a. Design a project that preserves environmental quality, is sensitive to the surrounding community and integrates quality urban design;
b. Advance long-term, multi-modal transportation system development;
c. Develop a project that meets Sound Transit operational and performance requirements and minimizes impacts to City infrastructure and operations;
d. Meet the objectives of the project schedule, including major milestones, while allowing adequate time for evaluation and reliable decision making; and
e. Support regional and local land use goals and objectives.

The CDP has been one of the most significant and useful processes established for implementation of light rail within the City. The CDP provides the mechanism for the City and Sound Transit to jointly advance the design of the Project through design phases and identify cost savings. The CDP provides a venue where City Staff, Sound Transit, and its designers have been able to work together in a collaborative manner to reconcile different objectives and to ensure that the design elements proposed in this DMP Application are consistent with Chapter 20.25M LUC as well as other provisions of the LUC. The Project elements that were identified and refined through the CDP process have been incorporated in the design plans covered by this DMP Application. Through the collaborative work under the CDP, these goals have been met as evidenced by the design package included in this DMP Application. Using the CDP's iterative process, the City and Sound Transit have accommodated the future vision for the 120th Station area as embodied in the City's Code, Comprehensive Plan, and other planning documents.

2.3 Design and Value Engineering ("DAVE") Technical Working Group

The CDP established a number of technical working groups to help design the Project. One of these is the Design and Value Engineering (DAVE) working group. The purpose of the DAVE working group is to support the advancement of all aspects of design development, to ensure adequate resources are available, and to reach agreement between Sound Transit and City staffs on design plans that can serve as the basis for final land use approvals while providing for mitigation measures that are appropriate and feasible for a project of this character. A copy of the DAVE charter is included as **Attachment J.**

The DAVE working group has met weekly since early 2012 to discuss and resolve issues with a focus on the following four main deliverables:

1. Review of the Project elements for Code compliance, and suggestions for design alternatives to ensure the same;
2. Site specific concurrence on Project scope (*e.g.* design of the Stations, including cross section, profile, limits of construction, utility relocation, landscaping, requirements, etc.) Meaning, that City Code and associated mitigation were fully satisfied or alternative compliance means have been found acceptable to the City;
3. Review of standards, design criteria, and specifications, in order to identify conflicts or suggest modifications to the Project and determine resolutions;
4. "Over the shoulder" review to confirm all required elements are addressed.

The collaborative effort under the CDP and work of the DAVE Technical Working Group were instrumental in reaching the level of design proposed in this DMP Application. Through the DAVE working group, the City and Sound Transit staffs have reached concurrence on various design elements relevant to this DMP Application, especially for Project elements that relate to the street widths, sidewalk widths, etc., as evidenced by the DAVE Concurrence Plan Sheets.

3.0 Who May Apply

LUC 20.25M.010.C provides that Sound Transit may apply for a DMP provided that Sound Transit can satisfy one of three conditions for each of the properties affected by the subject permit:

1. Is the owner of a sufficient property interest affected by the permit; or
2. Has the written consent of the owner to apply for permits; or
3. The Sound Transit Board has authorized the property acquisition and has provided the required advance notice to the owner and has initiated the appraisal process for the property.

Sound Transit has satisfied this requirement for this DMP application as demonstrated in **Attachment K**, which includes ST, City, and WSDOT authorization documents and a list of properties affected by this application.

3.1 Application Process

The only discretionary permits required prior to issuance of construction permits (such as building permits) are DMP's and shoreline permits. See LUC 20.25M.030.A.2 and .C.1. DMP review is the process the City established to ensure that the Project is consistent with the requirements of the LUC, the Bellevue Comprehensive Plan, the Light Rail Best Practices, and all

applicable standards and guidelines contained in City Codes and the procedures related to involvement of the Citizen Advisory Committee (CAC). See LUC 20.25M.030.C.2.a-c.

DMP applications are reviewed and decided by the Director as a "Process II" land use decision, which is appealable to the City's Hearing Examiner. See LUC 20.25M.030.C.4.a and LUC 20.35.200-250. As part of this process, an application is reviewed by the CAC. LUC 20.25M.035 provides that the CAC review permit applications, receive and incorporate public comments, and provide feedback regarding consistency of the Project with the policy and regulatory guidance of LUC 20.25M.035.E, 040 and 050. The Decision Criteria set forth in LUC 20.25M.030.C.3.a through j, are analyzed in detail in Section 4.0, which addresses the substantive standards applicable to DMP approvals.

4.0 Compliance with Substantive Standards for Design and Mitigation Permits

The design elements within the area of the 120th Station proposed in this DMP Application have been thoroughly vetted through numerous overlapping processes, rounds of review and comment by the public, technical working groups, the City Council, and Sound Transit. At each stage of this process, Sound Transit worked with all of these parties in revising the Project to incorporate suggestions for design improvements, mitigation, and cost savings consistent with the need to design and construct this state-of-the-art light rail transit facility. Through this process, Sound Transit has produced a design that meets all substantive standards of the LUC and the approval criteria for this DMP Application.

The following narrative enumerates and discusses the Project's compliance with each of the Decision Criteria, as well as other standards incorporated into these Criteria.

4.1 Chapter 20.25M LUC - Light Rail Overlay District

The design submittal in this DMP Application is consistent with the LUC requirements for RLRT Facilities and Systems, each of which is discussed in this section. Key LUC sections are reproduced verbatim in bold text followed by a discussion of each item. While the Decision Criteria incorporate other Code provisions and policy documents (such as certain Comprehensive Plan policies and the Light Rail Best Practices), the principal requirements are codified at LUC 20.25M.030.C.3, and provide as follows:

4.2 Decision Criteria - LUC 20.25M.030.C.3

Decision Criteria. A proposal for a RLRT System or Facility may be approved or approved with conditions provided that such proposal satisfies the following criteria:

a. The applicant has demonstrated compliance with the CAC Review requirements of LUC 20.25M.035; and

Sound Transit Discussion: Sound Transit anticipates that it will demonstrate compliance with the applicable requirements for the Facilities included in this DMP Application through the established CAC review process.

As detailed in section 7.0, in order to ensure consistency with future development planned on property adjacent to the Facilities, Sound Transit is requesting an administrative modification to: temporarily defer the timeline for the Facilities to meet the landscape development requirements of LUC 20.25M.040.C and incorporated requirements of LUC 20.25D.110; and alter the scope and process for CAC involvement (see 20.25M.035C-D) regarding landscape development associated with the Facilities.

See **Attachment R** for project responses to the applicable CAC Advisory Context Document.

b. The proposal is consistent with the Comprehensive Plan including without limitation the Light Rail Best Practices referenced in Comprehensive Plan Policy TR-75.2 and the policies set forth in 20.25M.010.B.7 above; and

Sound Transit Discussion: The Project is consistent with the Comprehensive Plan and Light Rail Best Practices as described in **Attachment L**. **Figure 2** identifies the land use districts in which the Facilities proposed in this DMP application are located.

c. The proposal complies with the applicable requirements of the Light Rail Overlay District;

Sound Transit Discussion: This DMP Application as a whole demonstrates that the RLRT Facilities described in this DMP Application comply with the applicable requirements contained within Chapter 20.25M LUC.

As detailed in section 7.0, in order to ensure consistency with future development planned on property adjacent to the Facilities, Sound Transit is requesting an administrative modification to: temporarily defer the timeline for the Facilities to meet the landscape development requirements of LUC 20.25M.040.C and incorporated requirements of LUC 20.25D.110; and alter the scope and process for CAC involvement (see 20.25M.035C-D) regarding landscape development associated with the Facilities.

d. The proposal addresses all applicable design guidelines and development standards of this Light Rail Overlay District in a manner which fulfills their purpose and intent; and

Sound Transit Discussion: Chapter 20.25M LUC sets forth a number of requirements for RLRT Facilities, and incorporates others by reference. See, e.g., LUC 30.35M.010.D.1.a-f (incorporating numerous land use district and overlay-related Code sections by reference). Key requirements and a discussion of the Project's compliance with each one are detailed in the narrative sections and attachments to this DMP Application. Where relevant, a discussion of

the policies and intent driving each of the LUC requirements is included as well. The design plans attached to this DMP Application show the Facilities' compliance with these requirements.

e. The proposal is compatible and responds to the existing or intended character, appearance, quality of development and physical characteristics of the subject property and immediate vicinity; and

***Sound Transit Discussion**:* Sound Transit incorporated a number of design measures into the Project design to make it compatible with and responsive to the property in the vicinity of the RLRT Facilities. The Project design complies with the height, bulk, scale, landscaping and other aesthetic requirements of the LUC. The Facilities included in this DMP Application were also carefully designed for consistency with City Comprehensive Plan policies and Light Rail Best Practices, which also address the Project's consistency with surrounding properties. See additional discussion in **Attachment L**.

The City's approval of the alignment selected by the Sound Transit Board allowed placement of RLRT Facilities within or adjacent to existing transportation corridors and rights-of-way throughout the 120th Station area. The areas affected are identified in City policies as the most appropriate to accommodate RLRT Facilities. The Project will provide a reliable, high performance alternative to single-occupant vehicle travel. The alignment of the overall Project was chosen to service the City's major employment centers and residential areas, while supporting future area goals. The Project will run within its own right-of-way. Where a crossing of an existing travel way is required, the travel way and guideway have been grade separated to maintain the existing thoroughfare and mitigate any potential traffic impacts. Overall, the Project will enhance transit services and ridership for the properties in the 120th Station area consistent with the City's vision for the Downtown and Bel-Red areas.

The design elements included in the Station, which are also discussed in **Attachment L** and Section 6.2 below (discussing the Facilities' adherence to the Bel-Red Design Guidelines), ensure its compatibility with the project site as well as existing and future development in the area.

As described in Section 1.1 and **Attachment D**, the design of the 120th Station was informed by comments provided by City staff and the public through several open houses and public comment opportunities. Sound Transit's art program, STart, will be implemented to enhance the aesthetics of the station when viewed from within the station site or from the surrounding properties. In addition to the design elements incorporated into the current design documents, the station will be designed in accordance with the LUC and Sound Transit's Design Criteria Manual. Urban design elements, buffering, and screening will be provided as shown in **Attachment M**.

All platform canopies and wind screens are elements of continuity across the Facilities. These elements are made up of standard materials and details that define the East Link station architecture. These elements, along with other ST standards, provide a recognizable environment and cohesive identity for passengers using the East Link system.

f. The proposal will be served by adequate public facilities including streets, fire protection, and utilities; and

Sound Transit Discussion: All necessary utility, fire protection, and other public facilities as required for operation the light rail system will be provided. Throughout Final Design, Sound Transit consulted and worked collaboratively with the Bellevue Fire Department to ensure adequate fire protection systems are installed.

g. The proposal complies with the applicable requirements of the Bellevue City Code, including without limitation those referenced in LUC 20.25M.010.B.8 above; and

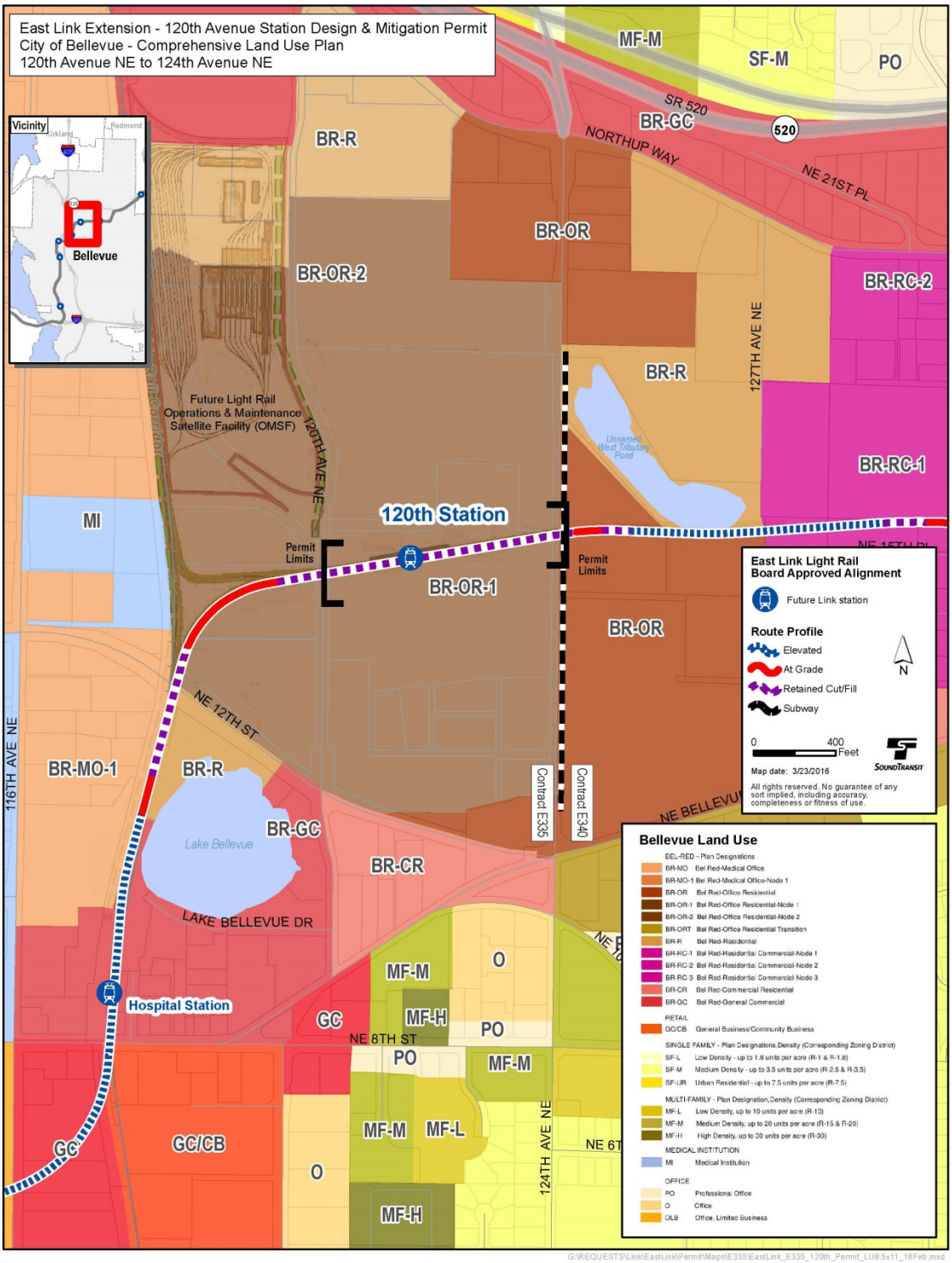
Sound Transit Discussion: The Facilities proposed in this Application comply with applicable City Codes. Compliance with Chapters 9.18 (Noise) and 22.02 (Environmental Procedures) are addressed in Sections 5 and 1.2 of this DMP Application, respectively.

As detailed in section 7.0, in order to ensure consistency with future development planned on property adjacent to the Facilities, Sound Transit is requesting an administrative modification to: temporarily defer the timeline for the Facilities to meet the landscape development requirements of LUC 20.25M.040.C and incorporated requirements of LUC 20.25D.110; and alter the scope and process for CAC involvement (see 20.25M.035C-D) regarding landscape development associated with the Facilities.

h. The proposal is consistent with any Development Agreement or conditional use permit approved pursuant to LUC 20.25M.030.B; and

Sound Transit Discussion: This criterion is not applicable.

Figure 2. City of Bellevue Comprehensive Land Use Plan – Approximately NE 8th Street to 130th Avenue NE



i. The proposal provides mitigation sufficient to eliminate or minimize long-term impacts to properties located near the RLRT Facility or System, and sufficient to comply with all mitigation requirements of the Bellevue City Code and other applicable State and Federal Laws;

Sound Transit Discussion: Sound Transit has complied with both the State Environmental Policy Act (SEPA) and the National Environmental Policy Act (NEPA) by conducting an evaluation of the environmental consequences of the East Link Project. The mitigation measures incorporated into the design of the East Link Project and required under the ROD eliminate or minimize potential long-term environmental impacts. See **Attachment L** for additional discussion of the mitigation features that were included in the design of the Facilities included in this DMP Application.

j. When the proposed RLRT Facility will be located, in whole or in part, in a critical area regulated by Chapter 20.25H LUC, a separate Critical Areas Land Use Permit shall not be required, but such facility shall satisfy the criteria:

i. The proposal utilizes to the maximum extent possible and the best available construction, design and development techniques which result in the least impact on the critical area and critical area and buffer; and

ii. The proposal incorporates the performance standards of Chapter 20.25H LUC to the maximum extent applicable; and

iii. The proposal includes a mitigation or restoration plan consistent with the requirements of LUC 20.25H.210; except that a proposal to modify or remove vegetation pursuant to an approved Vegetation Management Plan under LUC 20.25H.055.C.3.I shall not require a mitigation or restoration plan.

Sound Transit Discussion: This criterion is addressed in Section 6.4, below.

4.3 LUC 20.25M.040.C Landscape Development Requirements

Landscaping is not included in the ST design package for this segment. The idea will be to preserve existing land uses and/or match future development elements to the maximum extent feasible.

As detailed in section 7.0, in order to ensure consistency with future development planned on property adjacent to the Facilities, Sound Transit is requesting an administrative modification

to: temporarily defer the timeline for the Facilities to meet the landscape development requirements of LUC 20.25M.040.C and incorporated requirements of LUC 20.25D.110; and alter the scope and process for CAC involvement (see 20.25M.035C-D) regarding landscape development associated with the Facilities.

5.0 Noise and Vibration; City Noise Code

All construction within the portion of the Project addressed by this DMP Application are expected to take place between the hours of 7:00 a.m. and 6:00 p.m. on weekdays, and 9:00 am and 6:00 p.m. on Saturdays. The City's Noise Control code, BCC 9.18.020.C, exempts sounds created by construction during these hours.

The determination of which activities will need to occur outside the exempt hours and specific equipment locations on the site is typically left for the contractor based on their planned construction means and methods. Sound Transit recognizes that before the contractor is selected, the City and community need to better understand the extent to which nighttime construction will be necessary, and the mitigation measures that will be implemented to reduce sounds to the maximum extent necessary consistent with safe construction practices. Sound Transit will work with the City through the CDP to develop an overall nighttime construction plan, generally applicable conditions of approval, and schedule for application and approval of expanded exempt hours permits pursuant to BCC 9.18.020.C. Once the contractor is hired and develops detailed construction plans, any revisions they seek to the nighttime construction plan will be subject to City approval.

With regard to train operations, ATS Consulting prepared the *Noise Impact Assessment Using Bellevue City Code* dated May 2014 ("Noise Assessment"), that is included as **Attachment T.** Sound Transit is unaware of any other city or county with a noise code that applies to the operation of light rail transit vehicles, the exemptions in Chapter 9.18 for the operation of vehicles do not include the operation of light rail transit vehicles during nighttime hours in residential zones (Class A EDNAs). The properties addressed by this DMP Application are located within the City's Class B EDNA, where operation of light rail transit vehicles is exempt from the limits in the noise code pursuant to BCC 9.18.020.B.5.

Section 9.18.030.B of the Bellevue City Code states that the City's maximum permissible sound levels are measured in decibels that are weighted to approximate the sensitivity of human hearing (dBA). Chapter 9.18 defines two metrics, Leq and Ldn, that can be used to measure dBA, but Ldn is by definition a 24-hour sound level, and the code only limits noise from train operations during the nighttime hours of 10 p.m. to 7 am. ATS therefore predicted train noise using the Leq metric, and instead of using a nine-hour Leq that corresponds to the defined nighttime hours, ATS used a one-hour Leq that better reflects train noise during the nighttime hours when the trains will be operating.

ATS modeled the nighttime hour of operations when train noise will be greatest (6:00 to 7:00 am.) and, for comparison, ATS also modeled the nighttime hour of operations when ambient sound will be lowest (midnight to 1:00 a.m.). ATS's modeling assumed that the sound walls and other mitigation required by the ROD would be in place and ATS determined that noise from train operations will comply with the City's noise code at the affected Class B EDNA properties, as described in Attachment T.

6.0 Applicable Land Use Code Provisions

LUC 20.25M.010.D incorporates a number of other provisions of the LUC as applicable to RLRT System or Facilities to ensure that the System or Facility design is sensitive to the context of the underlying land use districts and that temporary and permanent impacts are appropriately mitigated. The provisions incorporated in LUC 20.25M.010.D that apply to this DMP Application include selected sections from Chapters 20.10 (Land Use Districts) and 20.25D (Bel-Red LUC) of the LUC. The applicable provisions of each of these chapters are addressed in this section. The applicable standards are identified in **bold text** followed by a discussion of the Project's compliance.

6.1 Land Use Districts (Chapter 20.10 LUC)

The alignment of the Facilities included in this DMP Application travels through various Bel-Red Office/Residential zones—namely, BR-OR, BR-OR-1, and BR-OR-2. The associated Comprehensive Plan designations are shown in **Figure 2**. Pursuant to the land use tables in Chapter 20.10, the Facilities included in the East Link Project are permitted in each of these land use districts.

6.2 Part 20.25D LUC – Bel-Red Requirements

Chapter 20.25D LUC contains requirements, standards, and guidelines that apply to development within the Bel-Red land use districts. ST and the City have used the CDP and the DAVE group to advance the design of the Facilities covered by this Application and to ensure compliance with the specific Bel-Red requirements. The RLRT Facilities proposed in this DMP Application meet all of the applicable Bel-Red standards.

LUC 20.25D.010.B – Land Use Districts

Sound Transit Discussion: As noted above, although the East Link project traverses through or is adjacent to numerous zones, the RLRT Facilities proposed in this DMP Application are located in Bel-Red land use district BR-OR-1. See **Figure 2.**

LUC 20.25D.070 – Land Use Charts

Sound Transit Discussion: Chart 20.25D.070 Transportation and Utilities Uses in Bel-Red Land Use Districts specifies that Regional Light Rail Transit Systems and Facilities are permitted uses or conditional uses in any of the listed Bel-Red land use districts. Note 17 states, "A Conditional Use Permit is not required when the City Council has approved a regional light rail transit system by resolution or ordinance…." Bellevue City Council Resolution No. 8576, passed on April 22, 2013, approved the alignment location and general profile of the Project for the purposes of Chapter 20.25M LUC. As a result of this Council action, RLRT Facilities are now permitted land uses in all land use districts throughout the City.

LUC 20.25D.110.B – Street Frontage Landscape Development Requirements

Sound Transit Discussion: None of the street types outlined in the LUC 20.25.D.110B are adjacent to the Facilities proposed in this DMP Application, so this requirement does not apply.

LUC 20.25D.110.C – Perimeter Landscape Development for Land Use Districts

Sound Transit Discussion: There are no interior property lines present in the area of the Project that abuts BR-R land use; therefore, this section is not applicable to the Facilities proposed in this DMP Application.

LUC 20.25D.110.D – Interior Property Line Development

Sound Transit Discussion: There are no interior property lines present in the area of the Project that would otherwise be classified for this requirement; therefore, this section is not applicable to the Facilities proposed in this DMP Application.

LUC 20.25D.110.E – Curb Extension Planting

Sound Transit Discussion: Per Appendix B (Bel-Red Corridor Plan) of the Transportation Design Manual, curb extensions occur primarily along local streets, and on intersections with green streets. Neither of these street types is adjacent to the Facilities proposed in this DMP Application, so this section does not apply.

LUC 20.25D.110.F – Significant Tree Retention and Pruning

Sound Transit Discussion: LUC 20.25M.040.C governs tree retention and removal for the Project, and describes that landscape development must be context sensitive and preserve existing significant vegetation to a maximum extent feasible. These requirements of the LUC 20.25M will be met through the protection/retention of significant existing trees where preservation is feasible, and by installing new landscape areas along the corridor and at or near the Stations to screen and buffer transportation facilities from surrounding neighborhoods.

Future pruning of trees may be necessary to ensure safe operations of RLRT facilities over time. To limit the potential for future conflicts with trees, ST has developed a Vegetation Clear Zone for safe operations and maintenance of RLRT facilities, where only understory vegetation may be planted. More details are provided in Sound Transit's DCM.

As detailed in section 7.0, in order to ensure consistency with future development planned on property adjacent to the Facilities, Sound Transit is requesting an administrative modification to: temporarily defer the timeline for the Facilities to meet the landscape development requirements of LUC 20.25M.040.C and incorporated requirements of LUC 20.25D.110; and alter the scope and process for CAC involvement (see 20.25M.035C-D) regarding landscape development associated with the Facilities.

LUC 20.25D.110.H – Fences

Sound Transit Discussion: The RLRT facilities meet the standards provided in LUC 20.25D.110.H No proposed fences are located near an intersection. With the exception of screen walls, all fences are less than 8 feet in height.

LUC 20.25D.120.D – Parking Structure Performance Standards

Sound Transit Discussion: There are no parking structures in the portion of the Project that runs through the Bel-Red subarea.

LUC 20.25D.130 – Bel-Red Development Standards

Sound Transit Discussion: The RLRT Project does not include retail or commercial uses, so the Code requirements regarding required ground-floor uses are not applicable. Requirements for build-to lines, sidewalk-oriented development, and transition edge development are also not relevant to this portion of the Project, because the Project does not pass through the areas defined by that section of the Code.

Building Materials - Sound Transit's DCM specifies that Stations should be designed with durable, high quality materials in order to persist with minimal maintenance for the long-term life of the system. Sound Transit has reviewed the selection and use of materials and refined its choices through the CAC review of the Project design, as well as the iterative, collaborative design process for the Project. Thus, the quality of building materials for the Station area will meet or exceed the requirements in the City Code for the Bel-Red subarea, including the requirements of LUC 20.25D.130.E.

LUC 20.25D.150 – Design Guidelines

The following five sections describe the RLRT Facilities' adherence to the Bel-Red Subarea Design Guidelines of the LUC. Renderings detailing the 120th Station design can be found in Attachment N.

1. Character and Site Guidelines

Sound Transit Discussion: Landscaping within and adjacent to the 120th Station is dictated by the future development, which is anticipated to be highly urbanized. The landscape design will not be included in the 120th Station design package. Rather, landscaping design will be installed by adjacent development.

The 120th Station aesthetic reflects the hotel and commercial/residential uses that surround it. The Station platform is in a trenched condition, with a plaza above it at the street level. Station entries are intended to be beacons of color, serving as wayfinding cues for patrons.

Views of the 120th Station from 120th Avenue NE help provide a strong identification with the Bel-Red district, consistent with the Design Guidelines' preference for "gateway" features in this area.

Sound Transit's *STart* art program will be implemented at the 120th Station, helping to create a sense of place in the communities where Sound Transit operates transit facilities. Strategic community involvement, including the Bellevue Arts Commission, will ensure a complementary relationship between the 120th Station site and the surrounding environment.

2. Pedestrian Emphasis Guidelines

Sound Transit Discussion: The 120th Station entries and plaza are designed to be scaled to the pedestrian and provide sense of security and connection to the community. The Station provides space above the platform for a plaza facility. Continuity in hardscape between the Station and 120th Avenue NE provides a strong route to Station entries. A localized entry at 120th Avenue NE is emphasized through use of hardscape and other urban design features.

Pathways from 120th Avenue NE are comprised of continuous sidewalks and are free of barriers. These paths increase connectivity to the Station. The proposed drop-off areas for passengers and para-transit will be directly connected to the plaza areas adjacent to 120th Avenue and the future NE 15th Street alignment.

At the plaza level of the 120th Station, the covered platform provides overhead protection for patrons utilizing bicycle storage and ticket vending machines. Space is provided to accommodate a concession pushcart. The platform incorporates canopy and wind screening, which is common to all stations in the East Link Project.

While the Station platform itself is restricted to fare-paying transit customers only, the plaza above provides a shelter from elements and is a potential gathering space for the community. Benches and seatwalls are present to those waiting in the plaza. Additionally, a "Walk in the Park" open space area to the south will provide an opportunity for public use.

3. Architectural Guidelines

Sound Transit Discussion: As mentioned previously, Sound Transit's DCM specifies that Stations should be constructed of durable, high quality materials. This employs a sense of permanence to the infrastructure, which will serve the community well into the future. The materials used will be further evaluated for their compatibility with their context in the Spring District of Bel-Red.

4. Lighting Guidelines

Sound Transit Discussion: The basis of design for this Project is the Sound Transit DCM, which specifies standards for lighting of sites and passenger stations. Fixtures used will be standard to the Sound Transit system. Luminaires are commonly 12-16 feet tall in station and plaza areas. Illuminance levels are specified in order to establish clarity between functions such as drop-off zones, station entrances, fare vending areas, and platform waiting areas. The DCM explicitly prohibits lighting from casting glare into adjacent properties or streets. Uplighting in any form is also prohibited.

5. Sign Guidelines

Sound Transit Discussion: The Project meets the guidelines' signage requirements. Sound Transit's Customer Signage Design Manual establishes the scale of signs so they are compatible with the station infrastructure and legible for easy wayfinding by patrons. Signs are placed such that they are visible to users of the RLRT System, including passersby and those entering the system from other modes (carshare, bus, etc). The paint scheme of the signs is dictated by the Customer Signage Design Manual but is complementary to each station's architecture while retaining a consistent scheme between stations for ease of use in the System.

6.3 Part 20.25E LUC – Shoreline Overlay District Requirements

There are no shoreline districts in this segment of the Project. See Section 2.1, above, for more information.

6.4 Part 20.25H LUC - Critical Areas Overlay District Requirements

There are no critical areas overlay districts in this segment of the Project.

7.0 Request for Administrative Modifications Pursuant to LUC 20.25M.060

The LUC recognizes that strict application of all LUC provisions may not always be practical or feasible due to the unique nature of the RLRT System and Facilities and permits the City to approve waivers or administrative modifications to these standards if the following criteria are met (see LUC 20.25M.060.B.1-2):

1. The modification or waiver is the minimum reasonably necessary in accordance with the "Light Rail Best Practices" Report to make construction or operation of the RLRT facility or RLRT system practicable and feasible; or
2. The modification or waiver is reasonably necessary to implement or ensure consistency with other related actions approved by the City Council with respect to the RLRT facility or RLRT system including development agreement modifications, cost saving alternatives, or street design standards amendments.

Through the CDP process and DAVE working group described in Section 2.2-3, the City and Sound Transit have identified instances where strict application of the LUC will not be practicable or feasible for the Facilities proposed in this DMP Application, and thus administrative modification pursuant to 20.25M.060 is appropriate. In order to ensure consistency with future development planned on property adjacent to the Facilities, Sound Transit is requesting an administrative modification to: temporarily defer the timeline for the Facilities to meet the landscape development requirements of LUC 20.25M.040.C and incorporated requirements of LUC 20.25D.110; and alter the scope and process for CAC involvement (see 20.25M.035C-D) regarding landscape development associated with the Facilities.

Under the requested administrative modification, Sound Transit proposes that landscape development requirements of the LUC applicable to the Facilities would be fully met by landscape development associated with future development activity adjacent to the Facilities. Given applicable site and design constraints, Sound Transit will not pursue landscape development associated with the Facilities, in area planned for redevelopment in the

immediate future. Design for the planned future development is not yet complete, and the design and/or installation of landscape elements by the future developer may not be complete by the time Sound Transit completes construction of the Facilities. Accordingly, it is expected that the CAC will not have the opportunity to provide substantive input into landscape development through the context setting, schematic design, design development, or construction permit processes for the Facilities.

This request for modification is consistent with the administrative modification approval criteria of LUC 20.25M.060.B.1.

ATTACHMENT A

ST2 PLAN

Sound Transit 2

A Mass Transit Guide

The Regional Transit System Plan
for Central Puget Sound

July 2008

SOUNDTRANSIT
RIDE THE WAVE

Table of Contents

Adopted by Sound Transit Board, 7/24/08

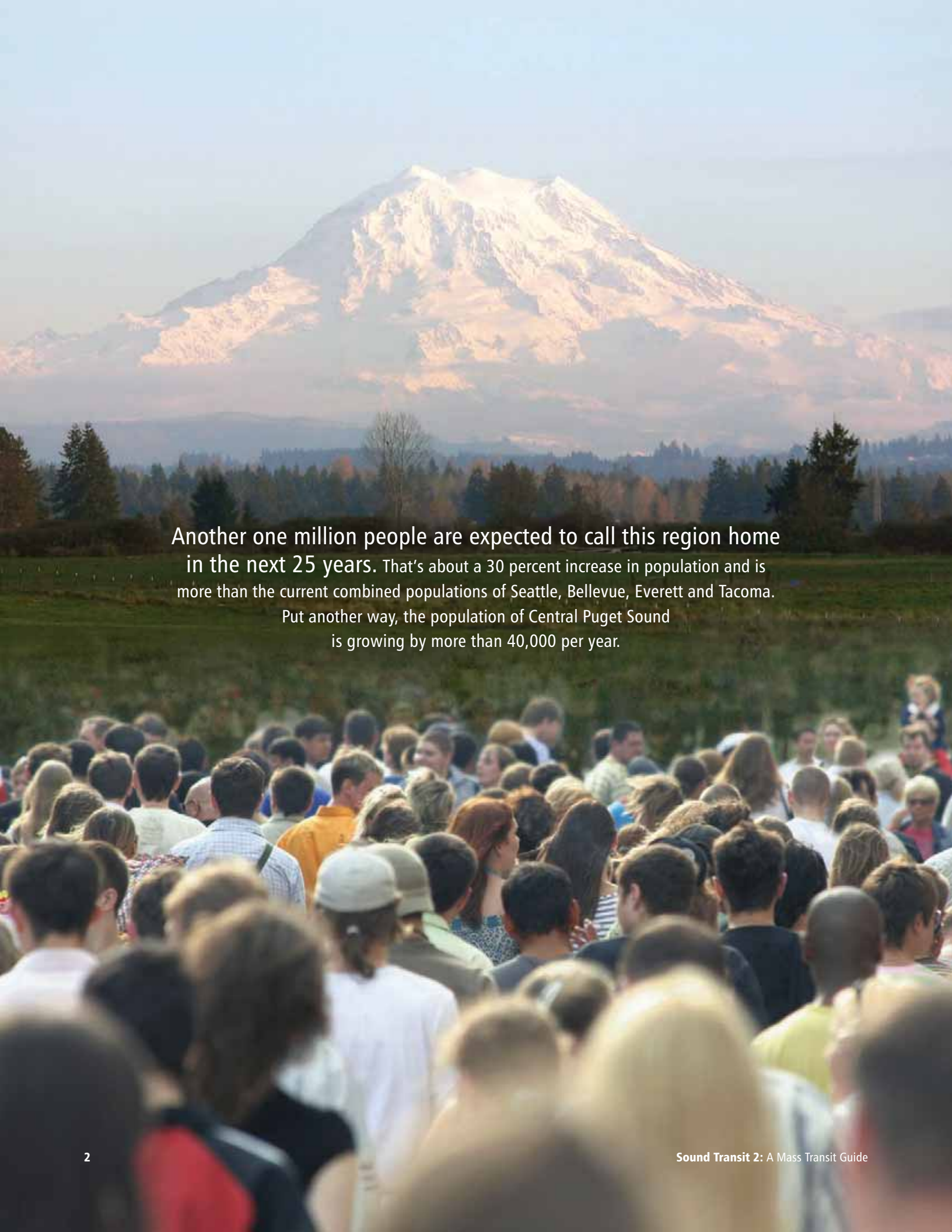
Link light rail • Sounder commuter rail • ST Express regional bus • Tacoma Link light rail

Easy connections to more places for more people.

—Sound Transit vision statement

Sound Transit plans, builds, and operates regional transit systems and services to improve mobility for Central Puget Sound.

—Sound Transit mission statement



Another one million people are expected to call this region home in the next 25 years. That's about a 30 percent increase in population and is more than the current combined populations of Seattle, Bellevue, Everett and Tacoma. Put another way, the population of Central Puget Sound is growing by more than 40,000 per year.

Introduction

Sound Transit proposes to improve and expand the regional mass transit system. The agency has been working since 1996 on the first phase of a regional mass transit system in the Central Puget Sound region that includes Link light rail, Sounder commuter trains and ST Express buses. This initial phase, called *Sound Move,* was approved by voters in 1996 in response to burgeoning growth and traffic problems.

Sounder commuter trains currently operate in a 74-mile corridor from Everett to Tacoma, with construction of an eight-mile extension to Lakewood underway. ST Express buses operate on every major highway in the region. Link light rail serves Downtown Tacoma, and it will open for service between Seattle and Sea-Tac International Airport in 2009. Together, these services carry more than 14 million riders a year reliably around the region to jobs, shopping, school, sporting events and other places they need to go.

Construction of the Link light rail extension between Downtown Seattle and the University District is expected to begin in late 2008, with service to start in 2016.

Even with those investments, however, improving transportation continues to be one of the biggest challenges facing this region.

Another one million people are expected to call this region home in the next 25 years. That's about a 30 percent increase in population and is more than the current combined populations of Seattle, Bellevue, Everett and Tacoma. Put another way, the population of the Central Puget Sound region is growing by more than 40,000 people per year.

By the year 2030, growth will lead to a 35 percent increase in employment and a 30 percent increase in vehicle travel in the region. By 2030, the typical commuter could spend nearly an entire work week of additional time stuck in traffic. Weekday rush hour could last from breakfast through dinner, strangling the movement of traffic and freight, jeopardizing our economy, and hurting the environment.

With a strong mass transit foundation in place and more growth on the way, additional investment is needed to ensure mobility for people and to help the Central Puget Sound region's transportation system run smoothly. An expanded mass transit system that builds on what we have is more important than ever.

In response, Sound Transit is proposing a plan that builds on the *Sound Move* program called Sound Transit 2. The Sound Transit 2 Plan (ST2) would expand the existing light rail system to serve three major travel corridors. Link light rail would extend from North Seattle into Snohomish County, across Lake Washington into East King County, and south of Sea-Tac International Airport to Federal Way. ST2 would also expand Sounder commuter rail and ST Express regional bus service significantly. A map showing ST2 Regional Transit System Plan improvements can be found on Page 16.

The ST2 Plan was developed through an open public process over a four-year period. During that period, Sound Transit coordinated closely with cities and counties and conducted substantial public outreach. With more jobs and people on the way, the time is now to continue building our transportation future.

New light rail from Downtown Seattle to Sea-Tac Airport opens 2009; extension to UW opens 2016

74 miles of Sounder commuter rail with 10 stations

ST Express bus routes offer all-day, two-way service around the region

Tacoma Link light rail connects Tacoma Dome Station to Downtown Tacoma

More than $800 million invested in transit centers, HOV direct access ramps and park-and-ride lots

PugetPass easy transfer fare system

ST2 would extend light rail from North Seattle into Snohomish County, across Lake Washington into East King County, and south of Sea-Tac International Airport to Federal Way.

Light rail trains carry people to and from East King County in this conceptual image. By 2020, nearly 40 percent of all Bellevue jobs and about 62 percent of its future population growth is projected to be in the downtown core. (Source: The Bellevue Downtown Implementation Plan)

ST2: The Future

ST2 includes a major expansion of the Link light rail system. Light rail is currently operating in Downtown Tacoma, and a nearly 16-mile line currently under construction between Downtown Seattle and Sea-Tac International Airport is scheduled to open in 2009. An extension from Downtown Seattle to the University of Washington is scheduled to open in 2016.

The ST2 Plan builds on these Link light rail lines and the region's investment in Sounder commuter rail and ST Express bus service. ST2 proposes a future in which someone can ride a light rail train to a job or appointment from the Overlake Transit Center area of Redmond west to Bellevue, Downtown Seattle or the University of Washington; from Lynnwood to Northgate and on to the University of Washington, Downtown Seattle and the airport; or from the Redondo/Star Lake area near Federal Way to the vicinity of Highline Community College, the airport and on to Downtown Seattle. The ST2 Plan would extend the rail system to serve nearly 50 percent of the region's current population and employment centers, providing a reliable transportation option for most of the region's citizens.

ST2 would increase ST Express bus service by 17 percent.

Because it runs on its own tracks separated from traffic, light rail is quick and reliable. It will take 19 minutes to travel on a light rail train from Downtown Bellevue to the International District Station and nearby Qwest and Safeco fields, 11 minutes from Overlake Transit Center to Downtown Bellevue, 15 minutes from Northgate to Downtown Seattle, 28 minutes from Downtown Seattle to Lynnwood, or 12 minutes from Redondo/Star Lake to the airport. And because trains are not stuck in traffic, riders can count on the ride being the same every day – rain or shine. With trains running up to 20 hours a day, and every few minutes at peak times, riders won't need to carry a schedule or map.

When all proposed ST2 projects are completed, half of all work trips to Downtown Seattle are expected to be on transit. The number of people taking transit to work during peak commuting hours will increase in the other major regional centers being served by the plan's investments. Together these investments will enable more people to get around reliably and predictably. With ST2 in place, Sound Transit ridership is projected to grow to over 100 million per year in 2030. The system will also have additional capacity to absorb future growth well beyond 2030.

When all proposed ST2 projects are completed, half of all work trips to Downtown Seattle are expected to be on transit.

The new investments proposed in the ST2 Plan are estimated to cost approximately $13.4 billion (including inflation) to construct over the next 15 years. These regional investments in new mass transit infrastructure include regional express bus, commuter rail and light rail facilities. In addition to these capital improvements, the plan provides funding for operating and maintaining the system. Operations and maintenance costs are estimated at $1.9 billion (including inflation) through 2023. The financial plan also funds reserves and debt service – for detailed information see the "Paying for the System" section later in this document.

The ST2 Plan is consistent with established long-range regional transportation and land use plans. The Puget Sound Regional Council (PSRC) created the Vision 2040 plan to be a strategy for directing growth in an environmentally responsible way, while fostering economic development and providing efficient transportation. In addition, the PSRC created the Destination 2030 plan to be the region's comprehensive long-range transportation plan. Grounded in Vision 2040's growth management and transportation policies, Destination 2030 provides a multimodal plan for investing in roads, ferries, transit and freight mobility through the year 2030. Destination 2030 is now being updated by the PSRC to reflect the transportation needs of Vision 2040 and is expected to be complete in 2010.

As the Regional Transit Authority (under Chapters 81.104 and 81.112 RCW), Sound Transit is responsible for regional high-capacity transit system planning in the context of Destination 2030. Sound Transit updated its Regional Transit Long-Range Plan in 2005. ST2 is the next phase of transit improvements for the Central Puget Sound region.

The ST2 light rail expansions have the long-term capacity to serve trains running every four minutes in each direction, with each train carrying up to 800 people.

In the first half of 2008, ridership on ST Express regional buses and Sounder commuter rail grew by 14 percent and 29 percent respectively over the same period in 2007.

The ST2 Plan

ST2 will substantially expand the regional mass transit system by extending and adding more light rail lines and increasing commuter rail and regional express bus service. This new service will enhance and add high-capacity transit in the region's main travel corridors. The result will be service that cuts through congestion and provides ridership capacity to accommodate the region's needs.

System access

Value from a high-capacity transit system comes from the ability of that system to transport people reliably, rapidly and efficiently. That is only possible when people are able to access the system. Access solutions vary by transit mode and community. In recognition of these varying needs, Sound Transit will, in consultation with its local transit partners and host jurisdictions, conduct access and demand studies for its passenger facilities to evaluate a full range of needs and potential improvements to meet those needs. Improvements may include:

- Pedestrian improvements at or near transit facilities;
- Additional bus/transfer facilities for improving bus connections;
- Expanded parking at or near transit facilities;
- Off-site/satellite parking along existing transit routes that connect to the facility, including transit priority treatments to improve the speed and reliability of those routes;
- Bicycle access and storage at or near transit facilities; and
- New/expanded drop-off areas to encourage ride sharing.

Link light rail extensions

ST2 adds approximately 36 miles of new light rail by extending north from the University of Washington to Northgate and Lynnwood, south from Sea-Tac International Airport to the vicinity of the Redondo/Star Lake area near Federal Way, and east from Seattle to Bellevue and the Overlake Transit Center area of Redmond. Light rail trains will provide service to at least 19 planned new stations up to 20 hours a day and every few minutes during peak commuting periods.

In addition, funding is established in ST2 for further planning, preliminary engineering and environmental review for future light rail extensions. ST2 also includes a strategic right-of-way preservation program to ensure crucial properties can be protected or acquired. This will allow Sound Transit to secure property for future extensions to provide more certainty to affected property owners, and to avoid the complications and additional financial expense of acquiring property that has been recently redeveloped.

South Corridor

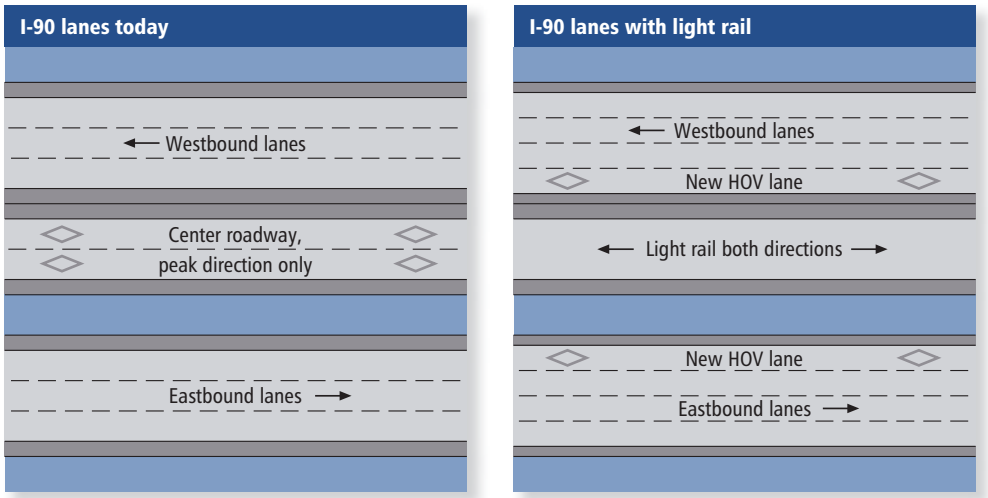
ST2 adds a light rail extension from Sea-Tac International Airport to the Redondo/Star Lake area near Federal Way, with three planned new stations at South 200th Street, the vicinity of Highline Community College (scheduled to open by 2020), and Redondo/Star Lake (scheduled to open by 2023). Funds, in the form of a capital contribution, are also programmed to provide for the expansion of the Tacoma Link light rail system if other public or private entities provide matching funds. Extensions that have been studied and are under consideration are north to the

The ST2 Plan's light rail extension to Northgate will begin service by 2020.

Tacoma General Hospital area or east to Fife. Funding is also provided to complete environmental documentation, preliminary engineering and partial right-of-way acquisition for light rail between Federal Way and Tacoma.

East Corridor

ST2 expands light rail across Lake Washington via I-90 from Downtown Seattle to the Overlake Transit Center area of Redmond, with nine planned new stations serving Rainier Avenue/I-90, Mercer Island, South Bellevue, Downtown Bellevue, Overlake Hospital, the Bel-Red corridor, Overlake Village and Overlake Transit Center. The line is scheduled to be open to Bellevue by 2020 and Overlake Transit Center by 2021. Funding is also provided to complete environmental documentation and preliminary engineering for light rail between Overlake Transit Center and Downtown Redmond.



Adding light rail to I-90's Lake Washington crossing will dramatically increase the people-carrying capacity of the bridge while the existing number of vehicle lanes is maintained. This will be achieved by adding a new HOV lane in each direction on the existing bridge, as shown at left.

Bringing fast, frequent and reliable light rail to the Redondo/Star Lake area near Federal Way will position the system for future southward expansion. The plan provides funds for environmental documentation, preliminary engineering and partial right-of-way acquisition for light rail between Federal Way and Tacoma.

North Corridor

ST2 expands light rail north from the University of Washington to Lynnwood, adding seven planned new stations in the University District, the Roosevelt neighborhood, Northgate, 145th Street/Jackson Park, Shoreline, Mountlake Terrace and Lynnwood. This extension is scheduled to be open to Northgate by 2020 and to Lynnwood by 2023. If additional funding and/or cost savings are available, preliminary engineering and environmental review for the extension of light rail from Lynnwood Transit Center to Everett may be performed as part of the ST2 program.

ST2 also includes a new streetcar connector line between Downtown Seattle, First Hill and the future Capitol Hill light rail station. The new connector will also provide convenient access to the Sounder commuter rail system and regional bus services.

Sounder commuter rail improvements

The ST2 Plan builds on the investments already made for providing passenger rail service between Everett and Lakewood along rail lines owned by Sound Transit and the Burlington Northern Santa Fe (BNSF) Railway Company.

ST2 increases the capacity of the highly utilized Tacoma-Seattle service through additional trains and expanded train lengths. Four round trips will be added to this service. Service capacity will be further expanded by increasing the number of passenger cars per train from seven to eight, and extending platforms at some stations. Additional locomotives and passenger cars will be acquired to support this capacity and service expansion.

On the Lakewood-Tacoma-Seattle line, ST2 also includes an expanded permanent Sounder station in Tukwila and access improvements for commuter rail and bus riders at the Kent, Auburn, Sumner, Puyallup, Tacoma Dome, South Tacoma and Lakewood stations. The ST2 Plan also provides for improvements on existing tracks in Tacoma, including Tacoma Rail tracks that are used by Sounder.

Kent Station is one of the region's numerous multimodal facilities where trains, buses, bikes and cars connect.

On the Everett-Seattle line, potentially in conjunction with Washington State Ferries multimodal terminal improvement projects, ST2 includes the construction of a permanent Edmonds Station and access improvements to Mukilteo Station.

Funds are also included to construct, own and operate a commuter rail yard and shop facility to support the level of service for Sounder trains at full operational capacity, enabling the agency to more efficiently maintain and operate Sounder.

The ST2 Plan also includes two provisional commuter rail stations along the Everett-Seattle corridor at Broad Street and Ballard that can be implemented subject to the availability of additional funds.

ST Express regional bus improvements

Recognizing the recent high growth in ridership experienced by Sound Transit and all our partner transit agencies in the Central Puget Sound region, the ST2 Plan rapidly improves ST Express bus service in the highest-need corridors. Specifically, ST2 provides annual operating and fleet expansion funds to increase service levels in the following corridors – I-5 (Everett to Seattle and Tacoma to Seattle); I-90 (Issaquah to Bellevue and Seattle); I-405 (Everett to Bellevue and Renton to Bellevue); SR 167 (Puyallup, Sumner, Auburn, Kent, Tukwila and Renton to Bellevue); and SR 522 (Woodinville and Bothell to Seattle) – by improving service frequency, expanding hours of operation and adding trips to relieve overloads. It also includes new routes in the SR 520 corridor to further develop bus rapid transit (BRT) connecting Redmond, Bellevue, the University of Washington and Downtown Seattle, taking advantage of transit speed and reliability improvements programmed as part of the Washington State Department of Transportation (WSDOT) SR 520 Bridge Replacement and HOV Project.

The ST2 Plan will provide bus rapid transit service on the SR 520 corridor.

In conjunction with King County Metro Transit bus services in the SR 520 corridor, Sound Transit will restructure ST Express services to improve overall service reliability and frequencies to at least every 15 minutes in both directions all day long on weekdays. Sound Transit will also seek to provide improved passenger amenities such as real-time next bus arrival information at stations. High service levels, streamlined transit facilities and congestion management will result in a fast, reliable and high-capacity BRT system in the corridor.

Beginning in 2009, ST2 includes a sufficient number of buses and the operating funds to provide a total of 100,000 annual platform hours above *Sound Move* planned levels. ST2 continues this service hour expansion on I-5, I-405, SR 520, SR 522, SR 167 and I-90 through the 15-year life of the plan. In cooperation with Community Transit in Snohomish County, ST2 provides significant investment in expanding ST Express service levels by 30 percent in the I-5 and I-405 corridors from Everett to Seattle and Bellevue respectively.

Sound Transit will work with WSDOT, Community Transit, Everett Transit, King County Metro and Pierce Transit to find solutions to rising congestion on HOV facilities in an effort to improve bus speed and reliability.

Throughout implementation, Sound Transit will work with WSDOT, Community Transit, Everett Transit, King County Metro and Pierce Transit to find solutions to rising congestion on HOV facilities in an effort to improve bus speed and reliability.

As bus maintenance capacity and fleet become available, Sound Transit will implement additional service as quickly as possible. Total annual ST Express service hours across the region will be increased by about 17 percent by 2020. ST2 also includes contributions from Sound Transit to help fund new or improved transit centers in Burien and Bothell in partnership with others.

When light rail opens in the various corridors, the majority of ST Express service in those corridors will be redeployed, resulting in a net overall increase in transit service.

While *Sound Move* included high-occupancy vehicle (HOV) access projects that make it easier for buses to merge into freeway HOV lanes, no new such projects are included in ST2. Park-and-ride expansion, HOV direct access ramps and other system access improvement projects are a high priority in Snohomish County. Such projects at regional system access facilities in Snohomish County may be built if sufficient additional funding and/or cost savings are identified in the ST2 program. Sound Transit continues to assume that WSDOT will fund and complete construction of the core HOV lane system in accordance with its freeway HOV policy. Funding is in place for Sound Transit's share of HOV projects underway on I-90 across Lake Washington and in Renton. These are *Sound Move* projects being implemented in partnership with WSDOT.

Eastside rail corridor partnership

The ST2 Plan sets aside funds that may be used in connection with rail passenger development and associated work that may be undertaken by other local governments and public agencies for long-term passenger rail service on an existing BNSF line. This rail line, portions of which BNSF intends to abandon and which the Port of Seattle is purchasing through the federal rail-banking process, stretches from the city of Snohomish to the city of Renton, east of Lake Washington. The State of Washington has directed Sound Transit and the PSRC to complete a feasibility study of potential passenger rail on this corridor. In addition, other parties in the region have expressed an interest in passenger rail service on this line.

Eastside ST*art* projects, like the ones at Bellevue Transit Center, add a heightened level of value to the surrounding community and help create a sense of place for residents, employees and transit users.

The ST2 Plan increases ST Express regional bus service by 17 percent.

Any future passenger rail service along this corridor would be implemented and operated by other public and/or private parties, particularly along the portion of the corridor located in Snohomish County outside the Sound Transit District. The ST2 Plan does not include funds to operate such passenger rail service. Sound Transit's investment in this project is limited to a maximum contribution of $50 million dollars, which may be used for engineering and design, and for the purchase of capital equipment and real estate that can either be sold or used on Sound Transit's existing transportation system. Sound Transit's investment is also contingent upon the satisfaction of the following conditions prior to December 31, 2011:

a. Completion of the Sound Transit/PSRC feasibility study and determination that passenger rail on the Eastside BNSF corridor is feasible and would be a meaningful component of the region's future transportation system, as required by state law;

b. The Sound Transit Board's determination that the ridership forecasts, financing plan, and capital and operating cost estimates and operating plan are reasonable and that the service will provide substantial benefits to the regional transportation system in the Sound Transit District; and

c. Execution of an agreement with other public or private parties regarding the implementation of a passenger rail system.

If a partnership for passenger rail on the BNSF corridor in East King County is not executed by December 31, 2011, the $50 million included in the ST2 Plan for a partnership will be reprogrammed to further the implementation of HOV BRT service in the I-405 corridor in East King County. Options for alternative investments in the I-405 corridor will be developed for Board review and approval prior to expenditure of these funds.

Real-time electronic messages at Puyallup Station tell customers when the next train will arrive.

Using the system

Sound Transit has used its research and technology and fares programs to find ways of making transit more convenient and easier to use.

For example, Sound Transit is installing vehicle location systems at its Link light rail and Sounder commuter rail stations and at some ST Express transit centers. These real-time electronic messages tell customers when the next train or bus will arrive. These electronic message signs will be in place in 2009 when the Link light rail system opens.

A decade ago, transferring between transit systems in the region required customers to have several passes or to pay a separate fare on each system. Over the last 10 years, Sound Transit has partnered with local transit agencies to create an integrated fare system that allows riders to transfer easily. In 1999, a new regional "PugetPass" was created for Sounder trains and ST Express, Community Transit, Everett Transit, Pierce Transit and King County Metro buses. These agencies are working together with the Washington State Ferries and Kitsap Transit to implement new "smart card" technology in 2009 to make it even easier to travel around the region.

Ticket vending machines allow passengers to pay their fares before getting aboard the train, speeding up service for everyone.

As part of ST2, Sound Transit will continue to explore and apply innovative technology and fare initiatives. Potential initiatives include expanding the "next bus" and "next train" electronic messaging system and installing more transit signal priority equipment to speed buses through congested intersections. Other possibilities include providing bus schedules and real-time "next bus" information on cell phones or personal handheld devices. Ticket vending machines at more locations would make it easier to buy a ticket or reload a smart card. Wireless internet access could be expanded to more Sound Transit vehicles and facilities. Electronic transit information kiosks could be installed in more places to provide more information to customers.

Planning for the future

ST2 includes funds to continue progress toward completing the regional transit system envisioned in Sound Transit's Long-Range Plan. Like *Sound Move*, ST2 is another incremental investment toward completing the larger regional high-capacity transit system. Further phases will be necessary beyond ST2 to fully build out the system envisioned in the Long-Range Plan, all subject to voter approval.

In order to advance completion of further expansions of the system beyond this ST2 Plan, funding is included for a series of planning studies. These studies will help narrow the range of alternatives, evaluate potential routes and station locations, inform local comprehensive planning, prepare for formal environmental impact review and engineering, and position the Sound Transit Board to evaluate options and establish the next highest priorities for implementation of the next phase of high-capacity transit investments in the region. All of the studies will include extensive public outreach, preliminary environmental assessment and ridership forecasting, and conceptual engineering and cost estimating.

The studies include high-capacity transit from Lynnwood to the Southwest Everett Industrial Center and to Everett; the Overlake Transit Center area of Redmond to Downtown Redmond; South Bellevue to Issaquah; the Redondo/Star Lake area near Federal Way to Tacoma; Redmond to Kirkland and on to the University District; University District to Ballard and on to Downtown Seattle; Renton to Tukwila, Sea-Tac and on to Burien; and Downtown Seattle to West Seattle and on to Burien. These studies will inform the Sound Transit Board's consideration of potential updates to Sound Transit's Long-Range Plan.

In the I-405 corridor, the focus will be on planning for BRT, the preferred long-term high-capacity transit technology identified in WSDOT's I-405 Corridor Program Master Plan. This study will review current transit service and capital improvements in the corridor being implemented by Sound Transit and other transportation agencies, and explore opportunities to enhance BRT system coordination and identify additional future improvements.

High-capacity transit studies will inform the region how to expand mass transit to areas such as Everett (top), Tacoma (middle), and Redmond (below) in future phases.

The investments contained in ST2 will create regional jobs both during construction and after the system is built.

Putting the System in Place

Implementing the plan in stages

Implementation of ST2 will begin after voters approve funding for the expanded regional transit system. Individual projects will be brought into service after they proceed through planning, public outreach, environmental review, preliminary engineering, property acquisition, final design, permitting, construction and start-up/testing programs. Transit centers, parking garages and commuter rail stations typically take five to six years from planning and site selection through opening for service. Light rail extensions are more complex because they travel through multiple jurisdictions, along freeway corridors or across waterways. Light rail extensions can take approximately four to seven years for planning, public outreach, environmental review, engineering and final design, and require another four to six years to build, depending on their length and complexity. Sound Transit continually coordinates with local and state governments to streamline project approval processes while ensuring environmental and community concerns are properly addressed. While putting each component of ST2 in place, Sound Transit will use a variety of proven analytical, project management and review techniques to make sure that the system provides the greatest regional benefits.

Link light rail from Downtown Seattle to the University of Washington is scheduled to open in 2016. The First Hill streetcar connector to light rail is also scheduled to open by 2016. The ST2 Plan anticipates opening the extensions to Northgate, Bellevue and the vicinity of Highline Community College in 2020. Construction will continue to the Overlake Transit Center area of Redmond with service scheduled to start in 2021, and the extensions to Lynnwood and Redondo/Star Lake are scheduled to open for service by 2023. ST2 also provides partnership funds for an extension of Tacoma Link light rail as early as 2015.

In the south corridor, Sounder commuter rail access will be improved for stations in Tukwila, Auburn, Sumner and Puyallup by 2015. Station platforms will be extended to accommodate longer trains and four new round trips will be phased into service by 2015. Station access improvements for Mukilteo, Edmonds, Kent, Tacoma, South Tacoma and Lakewood are scheduled to be completed by 2023.

ST Express regional bus service will be improved in high demand corridors in stages as additional buses and maintenance facility capacity become available. Sound Transit will put new service on the street as quickly as possible; change and add service to respond to ridership demand; and utilize access improvements such as HOV lanes and expanded parking and station access improvements as they come on line. Sound Transit will work closely with its transit partners to coordinate, integrate and maximize bus service and restructure those services in response to new rail services.

The Sound Transit Board will consider the prioritization, sequencing and actual timing of construction and service start-up of all ST2 projects. This will include ongoing consideration of factors affecting project readiness. The Board may modify project timing as appropriate, in response to the anticipated evolution of project readiness over the ST2 implementation period, and the necessity of coordinating ST2 construction with that of regional highway projects occurring in the same corridors. Some ST2 projects are located in close proximity to WSDOT projects. To the extent practicable, Sound Transit will coordinate design of its projects with WSDOT, and both parties will work to phase construction of each project to mitigate the overall construction impacts. As ST2 light rail projects are planned and designed, consideration will be given to possible future system expansion options to facilitate future extensions. For example, extensions to Issaquah and Kirkland are being considered during planning and design of the East Link project.

Throughout the implementation of the ST2 Plan, Sound Transit's Transit-Oriented Development (TOD) program will strive to achieve pedestrian-friendly development around the high-capacity transit stations. The purpose of the TOD program is to promote development that will result in reduced automobile use, higher transit ridership, enhanced livability, walkability and sustainability in the communities Sound Transit serves. A shift from the use of cars to walking and transit will result in reductions in fuel consumption and the emission of pollutants, especially greenhouse gases.

Mass transit expansions will result in reduced automobile use, higher transit ridership and enhanced livability, walkability and sustainability in communities across the region.

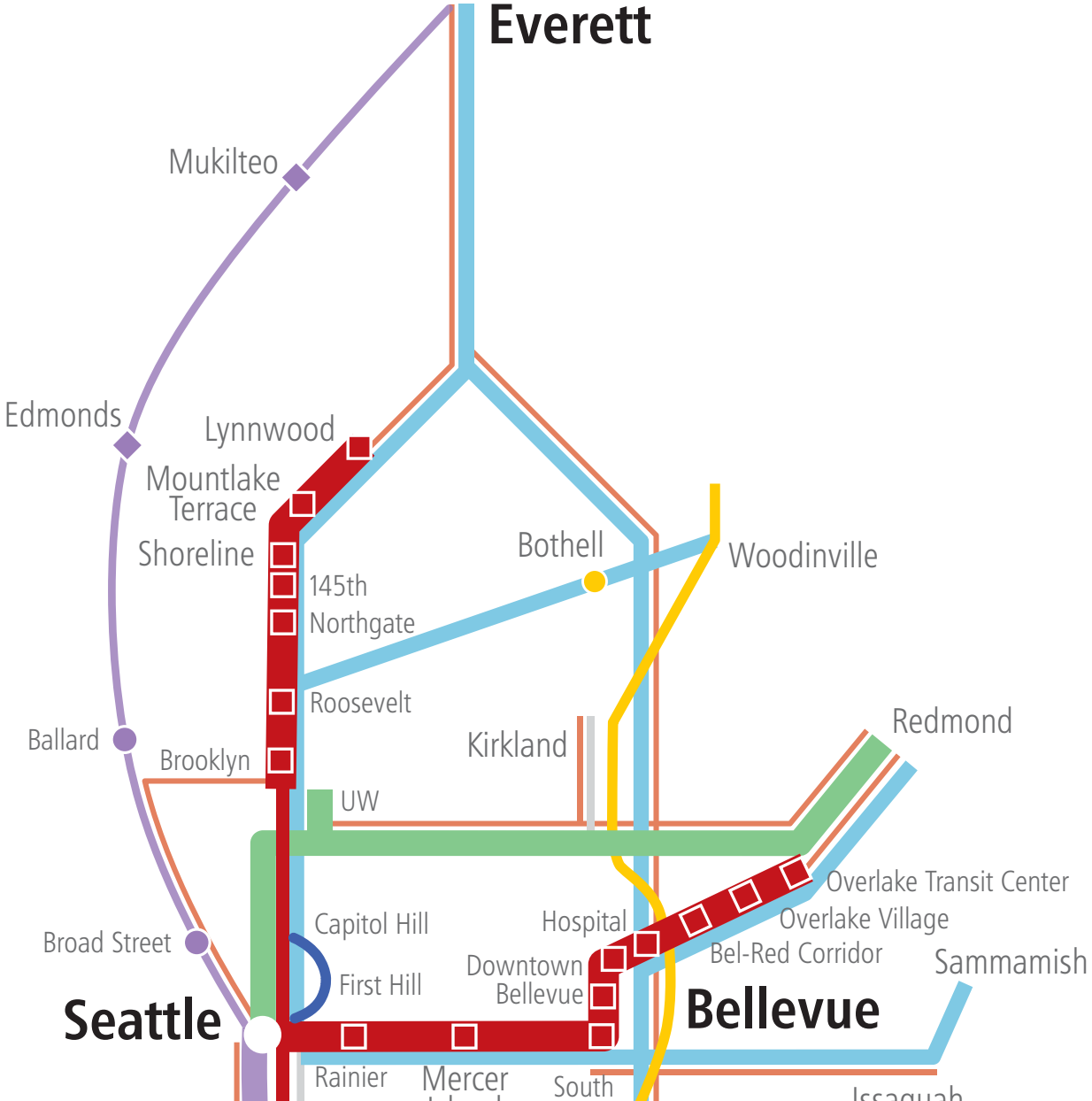
Sound Transit 2

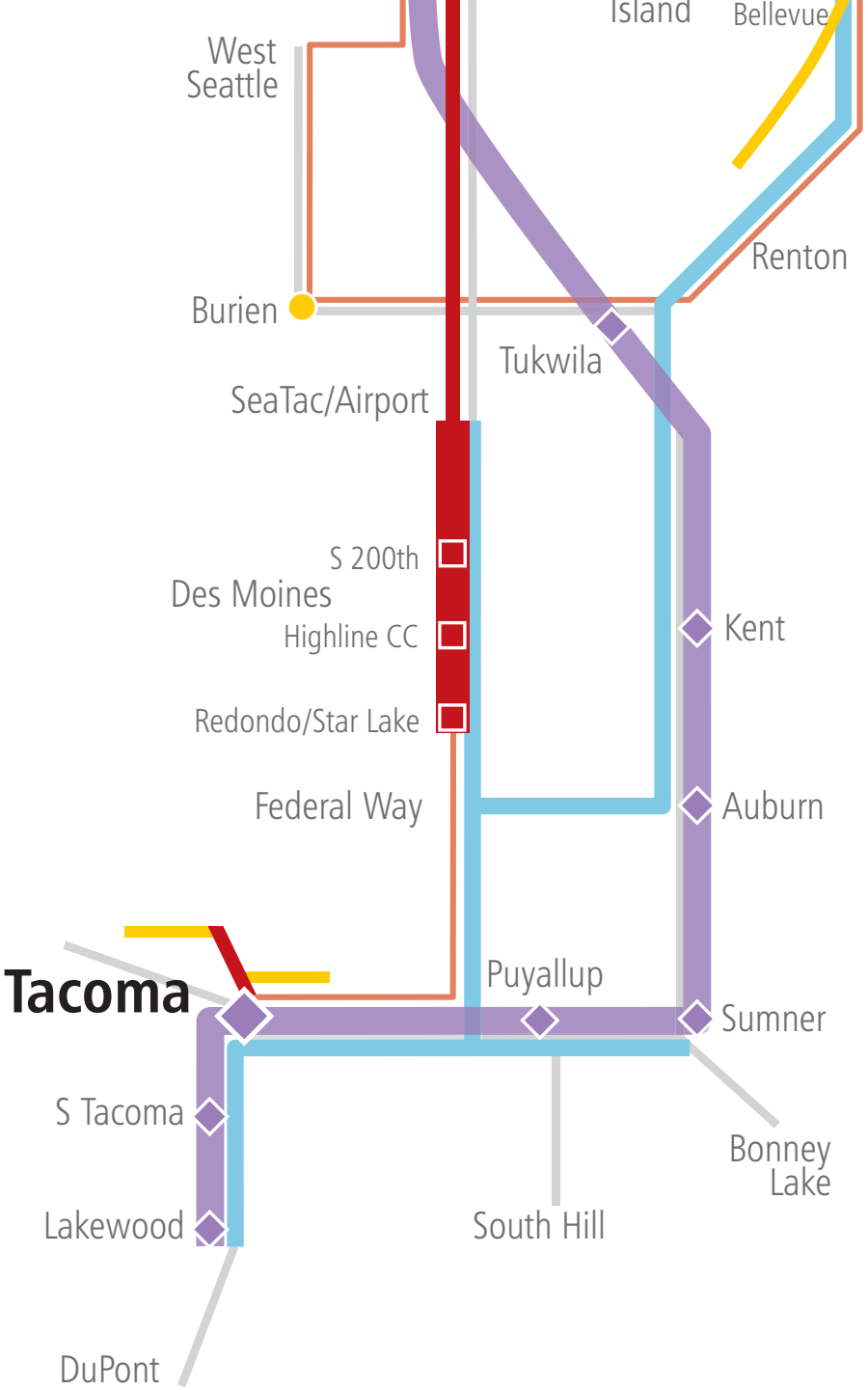
A MASS TRANSIT GUIDE

The Regional Transit System Plan for Central Puget Sound

ST2 at a glance

- Adds approximately 36 miles of new light rail, with at least 19 new stations
- Adds 4 round trip Sounder commuter rail trains between Lakewood and Seattle
- Improves Sounder stations along the entire line – north and south
- Adds 17% more ST Express regional bus service
- Adds a new streetcar connector line in Seattle





Legend

N

Link light rail

- Extension: new service and station
- Planning, environmental, design, and potential right-of-way purchase
- Existing light rail — UW to SeaTac

Sounder commuter rail

- New/improved service or station
- Provisional station subject to funding availability
- Existing commuter rail service

ST Express regional bus

- New/improved service
- New bus rapid transit (BRT) service or station
- Existing bus service

Other supporting investments

- Regional transit partnership contribution
- First Hill Link connector

ST2 expands access to regional transit system facilities across the region, such as Tacoma Dome Station, above.

As Sound Transit plans potential locations for rail stations and other facilities, evaluations of transit-oriented or joint development will occur at each location. Sustainable station development results from the combined efforts of local jurisdictions and public and private partners. Sound Transit will work with those parties and also evaluate which jurisdictions are encouraging appropriate land uses and densities to reinforce efficient land use and transit connectivity.

Approximately midpoint in the ST2 program implementation, or when the environmental review of all light rail extensions is substantially complete, Sound Transit will evaluate what projects might be funded through a new voter-approved ballot measure and consider a workplan and schedule for such a measure. Sound Transit staff will prepare an evaluation of further system expansion and submit it for Board consideration. This evaluation will at a minimum:

- Determine whether ST2 program implementation is on course as planned;
- Analyze the results of the planning studies to draw conclusions on the appropriateness of pursuing additional corridor development;
- Recommend corridors for additional high-capacity transit development; and
- Assess the potential tools available and/or necessary to develop financing strategies for such corridor development (for instance, federal or state grants, additional revenue authority, use of existing revenues or other funding partnerships), along with associated risks and opportunities.

Managing the existing system

System Access Program

Convenient and efficient access for customers using the system is critical to the effectiveness of the regional transit system and for expanding system ridership. A System Access Program is established to promote the development of facilities to improve connections between surrounding communities and stations, transit centers and other customer boarding locations.

The System Access Program aims to leverage existing or planned investments at or near these facilities. For example, in order to improve bicycle and pedestrian access, funds from this program could be matched with funds from other parties to connect a station to the regional trail system. Candidates for application of the program include the Tukwila/International Boulevard and Sea-Tac

International Airport stations, where trails and bicycle lanes lie to the east and west. A new trail extension is planned to the west, but additional facilities are needed to complete bicycle connections to the stations. Other potential System Access Program uses may include new and/or improved pedestrian and bicycle facilities, additional bus bays for expanding connecting bus service, capital improvements that improve bus speed and reliability along routes connecting to stations, and improved passenger drop-off/pick-up facilities at stations.

A portion of the program's funds will be allocated through a competitive process where project ideas will be regularly solicited and evaluated for funding consideration. Evaluation criteria will be established and may include, but are not limited to, the level of matching funds from outside sources, the ability to overcome small barriers or close small gaps that are present along pedestrian and bicycle routes, and the potential to reduce reliance on auto use and parking for station access.

Buses and ferries are an integral part of the rail expansion in ST2 by extending the reach of rail far beyond immediate station areas.

Bus/ferry-rail service integration

Buses and ferries are an integral part of the rail expansion in ST2. Sound Transit is working closely with its transit partners – Everett Transit, Community Transit, King County Metro, Pierce Transit and Washington State Ferries – to develop a coordinated bus/ferry-rail network that fully utilizes the unique qualities and strengths of all transit modes. By coordinating bus/ferry-rail service planning and by designing stations for efficient intermodal connections, the rail expansions proposed in ST2 can strengthen existing bus and ferry systems and achieve region-wide mobility benefits that extend far beyond the rail alignments.

Providing rail service in high-traffic areas allows buses to avoid congested segments of the roadway system, improving transit's on-time performance and efficiency. Convenient bus and ferry connections to rail stations extend the geographic reach of rail far beyond the immediate station areas, providing additional transit connections and expanded regional and neighborhood transit access to the high-capacity transit system. Since some bus service that operates parallel to rail will no longer be needed, the savings in bus service hours can be reinvested to increase bus service elsewhere.

Thousands of comments from community members helped shape the ST2 plan.

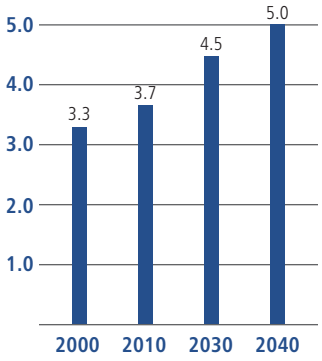
A community effort

The public played a key role in shaping Sound Transit's Long-Range Plan and ST2, and will play an even greater role in ST2's implementation.

Sound Transit will continue its open public involvement process with many opportunities to inform and involve the community. This is particularly important when planning, designing and constructing specific projects so that the unique character and needs of each community can be reflected in the finished project.

Regional population growth

Snohomish, King, Pierce and Kitsap counties (in millions)



Source: Puget Sound Regional Council

The Sound Transit District

The Sound Transit District is more than 1,000 square miles with a population of about 2.86 million people. There are currently more than 50 cities in the district, which includes most of the urban areas of King, Pierce and Snohomish counties.

Sound Transit is governed by an 18-member board of directors made up of local elected officials including mayors, city council members, county executives and county council members from within the Sound Transit District, and the Secretary of the Washington State Department of Transportation.

Annexations

After voters within the district boundaries have approved a ballot proposition authorizing local taxes to support implementation of the ST2 Plan, the Sound Transit Board may approve resolutions calling for elections to annex areas outside, but adjacent to, the Sound Transit District.

The legal requirements to annex areas into the Sound Transit District include the following:

The Sound Transit District

- Includes urbanized areas of Snohomish, King and Pierce counties
- 1,000 square miles
- 52 cities

The Sound Transit Board may call for annexation elections after consulting with any affected transit agencies and with the approval of the legislative authority of the city or town (if the area is incorporated) or with the approval of the area's county council (if it is unincorporated).

Citizens in areas to be annexed are provided an opportunity to vote on proposed annexation and imposition of taxes at rates already imposed within the Sound Transit District boundaries.

If approved by the voters, changes to the Sound Transit District boundaries may require changes in the make-up of the Sound Transit Board membership. Board membership must be "representative" of the proportion of the population from each county that falls within the Sound Transit District.

Extending service outside Sound Transit boundaries

Sound Transit may extend new services beyond its boundaries to make connections to significant regional destinations and allow areas outside of the district to function as part of the regional system.

Such service extension would require agreements with the affected local transit agency and/or other appropriate government agencies.

Sound Transit will enter into agreements with agencies beyond the district boundary to integrate fares. This will allow flexible transfers between various transit operators and prevent people who live outside the district from being penalized financially for making regional trips by transit instead of by automobile.

Benefits of the Plan

Transportation improvements are clearly linked to the growth, development, quality of life and economic vitality of a region. ST2 proposes a range of transit improvements building on the investments Sound Transit has already made, with major extensions of Link light rail to serve more of the Central Puget Sound region's urban centers, along with improvements in Sounder commuter rail and enhancements to ST Express bus services and facilities. These improvements add major new capacity in the region's most congested corridors to help serve the transportation demands of the people and businesses already here, as well as anticipated growth.

Transit investments create value within a community that goes beyond where or how many projects are built. Personal mobility, regional connections, the availability of transportation alternatives, and impacts on growth patterns, quality of life and the economic well-being of the region are all tangible outcomes that must be considered in deciding on transit investments.

The regional transit improvements included in ST2 will have many benefits for people throughout the Puget Sound region and will further the realization of the long-term growth management and quality of life goals embodied in Vision 2040, the Sound Transit Long-Range Plan and local land use policies. Some of those benefits are briefly described below, and in more detail in Appendix C.

Table 1: Regional transit ridership and transfer rate

	Existing in 2006	2030 without ST2	2030 with ST2
Daily			
Transit trips	329,000	482,000	544,000
Transit boardings	424,000	661,000	808,000
Annual			
Transit trips	98 million	145 million	165 million
Transit boardings	127 million	199 million	246 million
Percent using ST	12%	40%	65%
Transfer rate	1.29	1.37	1.49

Table 2: Summary of projected Sound Transit ridership by mode in 2030

	Annual riders	Daily riders
Link light rail	86.5 million	280,000
Tacoma Link	2 million	6,000
Sounder commuter rail	6.5 million	24,000
ST Express bus	14 million	48,000
Total	**109 million**	**358,000**

With the ST2 Plan, transit ridership in the region is projected to grow by more than 65 percent over 2006.

Transit ridership

By 2030, the completed projects in *Sound Move* and ST2, along with continued growth in people riding local buses, means that public transit in the Sound Transit District will be carrying an estimated 165 million trips a year, twice as many as in 1996. Over 100 million of these trips will be on Sound Transit. Most importantly, these new transit trips will be concentrated in the region's most congested corridors on bus routes and rail lines serving the region's densest downtowns and urban centers.

The most important measure of any transit investment is whether it attracts riders and serves them well. The most direct way to measure this factor is the number of people riding transit. With the ST2 Plan, transit ridership in the region is projected to grow by more than 65 percent over 2006.

Table 1 compares regional transit ridership in 2006 with ridership projections for 2030, with and without the ST2 investments.

Table 2 summarizes the daily and annual boardings projected for Link light rail, Sounder commuter rail and ST Express bus in 2030 with the ST2 Plan.

Transit reliability – that is, on-time performance – is ensured through exclusive rights-of-way that are completely free of delays from traffic congestion.

Transit capacity

The capacity of rail transit is a combination of the size of the vehicles and how frequently they run. As with highway capacity, the important measure for rail capacity is the maximum passenger carrying capacity during the peak period, when service is most in demand. This is usually referred to as "peak passengers per hour in the peak direction." Projected ridership for Link light rail in 2030, seven years after ST2 system build-out, shows it will have capacity to meet demand well into the future.

The per-hour and all-day passenger moving capacity of the ST2 light rail system is significant, especially compared to a roadway of similar width with mixed traffic.

The difference between the ultimate system capacity and the ridership forecast shortly after opening represents the excess capacity available to accommodate a large amount of future ridership demand in the decades after the system is built. **Table 3** presents the hourly passenger capacity of the ST2 light rail system at points in the system with varying frequencies of train service, at three different loading standards: all passengers seated, a comfortable level of standing passengers and a "crowded" load that might only be accommodated during peak times for short segments, such as a major event.

Table 3: Light rail system capacity (passengers per hour per direction)

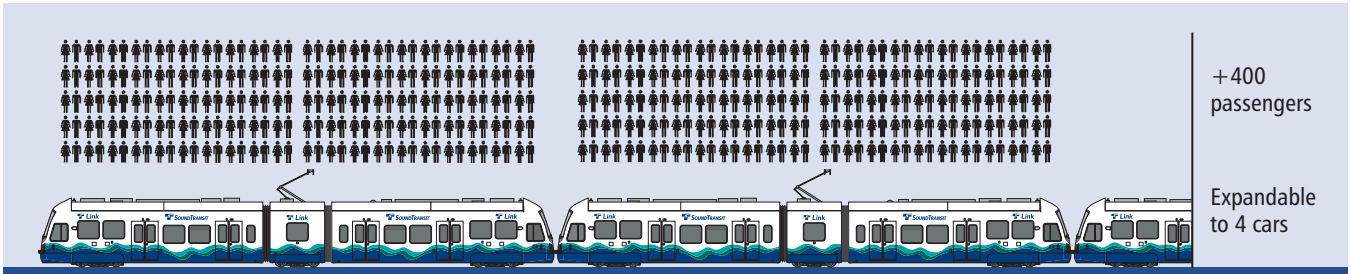
Peak frequency (minutes)	4-car trains per hour	Seated capacity (74 per car)	Comfortable capacity (150 per car)	Crowded capacity (200 per car)
2	30	8,880	18,000	24,000
4	15	4,440	9,000	12,000
6	10	2,960	6,000	8,000
8	7.5	2,220	4,500	6,000

Travel time savings and reliability

As the region's population grows, Sound Transit can serve the rising demand by increasing the frequency and length of light rail trains. A four-car light rail train can carry up to 800 people. At maximum capacity, running four-car trains every four minutes offers the ability to move 12,000 riders per hour in each direction, or 24,000 riders per hour in both directions.

Within the Sound Transit District, bus travel times slow by about one percent per year, mostly due to increased road congestion and increased pedestrian activity in centers. Without improvements in transit, existing bus travel times would be expected to be about 22 percent slower by 2030.

Expanding the region's network of fixed guideway transit operating in its own right-of-way separate from roadway congestion helps protect transit riders from increasing travel times. Travel times for drivers will improve as more people get out of their cars and use transit, providing more room on the road.



Light rail system capacity grows with demand

Tables 4 and 5 illustrate the expected travel time savings for the region's drivers and transit riders, achieved by the investments included in the ST2 Plan. Looking ahead to 2030, seven years after ST2 investments are complete, the region's highway drivers and transit riders are projected to save about 25 million and 19 million hours a year respectively.

Reliability means arriving at the same time every time, regardless of gridlock or weather conditions. Reliability is a critical factor in how people plan their travel and budget their time. Transportation system reliability has continued to decline in the Puget Sound region for several decades, both for car drivers and for transit riders. This is primarily related to increases in the severity of traffic congestion, and in the greater likelihood of congestion occurring at any time of day or on any day of the week.

When people need to arrive somewhere by a specified time, whether to be on time for work, or to catch a plane or to watch a child's soccer game, they know that if the trip involves one of the region's most congested corridors at peak hours they should allow a great deal of extra time to get there. Increasingly, the problem of congested peak hours has spread to all hours of the day and even to the weekends.

Buses are caught in the same traffic as cars and trucks. Freeway HOV facilities speed buses, but even these ramps and lanes often break down in the crush of peak period traffic, bad weather and accidents. Sounder commuter rail and Link light rail, although they share some grade crossings with vehicles, operate on their own rights-of-way free from conflicts with other traffic.

Reliability on streets and highways is affected by many things including accidents, stalled vehicles and weather conditions, but the most important factor in the Central Puget Sound region is the volume of traffic and delays caused by congestion.

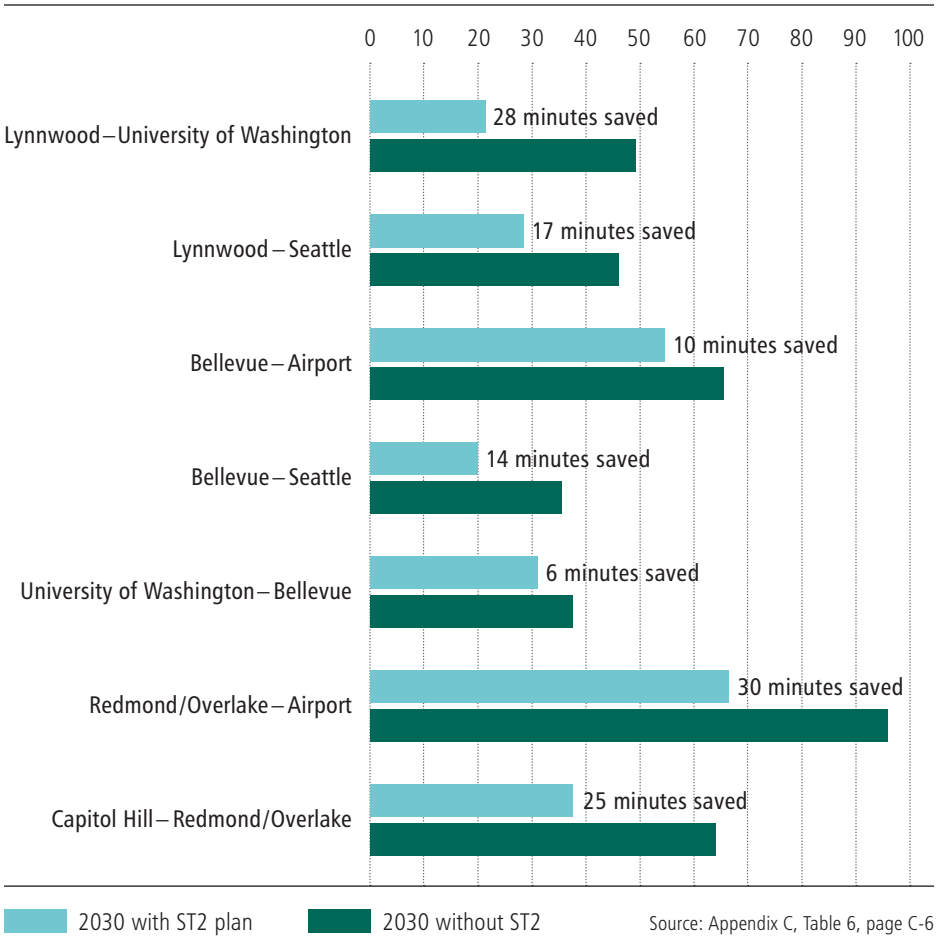
Table 4: Projected travel time savings for drivers and freight

	Drivers & freight 2030 with ST2
Reduction in annual vehicle miles traveled (switched to transit)	268 million
Annual highway delay reduced	25 million hours

Table 5: Projected travel time savings for transit riders

	Transit riders 2030 with ST2
Daily hours saved	60,000
Total annual hours saved	19 million

Projected average transit travel times



Source: Appendix C, Table 6, page C-6

Each year, rising congestion means drivers have to allow more and more time to reach their destinations. This is illustrated by the travel time allowances at right that are necessary to have a 95 percent chance of arriving on time.

WSDOT tracks reliability on the freeways for major commutes between pairs of cities, and calculates "95 percent reliable travel times." This is the amount of time a driver needs to plan for to arrive on time 19 times out of 20.

WSDOT data for major corridors shows reliability on the region's highways to be steadily declining. **Table 6** shows WSDOT's estimates of how much time a driver needs to allow for travel between certain points in the regional system due to the unpredictability of highway travel in the region.

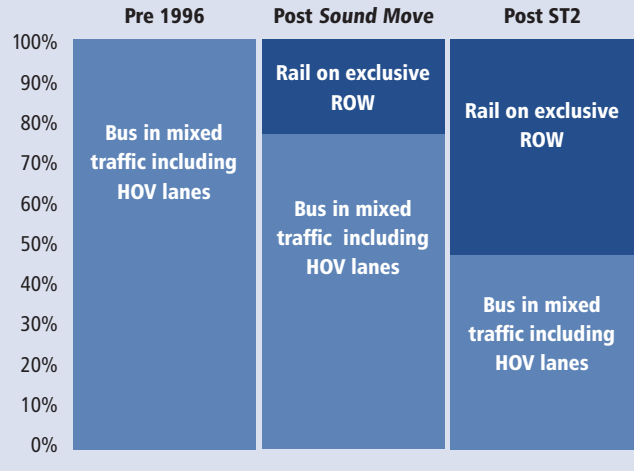
Transit reliability is related to a number of factors, but most significantly to the portion of the trip that occurs in exclusive right-of-way. **Figure 1** illustrates the increased access to exclusive right-of-way that will be experienced by the region's transit riders with ST2.

Table 6: Regional highway travel time reliability

Route description	Travel time at posted speeds	Average peak travel time	Travel time for 95% on-time arrival	On-time arrival % increase
From Seattle	(in minutes)	(in minutes)	(in minutes)	
Seattle–Everett	24	43	60	40%
Seattle–Redmond via SR 520	15	30	44	47%
Seattle–Bellevue via I-90	11	18	32	78%
Seattle–Bellevue via SR 520	10	21	32	52%
Seattle–Issaquah	16	23	37	61%
Seattle–SeaTac	13	19	28	47%
Seattle–Federal Way	22	37	56	52%
From Bellevue				
Bellevue–Everett	23	44	62	41%
Bellevue–Seattle via I-90	11	28	46	64%
Bellevue–Seattle via SR 520	10	26	38	46%
Bellevue–Tukwila	13	33	45	36%
From other locations				
Renton–Auburn via SR 167	10	20	33	65%

Source: WSDOT Gray Notebook: Measures, Markers, and Mileposts 9/30/07 p.68

Figure 1: Percentage of passenger miles in mixed traffic vs. exclusive right-of way



Transit reliability is related to the portion of the trip that occurs in exclusive right-of-way. As the percentage of rail trips increases, transit reliability will also increase.

Sound Transit's Link light rail operates entirely on exclusive right-of-way. In addition, most of the right-of-way is grade separated with no interference from traffic. Even where there is no grade separation, Link light rail operates in exclusive right-of-way with signal preemption. This allows the service to maintain a very high level of reliability at all times of the day.

Upon completion of the ST2 investments, the share of all transit riders in the region using Sound Transit's services grows from 12 percent today to 65 percent in 2030. Much of the bus service in new rail corridors can be reinvested elsewhere in the region, resulting in an overall increase in transit service and access beyond the rail lines.

Transit system accessibility

The reach of the regional transit investments made in *Sound Move* and in ST2 is much greater than just the immediate vicinity of rail stations and transit centers. **Figure 2** shows the access to the regional light rail and commuter rail systems when all ST2 improvements are in service. It depicts the geographic coverage of an average ½ mile walk access and average 2½ mile park-and-ride access to the rail stations, and the reach of existing local bus services (including an average ¼ mile walk distance to the bus) that would allow access to the rail system with one transfer. Within the Sound Transit District, over 70 percent of residents and over 85 percent of employees would have convenient access to the region's rail system in 2030.

Activity center drive-alone travel reductions

Table 7 on the following page presents the percentage of work and college trips made by transit riders to a selected set of regional centers. Increasing access to regional centers by transit reduces the need for automobiles that contribute to roadway congestion and delay, fuel consumption and air pollution, and use of scarce land resources for parking. The existing transit share data is from the 2000 U.S. Census Journey-to-Work survey as compiled by PSRC. Percentages include ridership on scheduled fixed-route transit service. Excluded are paratransit, dial-a-ride, carpools and vanpools.

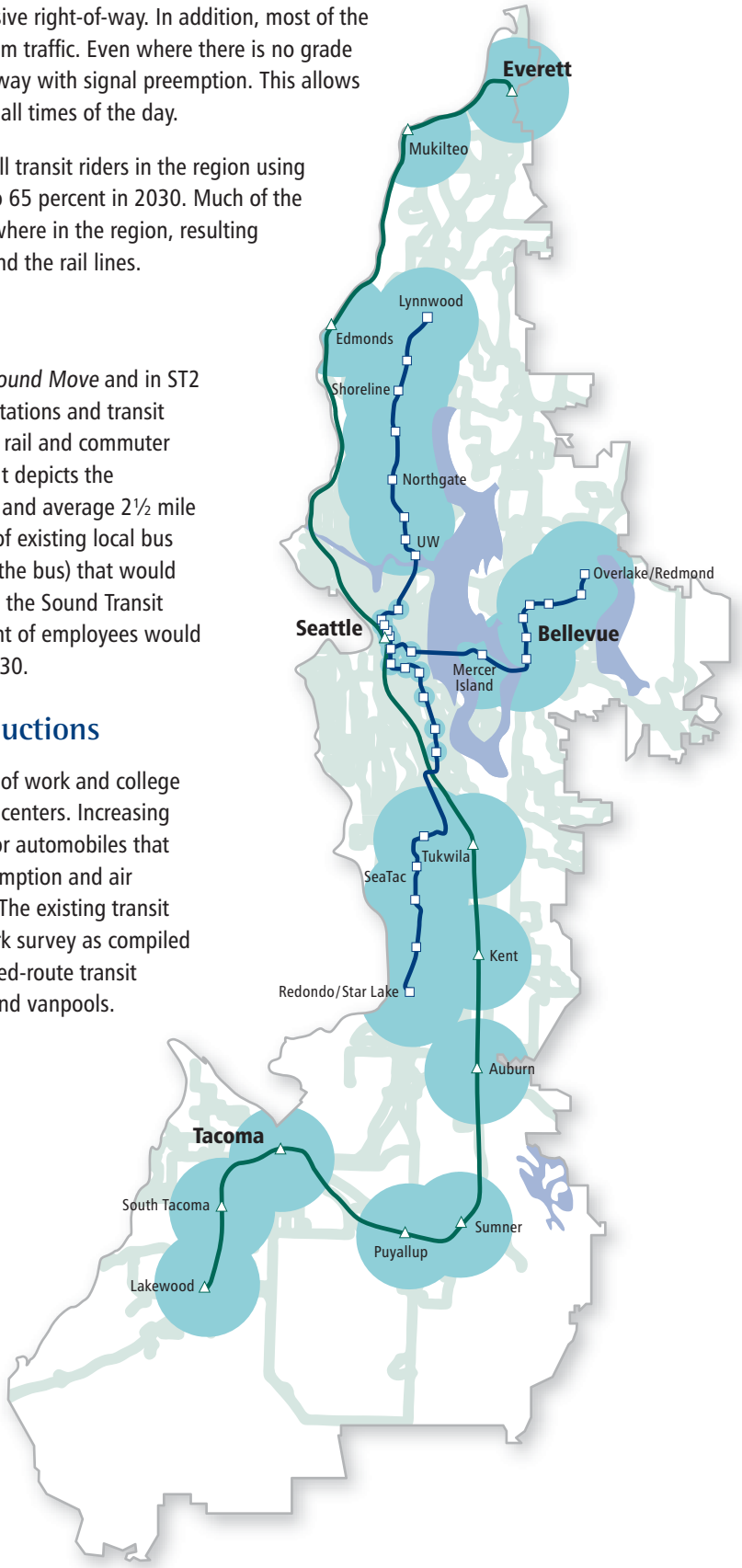


Figure 2: Combined regional rail acccess

As shown in the shaded areas, the ST2 rail investments would be accessible to 70 percent of the region's population and 85 percent of its jobs in 2030.

Note: This does not include areas served by ferries or bus routes that are outside the Sound Transit District.

Table 7: Projected activity center mode splits

	Existing transit share of commute trips	ST2 2030 share of commute trips
Northgate	6%	9%
University District	20%	33%
Downtown Bellevue	8%	12%
Downtown Seattle	40%	50%

Table 8: CO_2 equivalents (E) of ST2 emission reductions[1]

ST2 annual average emission reductions	
138,943 metric tons CO_2E	
which is equivalent to	
25,400	passenger vehicles;
323,100	barrels of oil consumed;
1,900	gasoline tanker trucks;
12,300	single-family homes;
1,000	acres of forest preserved;
700	railcars of coal; or
47,900	tons of landfill waste

[1] Source: EPA Clean Energy Calculations and References, http://www.epa.gov/cleanenergy/energy-resources/refs.html.

Vehicle miles traveled, fuel use and greenhouse gas reductions

New transit riders using the investments in the ST2 Plan will reduce daily vehicle miles traveled in the region by about 870,000 miles per day, or 268 million miles per year. That equates to annual fuel savings of about nine million gallons. Not burning that fuel would save the region about 360 metric tons of equivalent CO_2 emissions each day and approximately 100,000 tons per year in 2030. According to the federal Environmental Protection Agency, this level of emission reductions is equivalent to the emission production levels included in **Table 8**.

Transportation system cost and delay reductions

According to the U.S. Census Bureau, in 2003 the average family in our region spent 18 percent of disposable income on transportation, more than any other expenditure except housing. The average household has 2.3 people, owns 2.4 cars and spends $9,350 a year on transportation.

The most expensive costs of driving are owning and insuring a vehicle. A family that can own one less car because of better transit service can save thousands of dollars a year on transportation. A family that owns the same number of cars, but drives less will save on vehicle operating costs – gas, oil, parking, tires and maintenance. For example, based on current average vehicle fuel economy and fuel cost of about $4.00 per gallon, ST2 transit investments would save the region about $100,000 per day, or about $37 million per year.

For those commuting by transit to places with high parking costs, the savings in parking are substantial. For example, a monthly PugetPass good for unlimited $2.25 rides (the two-zone peak hour fare on King County Metro) costs $81. According to the PSRC, the average cost of parking in the region's downtowns in 2006 was $138 a month. For the average transit commuter to Downtown Seattle, savings in parking would be approximately $700 a year, on top of the savings on gas and other vehicle operating costs.

As important as out-of-pocket expenses, the ST2 investments would also save about 25 million hours of delay per year for drivers and freight, and 19 million hours per year for transit riders. Rather than sitting in traffic or slower transit, residents would be able to better use their time with their families or in productive work. Residents of the region would save over $600 million per year in today's dollars, based on an average value of time of about $14 per hour, about half the region's average wage rate.[2]

[2] Sound Transit, Draft Benefit-Cost Methodology Report, June 2008.

Because it runs on its own tracks separated from traffic, light rail is quick and reliable.

Paying for the System

Financial plan framework

State law provides the basis for funding regional transit investment through authorization of voter-approved taxes and bonding. The ST2 Plan will be funded by a combination of existing local taxes (four-tenths of one percent sales and use tax, three-tenths of one percent motor vehicle excise tax to be ended after 2028), new voter-approved local taxes (an additional five-tenths of one percent sales and use tax), federal grants and fares. Sound Transit will issue bonds backed by local tax collections within the Sound Transit District to help implement the ST2 Plan.

The agency will seek legislative authority to replace or substantially reduce its reliance on the sales and use tax as the primary funding source for regional transit improvements, consistent with all contractual commitments. In order to replace the revenue that would be lost by reducing or eliminating the sales and use tax, the agency will seek legislative authority to raise an equal amount of revenue from other sources more directly related to regional transportation such as tolls, user-based fees, vehicle or other transportation related taxes.

ST2 quickly expands ST Express bus and Sounder commuter rail while building out the regional light rail system.

Funding

The proposed plan is built on the following funding elements (all dollar values include inflation and represent year of expenditure dollars):

***Sound Move* surplus:** Revenue generated from Sound Transit's existing *Sound Move* taxes (four-tenths of one percent sales and use tax and three-tenths of one percent motor vehicle excise tax), will continue to be used in addition to grants, fares and other miscellaneous sources. The revenue generated from *Sound Move* surplus that is available to be applied to the ST2 program is estimated to be $2.3 billion.

ST2 sales and use tax: The plan will seek voter approval to raise the local sales and use tax an additional five-tenths of one percent. Revenue from the five-tenths of one percent sales and use tax increase is estimated to generate $7.8 billion through 2023.

ST2 rail investments result in an 8.9 percent rate of return to the region , paying for themselves in about a decade.

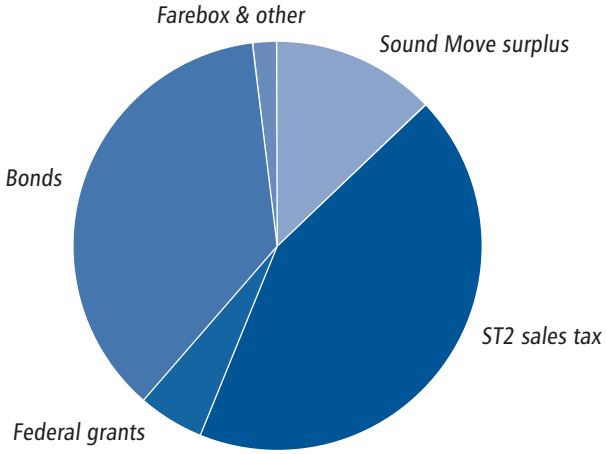
Federal support: The ST2 Plan assumes an additional $895 million in federal grants to build out the system, supplementing local resources. These federal grants for capital programs include Federal Transit Administration formula grants and full funding grant agreements. No state or local grants are assumed for implementing the ST2 Plan.

Bonding: Because transit facilities provide benefits over a long span of time, it is reasonable to finance a portion of their construction over a period that extends well beyond the construction timeframe. Sound Transit's debt financing capacity will be calculated by evaluating all revenues and deducting total operating expenses for net revenues available for debt service. The Sound Transit Board recognizes that its future bondholders will hold first claim against taxes pledged as repayment for outstanding bonds. The ST2 Plan includes an estimated $6.5 billion in bond financing from 2009-2023.

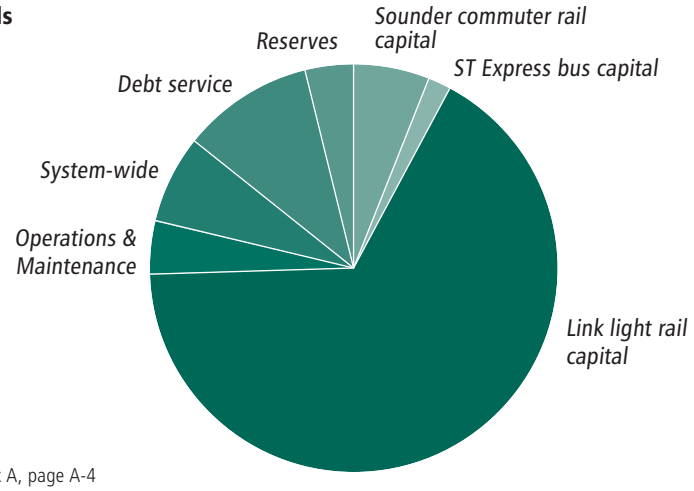
Fares: Sound Transit currently collects fare revenues from passengers using the system. As the ST2 system is built out, the agency will continue to collect fares and other operating revenue. The ST2 related fares and other operating revenues are estimated to be $219 million from 2009-2023.

Interest Earnings: The ST2 related interest earnings on net cash balances are estimated to be $143 million from 2009-2023. Financial policies attribute these revenues to fund system-wide costs.

Sources of funds



Uses of funds



Source: Appendix A, page A-4

Estimated costs

The ST2 Plan will cost an estimated $17.8 billion in capital and operating investments to expand the regional high-capacity transportation system – Link light rail, Sounder commuter rail, and ST Express bus service. The capital and other associated costs that would be incurred from 2009 through 2023 are as follows:

Sounder commuter rail: $1.1 billion for additional track space leases, locomotives and coach cars, maintenance facilities, and stations and improvements.

ST Express bus: $344 million for expanded park-and-rides, transit centers, station access improvements, bus fleet and maintenance facilities.

Link light rail: $11.8 billion for approximately 36 miles of light rail to extend service to Lynnwood, the Overlake Transit Center area of Redmond, and Redondo/Star Lake. The light rail cost estimate includes the First Hill streetcar connector, Tacoma Link extension partnership funds and the Eastside rail corridor partnership.

Transit operations and maintenance: $730 million through 2023 for new light rail, commuter rail and regional bus services. The ST2 Plan funds transit operations indefinitely. The costs estimated here are for the first 15 years of ST2 transit operations through 2023.

Sounder commuter rail service led the nation in ridership growth in the first quarter of 2008. Public input supports expansion of this popular service.

System-wide activities: $1.3 billion through 2023. ST2 will fund system-wide expenditures, including the agency's research and technology and fares programs, future phase planning, administration and other expenditures that are necessary to maintain and plan for regional transit consistent with the voter-approved system plan.

Debt service: $1.8 billion through 2023. In order to finance the plan, the ST2 Plan anticipates the issuance of 30-year bonds as necessary to maximize the financial capacity required to complete the plan. The $1.8 billion in debt service reflects costs for 2009-2023 for bonds issued for ST2 projects. Debt service will continue until the final bonds are retired.

Reserves: $708 million through 2023. The plan funds estimated bond reserves and a two month operations and maintenance reserve.

ST Express ridership grew by 14 percent in the first half of 2008. ST2 expands this service in the highest need corridors by up to 30% starting in 2009.

Table 9: Uses of funds*

Uses of funds	
Capital expenditures	
Sounder commuter rail	1,101
ST Express bus	344
Link light rail	11,821
System-wide activities	153
Total capital	**13,418**
O&M expenditures	
Sounder commuter rail	206
ST Express bus	232
Link light rail	292
System-wide activities	1,141
Total O&M	**1,871**
Other	
Debt service	1,835
Contributions to reserves	708
Contribution to system-wide	
Total uses	**17,832**

Table 10: Sources of funds*

Sources of funds	
Sound Move taxes	2,301
ST2 sales & use tax	7,752
Federal grants	895
Bonds	6,522
Fares & other operating revenues	219
Interest	143
Total sources	**17,832**

* All figures in millions of year-of-expenditure dollars (2009-2023, includes inflation).
Figures may not add exactly due to rounding.

Project scope and betterment control: One tool that Sound Transit has at its disposal to constrain unanticipated growth in the costs of projects during their implementation is a Board-adopted Scope Control Policy. The objective of the policy is to guide staff in responding to requests for enhancements to projects that increase scope, usually with a corresponding increase in costs. The policy requires:

- Written project scope definitions at every stage of project development;
- Cost estimates and budgets that correspond directly to the project scopes;
- Consideration of project alternatives that are within the project budgets;
- Inclusion of reasonable and responsible mitigation measures based on specific, significant adverse environmental impacts clearly identified in environmental documents, and which are attributable to those impacts;
- Baselining of the project scope, mitigation measures and budget following the Board's decision at the conclusion of the environmental process;
- Confirmation and re-alignment of project scope and budget at each major project development milestone (e.g., completion of preliminary engineering);
- Addition of partner-financed enhancements to the baseline scope, provided the addition does not negatively affect Sound Transit's project scope, schedule and budget; and
- Project budgets can be increased to incorporate enhancements above and beyond the baseline scope only through a two-thirds majority vote of the Sound Transit Board.

The capital cost estimates for the ST2 Plan were developed using standard cost-estimating techniques common in the transit industry and recommended by the Federal Transit Administration. They also reflect Sound Transit's experience in designing and building comparable facilities in the Central Puget Sound region. Sound Transit's cost estimating methods were reviewed by an independent Expert Review Panel that was appointed by the State of Washington. **Table 9** summarizes the estimated cost of building out the ST2 system and operating and maintaining all of the services contained in the ST2 Plan.

Table 10 summarizes the revenues that are anticipated to be used to pay for the ST2 Plan.

For a more detailed sources and uses of funds summary – including explanatory notes and distribution of sources and uses by subarea – see Appendix A.

The Puget Sound region is a dynamic economic engine that would benefit from reliable, safe and sustainable transit investment to maintain its vitality well into the future.

Risk assessment

Building a complex regional transit system over an extended period involves risk. Those risks and Sound Transit's approach to addressing them are summarized below.

Tax base growth risks: The plan requires projections of revenue collections over an extended period. The agency relies on an independent revenue forecast that has been reviewed by the State's Expert Review Panel. That forecast projects sales tax revenues to grow at 4.76 percent annually from 2009-2023, compared to a 6.4 percent annual growth from 1980-2005.

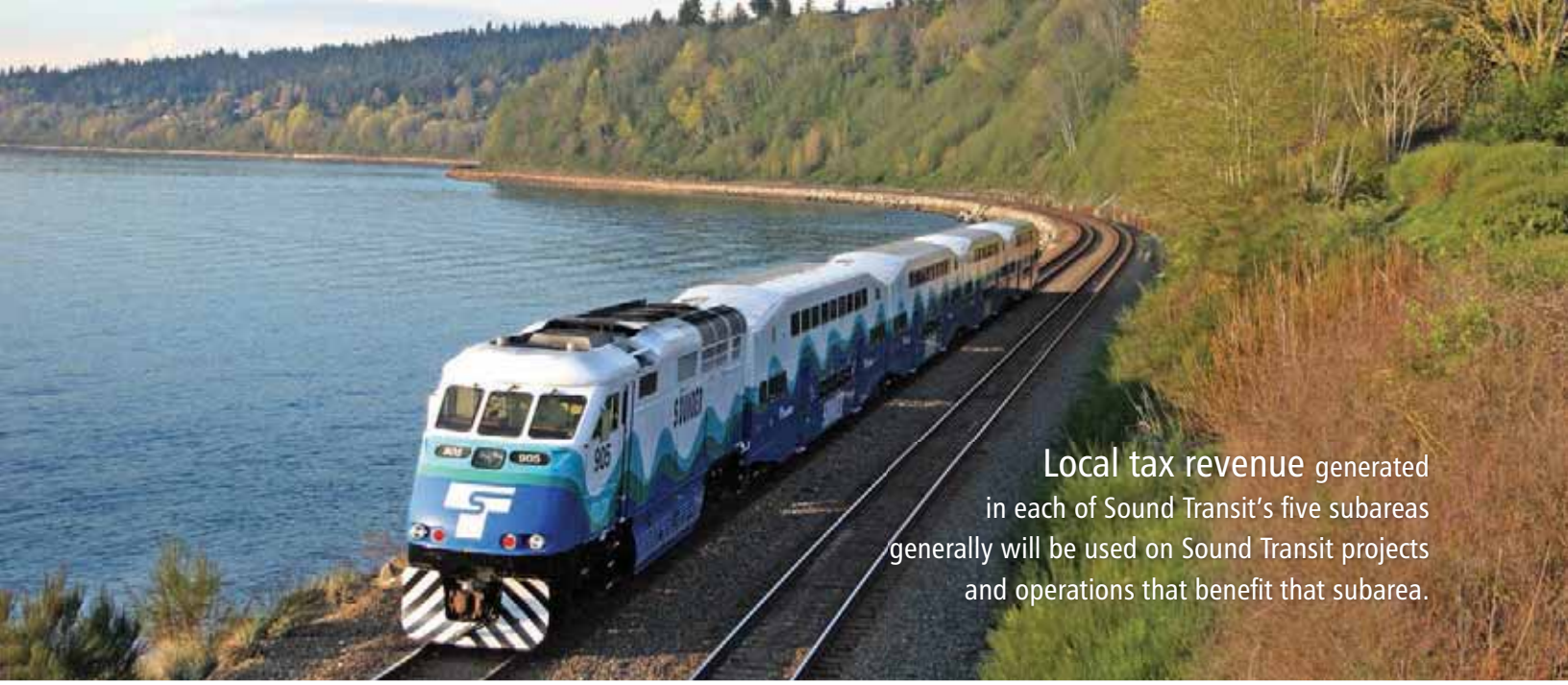
Federal funds risk: The ST2 financial plan assumes $895 million in federal funds. This assumption is based on an overall seven percent federal share of the ST2 capital program, compared with a 31 percent share for *Sound Move*. However, federal funds are contingent upon future Congressional authorization and may vary from initial ST2 projections due to federal fiscal conditions, timing of ST2 projects and competition from other transportation projects nationwide.

The ST2 Plan includes contingencies within the project budgets that allow for uncertainties and unforeseen conditions that arise during the design and construction of the projects.

Costs risks: With the exception of the light rail extension from the University of Washington to Northgate, ST2 is based on conceptual engineering estimates. The risks for costs to grow beyond initial estimates include: faster than anticipated growth in construction costs; faster than anticipated growth in real estate values; the addition of new required elements or projects not currently included in the plan; and more expensive alignments or station locations than included in the plan. The Sound Transit Board will closely monitor and manage project scope and cost risks to minimize cost increases. In addition, the ST2 Plan includes contingencies within the project budgets that allow for uncertainties and unforeseen conditions that arise during the design and construction of the projects.

The ST2 financial plan also contains additional contingency to deal with revenue shortfalls or cost increases. The agency plans to maintain a 50 percent annual contingency (after payment of operating expense) above the amount necessary to pay debt service (1.5x net coverage policy). In the event that a subarea's revenues are insufficient to cover its costs, the agency's currently approved policies provide the Sound Transit Board with these options:

- Modify the scope of the projects;
- Use excess subarea financial capacity and/or inter-subarea loans;
- Extend the time to complete the system; or
- Seek legislative authorization and voter approval for additional resources.



Local tax revenue generated in each of Sound Transit's five subareas generally will be used on Sound Transit projects and operations that benefit that subarea.

Sounder commuter rail service between Everett and Seattle, with service to Mukilteo and Edmonds, runs along the shores of Puget Sound.

Financial policies

The ST2 financial plan is based on the following principles, which are documented in the agency's financial policies and included as Appendix B. The financial policies also reflect the framework for completing ST2 and provide tools for the Sound Transit Board to respond to future conditions. For more detailed revenue and expenditure information, see Appendix A.

Distributing revenues equitably: Local tax revenue generated in each of Sound Transit's five subareas generally will be used on Sound Transit projects and operations that benefit that subarea. Subareas may fund projects or services located outside of the geographic boundary of the subarea when the project benefits the residents and businesses of the funding subarea.

Financial management: To effectively manage voter-approved revenues and to efficiently manage the transit system, Sound Transit will maintain policies for debt and investment management, risk management, capital replacement, fares and operating expenses and grants management.

Public accountability: Sound Transit will hire independent auditors and appoint a citizen oversight committee to monitor Sound Transit performance in carrying out its public commitments.

Voter approval requirement: The Sound Transit Board recognizes that the taxes approved by voters are intended to implement the system and to provide permanent funding for future operations, maintenance, capital replacement and debt service for voter-approved projects, programs and services. The Board has the authority to fund those future costs through a continuation of the local taxes authorized by the voters. However, the Board pledges that after the voter-approved plan is completed, subsequent phase capital programs that continue local taxes at rates above those necessary to build, operate and maintain the system and retire outstanding debt, will require approval by a vote of the citizens within the Sound Transit District.

Sales tax rollback: Upon completion of the capital projects in ST2 and *Sound Move,* the Board will initiate steps to roll back the rate of sales tax collected by Sound Transit. Sound Transit will initiate an accelerated pay off schedule for any outstanding bonds whose retirement will not otherwise impair the ability to collect tax revenue and complete ST2 or *Sound Move*, or impair contractual obligations and bond covenants. Sound Transit will implement a sales tax rollback to a level necessary to pay the accelerated schedule for debt service on outstanding bonds, system operations and maintenance, fare integration, capital replacement and ongoing system-wide costs and reserves.

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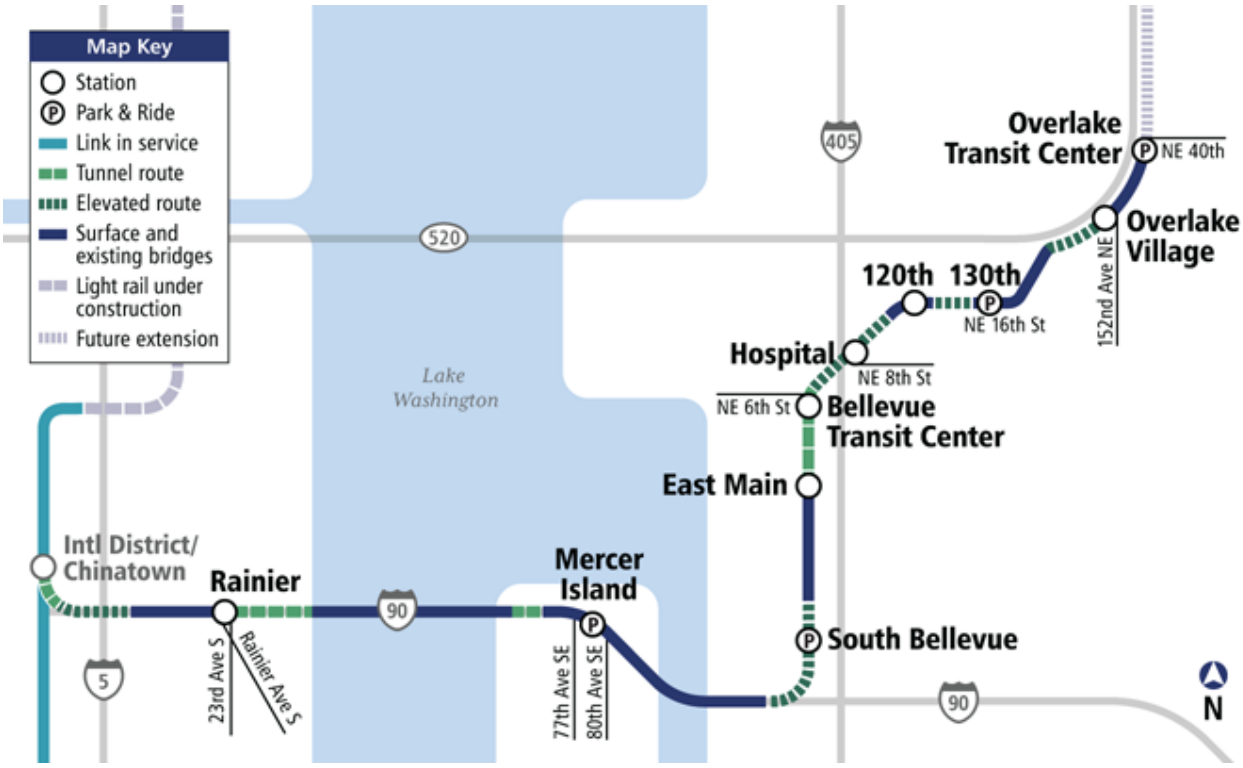
ATTACHMENT B

EAST LINK SYSTEM PLAN


Map Key
Station
Park & Ride
Link in service
Tunnel route
Elevated route
Surface and existing bridges
Light rail under construction
Future extension
Lake Washington
520
405
90
5
Overlake Transit Center
NE 40th
Overlake Village
152nd Ave NE
120th
130th
NE 16th St
Hospital
NE 8th St
NE 6th St
Bellevue Transit Center
East Main
South Bellevue
Mercer Island
77th Ave SE
80th Ave SE
Intl District/ Chinatown
Rainier
23rd Ave S
Rainier Ave S
N

ATTACHMENT C

COLLABORATIVE DESIGN PROCESS

EAST LINK COLLABORATIVE DESIGN PROCESS

MANAGEMENT PLAN

EAST LINK COLLABORATIVE DESIGN PROCESS

MANAGEMENT PLAN

Contents

January 12, 2012

Dear Team Members:

We are delighted to welcome you to the East Link Collaborative Design Team. The City of Bellevue and Sound Transit have been working to advance the East Link Project for several years, and we are entering a new phase and a new collaborative working relationship that will serve the growing needs of the region for several generations.

East Link is a critical project for the region, Bellevue and Sound Transit, providing mobility in the Trans-Lake Corridor and connecting the largest employment centers in the region. East Link is the largest ST2 project and will carry 50,000 riders per day by 2030. Over the next 20 years, Bellevue needs to accommodate 17,000 new housing units and 53,000 new jobs. Much of that growth will be Downtown, which is forecast to add over 12,000 new residents and 28,000 new employees.

On November 15, 2011, the City of Bellevue and Sound Transit approved an Umbrella Memorandum of Understanding (MOU) for intergovernmental cooperation for the East Link Project. The MOU establishes the Collaborative Design Process (CDP) we are beginning today. The adopted alignment with proposed modifications on 112th described in the MOU offers benefits to both the City and Sound Transit by providing grade separation from Seattle to the Bel-Red Corridor and by providing the means for affording the tunnel alignment through downtown Bellevue. The CDP also enables us to achieve our common interests of significant cost savings while producing a high quality product.

The CDP depends on you for its success. We expect the CDP Team to continue the spirit of collaboration established by the MOU to successfully advance the project on schedule and within the framework contained within the CDP Management Plan.

We give our thanks and support to you, the team members.

Best regards,

Joni Earl
CEO, Sound Transit

Steve Sarkozy
City Manager, City of Bellevue

Introduction

Steering Committee Endorsement

We fully endorse the Collaborative Design Process and are each personally committed to invest the time and resources needed to ensure this project reaches a successful conclusion.

City of Bellevue	Sound Transit
Dave Berg Director, Transportation Department	Ahmad Fazel Executive Director, Department of Design, Engineering, and Construction Management
Chris Salomone Director, Planning and Community Development Department	Jim Edwards Deputy Executive Director, Design and Engineering
Mike Brennan Department of Development Services Department	Don Billen Acting East Link Project Director
Mary Kate Berens Deputy City Attorney	Stephen Sheehy Sound Transit Staff Legal Counsel

Background

The City of Bellevue and Sound Transit have committed to working together in a collaborative manner throughout the East Link Project final design process in order to achieve the joint goals of reducing costs and delivering a quality project on schedule and in compliance with the applicable codes and regulations. The City and Sound Transit executed an Umbrella Memorandum of Understanding for Intergovernmental Cooperation between the City of Bellevue and the Central Puget Sound Regional Transit Authority for the East Link Project on November 15, 2011 ("MOU"). The MOU directs the City and Sound Transit to endorse a Collaborative Design Process (CDP) that will guide the cooperative efforts leading up to completion of the 60% design plans and Sound Transit baselining in the 1st quarter of 2014. This CDP establishes a decision-making framework following the principles described herein and related to achieving the goals of the MOU. In the event of any conflict between this CDP Management Plan and the MOU, the MOU shall prevail.

1. Principles, Goals, and Roles

Principles for the Collaborative Design Process

The Collaborative Design Process shall:

1. **Provide a process and structure for timely, reliable decision-making:** The CDP process and structure is designed to allow informed decisions, in a timely manner, with certainty around those decisions, at the lowest appropriate level of the organization chart. The City Council, Sound Transit Board, and executive management empower the "Collaboration Team" (the Project Management team) to make decisions in order to advance the project consistent with the project schedule.
2. **Utilize an integrated team structure at all levels of the process to facilitate collaboration**: Integrated teams of Sound Transit and City staff, with consultant expertise as needed, facilitate communication and free flow of information; allow all parties to participate in project design in real time; reinforce common goals and objectives for the project and design process; and reflect the commitment to collaboration in spirit and actions.
3. **Give full and fair consideration to all cost saving, design optimization, and design change ideas**: Staff and consultants shall consider ideas for cost savings and design optimization at all levels of the East Link Project, demonstrated by a willingness to explore all processes, methods, designs, and materials that have potential to advance goals and policy objectives. Staff and consultants shall also consider design changes that advance project goals and are consistent with adopted policy guidance.
4. **Utilize adopted policy and shared project goals to guide decision-making**: The Sound Transit Board and Bellevue City Council each have an adopted body of light rail policy to guide staff decision-making. Additionally, both parties have articulated joint project goals (detailed below) to further facilitate a common basis for decision-making. The decision-making responsibility of both parties is further defined in the Roles and Responsibilities Section.

5. **Utilize timely, best available, and transparent information as the technical basis for decision-making**: Technical information is a critical component to facilitating timely decisions and issue resolution. Information and analysis should be accurate, timely, understandable to decision-makers, and at a level of detail appropriate to the magnitude of the decision.
6. **Support proactive communication**: Parties shall endeavor to share information about the project, processes, related efforts, or any other items of relevance in a timely and forthright manner.
7. **Provide meaningful opportunity for public involvement by residents, neighborhood groups, business leaders and other stakeholders**: Public engagement is critical to successful project advancement. Sound Transit and the City shall jointly develop and implement a program, which supports the project schedule, to inform, involve, and consider the public's input as the project advances.

Joint Project Goals: The MOU identifies the joint goals of reducing costs and delivering a quality project on schedule and in compliance with applicable codes and regulations. While finding costs savings is a critical goal of the design process, it is not the only desired outcome. The parties share a common goal of developing a project with the best outcomes at a lower cost. The following non-prioritized list of shared goals will help evaluate trade-offs and guide decision-making in the Collaborative Design Process.

A. Advance engineering design while exploring and accepting scope reductions, modifications and value engineering options that result in material Project cost savings of at least $60 million, provided that such reductions and modifications continue to support the goals listed in this section:
    a. Pursue cost saving measures at all levels of the East Link Project, including contracting structures, construction methods, and standardization of materials;
    b. Ensure high quality design while reducing cost;
    c. Coordinate City and Sound Transit projects to optimize cost efficiencies;
    d. Pursue innovative design solutions that meet the purpose, function, and intent of City code requirements and Sound Transit design criteria while reducing cost, risk, and complexity. Modifications to City Code and/or Sound Transit design criteria may be considered when evaluating innovative design approaches so as not to preclude potential solutions.
    e. Design a system that can be efficiently and effectively operated and maintained.
B. Design a project that preserves environmental quality, is sensitive to the surrounding community and integrates quality urban design:
    a. Minimize adverse impacts on the natural and built environment.
    b. Provide benefits, including access and high-quality urban spaces, to existing and future residents and businesses;
    c. Coordinate City projects to optimize community benefit;
    d. Pursue sustainable innovations and design solutions that minimize operational impacts and support principles of providing a healthy environment, community, and economy into the future;

e. Prioritize noise and visual mitigation in residential areas;
f. Evaluate construction impacts and risk when making design decisions, including employing construction techniques that minimize significant disruptions to businesses, property owners, and transportation networks.

C. Advance long-term, multi-modal transportation system development:
   a. Improve transit mobility in the East Link corridor with a focus on ridership, quality of transit service, and transit accessibility;
   b. Meet regional transportation needs, including facilitating regional transit connections from non-motorized and other transportation modes;
   c. Pursue opportunities to advance local transportation objectives in coordination with the larger Project, particularly those that avoid or reduce future costs for planned projects.

D. Engage project stakeholders at defined points in the design process to provide input on possible design considerations. Provide useful and transparent information to the public about the Project status, milestones, and opportunities as the project advances.

E. Develop a project that meets Sound Transit operational and performance requirements and minimizes impacts to City infrastructure and operations.

F. Meet the objectives of the Project schedule, including major milestones, while allowing adequate time for evaluation and reliable decision-making.

G. Advance design solutions that minimize risk for all partners.

H. Support regional and local land use goals and objectives.

Roles and responsibilities of parties

Sound Transit

- **Project owner and developer:** Sound Transit is the Regional Transit Authority charged with implementing high capacity transit solutions in the Puget Sound Region. Sound Transit will design, construct, own, and operate the East Link light rail system and be responsible for any and all future liabilities associated with East Link.
- **Project manager:** Sound Transit is the Project Manager responsible for managing the East Link Project to deliver an operating light rail system by 2023. Sound Transit is responsible to develop schedules, scopes of work, administer and manage contracts, and be accountable for the Project budget. The Sound Transit Board is the final authority for all Project decisions.
- **Procurement of services:** Sound Transit will procure consultant services for all aspects of Final Design, 112th design environmental analysis, and cost reduction workshops. Sound Transit is responsible to administer and manage all contracts procured by Sound Transit, and direction to the consultant(s) will be by Sound Transit.
- **Provider of services:** Sound Transit is responsible to openly share project data and analysis to advance the project consistent with the MOU and as requested by the City and agreed to by both parties. Sound Transit is responsible to provide adequate staffing from the appropriate level within the organization to fulfill the intent of the MOU and to participate in complementary City initiatives, including but not limited to station area planning.

- **Public engagement:** Sound Transit and the City are jointly responsible for the design and execution of a meaningful public engagement program throughout the Collaborative Design Process. Sound Transit has lead responsibility for public engagement related to the design of the light rail facilities and stations. The City will have an integral role in the outreach effort for light rail facilities and stations, and Sound Transit will work with the City to define the City's role and to integrate the East Link outreach effort with the station area planning outreach program.

City of Bellevue

- **Investment and development partner:** The City is making a significant financial investment in the East Link Project, and as such, has an active role in project design, engineering, and decision-making. Further, the City is a "client" of the East Link Project. It is being built within City parks, roadways, and adjacent to major civic facilities. Bellevue residents, the business community, and visitors will live with and utilize East Link for decades to come. The City is a representative of community values and vision in the design process.
- **Permitting authority:** The City is responsible for administering state and local land use laws, development regulations, and technical codes that will apply to the planning, design, construction and operation of the East Link Project. The City will exercise its regulatory authority in review of permits and approvals related to the Project.
- **Provider of services:** The City is responsible to provide relevant city-owned data and analysis as requested by Sound Transit and agreed to by both parties. The City is responsible to provide adequate staffing from the appropriate level within the organization to fulfill the intent of the MOU. The City may, at its own expense, utilize consultants to assist in participating in the MOU to provide additional technical expertise or labor support.
- **Related independent project owner and developer:** The City is the project owner and developer of numerous projects that directly interact with the East Link project, including but not limited to 120th Avenue NE, 124th Avenue NE, and 15th Street Projects. The City is responsible for all aspects of project construction, ownership, operation, and design for these projects, except as otherwise required in permits or other agreements. The City is responsible to develop schedules, scopes of work, administer and manage contracts, and be accountable for the Project budget. The City Council is the final authority for all project decisions. The City is responsible to coordinate the advancement of these projects with the East Link Project, particularly to share information, identify opportunities to save costs at East Link Project interfaces and raise issues for resolution in a timely manner.
- **Public engagement**: The City and Sound Transit are jointly responsible for the design and execution of a meaningful public engagement program throughout the Collaborative Design Process. The City has lead responsibility for public engagement related to the City's station area planning program. Sound Transit will have an integral role in the outreach effort for station area planning, and the City will work with Sound Transit to define their role and to integrate the outreach effort with the overall public engagement program.

2. Cooperative Procedures/Decision-Making Process

DECISION-MAKING

Sound Transit and the City recognize that it is imperative to put in place a collaborative structure that can facilitate decision-making in a timely and effective fashion. This management structure, outlined below and summarized graphically in Figure 1, is intended to support coordinated decision-making and provide multiple opportunities and resources to make decisions and to identify and resolve potential barriers. ***The intention of this decision-making process is that decisions will be made at the lowest possible level of the organization chart.*** If they cannot be resolved, they will be elevated to the next level.

Leadership Group. A Leadership Group will be formed and its membership will include three members from the Sound Transit Board of Directors, three members from the Bellevue City Council, and as *ex officio* members, the Sound Transit CEO, and the Bellevue City Manager. The role of the Leadership Group shall be to ensure the CDP goals are met by providing overall guidance, timely decision-making and confirmation of existing policy direction. The Leadership Group will meet on an as-needed basis to determine issues of general policy consistent with the MOU and resolve issues consistent with the MOU that are not resolved at the Steering Committee or Collaboration Team levels. It is understood that the Leadership Group may not make decisions that are required to be made by the legislative bodies of the parties.

Steering Committee. The Steering Committee is comprised of the City Directors of Transportation, Development Services, Planning and Community Development, and the Deputy City Attorney, and the Sound Transit DECM Executive Director, Deputy Executive Director for Design and Engineering, East Link Project Director, and Staff Legal Counsel. The role of the Deputy City Attorney and the Sound Transit Staff Legal Counsel is to provide continuity from earlier stages of the project and the MOU and provide guidance in the creation of future agreements which may evolve out of the CDP. The Steering Committee is to provide high-level oversight of the Collaboration Team and meet monthly, or otherwise as needed, to engage and resolve key decisions necessary to keep the project on track. The Steering Committee has authority to approve any changes to the Collaboration Team membership, as needed to respond to project decision-making needs, and to approve the creation of additional Technical Working Groups, approve team co-leads, and to sunset Technical Working Groups. Additionally, the Steering Committee has primary responsibility for jointly selecting and directing the Independent Facilitator. Decisions by the Steering Committee will be agreed to by both agencies. The Steering Committee will elevate issues, as needed, to the Leadership Group for discussion and resolution. Meetings may be facilitated by the Independent Facilitator, and each member is responsible for attending the meetings or sending a designee.

Collaboration Team. The Collaboration Team has primary responsibility for day-to-day project oversight. The Collaboration Team consists of the City and Sound Transit lead staff and an independent facilitator:

- The City members consist of the Bellevue Assistant Directors for Transportation, Planning and Community Development, and Development Services; and the City's East Link Program Manager. The Sound Transit members consist of the East Link Deputy Project Director-PEPD, Bellevue Corridor Lead, and Bellevue Segment Managers. Collaboration Team members may change to most appropriately provide the expertise needed for decision-making during each phase of final design; the Steering Committee is responsible to approve changes in membership.
- The Collaboration Team meets as frequently as necessary (but at least weekly) to keep the project on track and is responsible for providing direction to the Independent Facilitator. Decisions will be agreed to by both partners, and the Collaboration Team will elevate to the Steering Committee issues that cannot be resolved at this level.

Independent Facilitator. The Independent Facilitator, hired and directed by the Steering Committee, has direct responsibility for ensuring timely decision-making. The facilitator may organize and manage meetings, develop consensus documents as needed, act as a go-between among participants (if necessary), and suggest compromise solutions to avoid breakdowns in communications and working relationships. The facilitator may manage logistics, information, and communication for the Leadership Group, Steering Committee, and Collaboration Team. The facilitator may also work with staff from both agencies to coordinate information sharing.

Technical Working Groups. Additionally, as shown in Figure 1, the collaborative process will be supported by Technical Working Groups. City and Sound Transit staff will co-chair each technical group. The co-chairs will report to the Collaboration Team on a regular basis. The Steering Committee is responsible to approve the creation of additional Technical Working Groups, approve team co-leads, and to sunset Technical Working Groups, as needed to meet the goal of advancing the East Link Project. Initial working groups will consist of the following:

- Design and Value Engineering: This group will review design progress, identify possible cost savings, resolve Preliminary Engineering (PE) comments, resolve other City comments, advance design development and mitigation associated with the 112th design modifications, discuss possible design changes, and participate in the VE process. The primary responsibility of this group is to ensure adequate resources are available to support all aspects of the design development in Bellevue (e.g. transportation, parks, public utilities, land use, etc.) and to reach agreement on 60% design plans in the fall of 2013 that can serve as the basis of cost estimating for project baselining and final land use approvals. Other deliverables will include: cost savings evaluation, including documentation of cost savings ideas and resolution; proposed 112th design configuration; integration of the Sound Transit art program (STart); value engineering at points shown in the project schedule; review and comment on the design as it progresses; identification of code amendments that may be necessary to facilitate design decisions for the Code Amendment and Permitting Framework technical working group to consider; and resolution of PE comments, and other comments received.
- MOU Accounting and Cost Estimating: This group will work cooperatively to fulfill the financial accounting tasks outlined in the MOU, including tasks identified in Section 4.0 City Funding

Contributions for C9T Tunnel, and prepare the documentation to demonstrate completion of these tasks. This group is also responsible to work collaboratively to jointly review the final design consultant's cost estimating deliverables, resolve issues, and identify elements and timing for independent review of the cost estimates to improve confidence in the final design consultant's cost estimate.

- Code Amendment and Permitting Framework: This group will work cooperatively to integrate the Code Amendment and Permitting Framework into the CDP as described in Exhibit G of the MOU. This group will also work collaboratively to develop the Permit Processing Plan for the East Link Project as described in Exhibit E, Task 1.5, of the MOU. Deliverables will include: proposed land use code amendments that allow for a consolidated land use permitting process, accommodation of light rail and related facility uses, extended vesting, and a process for administrative modifications for code requirements that are determined to be impracticable or infeasible; amendments to other City codes as needed to resolve identified technical code conflicts; and a Permit Processing Plan. The code amendment deliverables are intended to be completed by December 31, 2012. Components of the Permit Processing Plan are intended to be informed by the proposed code amendments and will be developed as soon as is practicable. If the City Council approves land use code amendments that allow for a negotiated Development Agreement (DA) for the East Link Project, this group will prepare the DA that describes details of the consolidated permit process for consideration by the legislative bodies of Sound Transit and the City of Bellevue including the project scope, vesting process, decision-making authority, and the final Permit Processing Plan.
- Private Utility Coordination: This group will work cooperatively to require private utilities located in the City right-of-way to relocate. Deliverables will include a coordinated plan for third party relocation.
- Public Outreach and Government Relations: This group will develop and implement a plan and schedule for outreach activities to the public and stakeholders, including regular reports and briefings to the City Council and the Sound Transit Board. The group will establish a framework for sharing information between agencies, informing and engaging the public, and compiling feedback for consideration during final design. Deliverables will include: a community outreach plan, a timeline for public input, a protocol for property owner communications, and a timeline for Sound Transit Board and City Council briefings.
- Station Area Planning: This City-initiated group will coordinate the City's station area planning with the ST final design process. The group will exchange schedules of when relevant decisions are expected so that coordination can occur. This group will review concepts and develop recommendations to address issues raised through the SAP process. Deliverables will be determined once the schedules are exchanged since the CDP anticipates support of the East Link schedule.

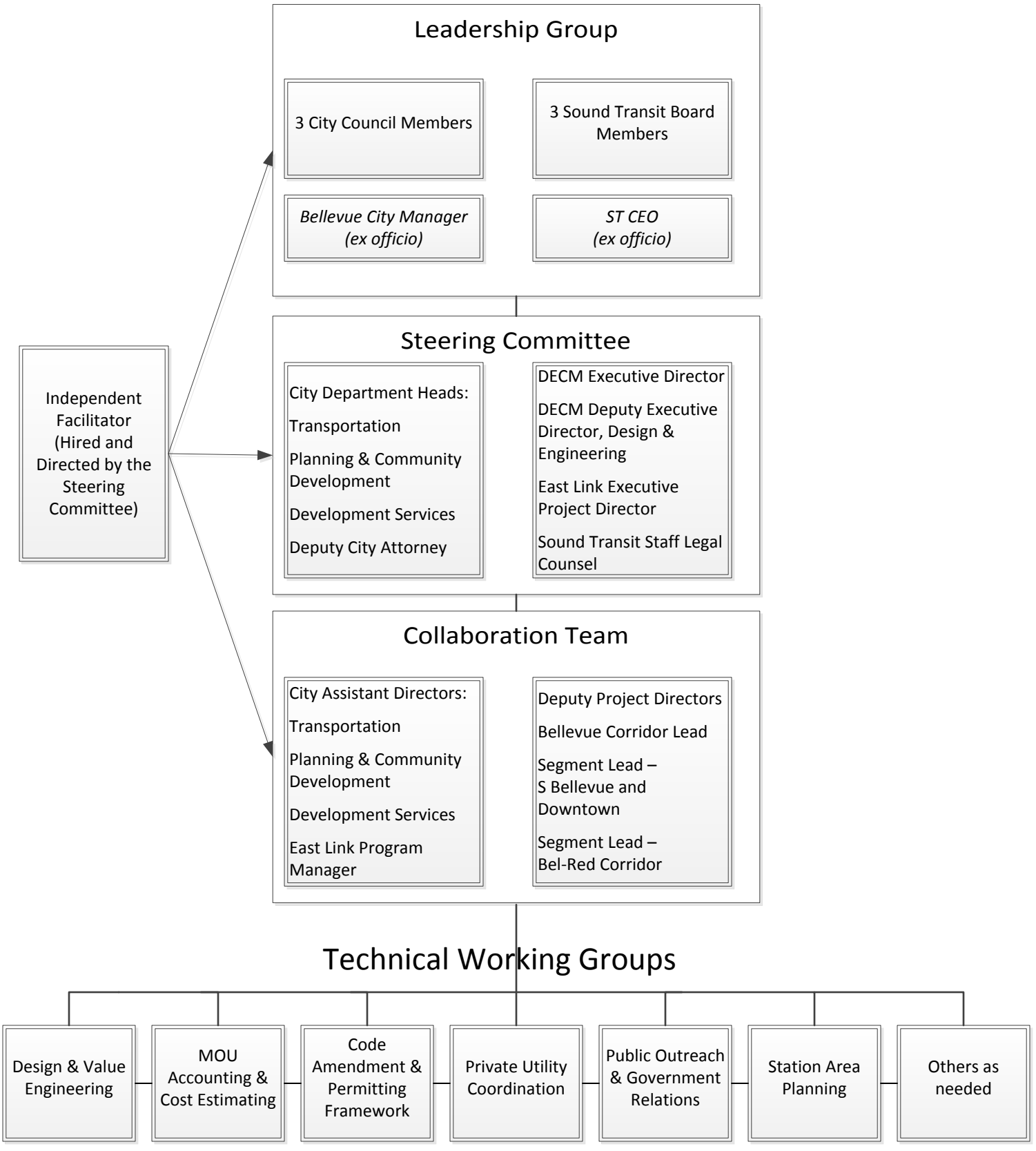
Decision-Making Process. Decisions will be made at the lowest appropriate level of the organization chart where both parties can reach agreement on the decision. If agreement cannot be reached at a given level it will be elevated to the next level. It is expected that most decisions will be made by the Collaboration Team and/or Technical Working Groups. If the Collaboration Team cannot reach

agreement, Collaboration Team members will each be responsible for briefing their organization's representatives on the Steering Committee in advance of the next Steering Committee meeting. The issue will then be taken up by the Steering Committee at the next meeting with the goal of making a decision at that meeting. Decisions that are not agreed to by the Steering Committee members will be elevated to the Leadership Group. A Leadership Group meeting will be scheduled within seven days of an impasse at the Steering Committee and held as soon as is practicable. All meetings may be facilitated.

3. Organizational Chart and Staffing

See Figure 1 for the organizational chart. The staff positions on the teams shown are subject to change as agreed to by the Steering Committee. The Technical Working Groups shown are those that are anticipated at the start of the process and may change over time as determined by the Steering Committee and/or Collaboration Team.

Figure 1: Collaborative Design Process Organization Chart



4. Project Schedule and Timelines

Figure 2 describes the project schedule.

Figure 2: Project Schedule

	2012				2013				2014	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Task										
CDP Process										
Approve CDP Management Plan	●									
CDP Kickoff	●									
Endorse Configuration for Production Engineering			●							
Confirmation of MOU									●	
Public Outreach	●	●	●	●	●	●	●	●	●	●
Engineering Design										
PE Comment Resolution	●	●	●							
Cost Savings Workshop & Process	●	●	●							
NTP Phase 1	●									
Prepare Construction Packaging		●								
Update Final Design Schedule		●								
Develop Engineering Concepts	●	●								
VE Workshop			●							
NTP Phase 2			●							
Production Engineering			●	●	●	●	●	●	●	▸
Design Review Submittals (staggered over time)					●	●	●			
Complete 60% Final Design Plans								●		
Update Risk Analysis/2nd VE Workshop								●	●	
Further Scope Reductions (if needed)									●	
Baselining									●	
City Requested Modifications/112th Design										
Structural/Civil Design	●	●								
Visual Impacts	●	●								
Sound Impacts	●	●								
112th Environmental Complete				●						

Figure 2 Continued

	2012				2013				2014	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Cost Estimating										
ROM Estimates: Cost Savings/PE Comments	●	●								
Update Estimates to include VE/112th			●							
Prepare/Review 60% Design Cost Estimate					●	●	●	●		
Land Use/Permitting										
Review Codes/Standards	●	●	●							
Submittal Standards		●								
Establish Review Schedule and Timing		●								
CoB Adopt Code Amendments				●						
Integrate Permit Processing with Dev Agrmt					●	●	●			
Station Area Planning										
Station Area Planning - Coordination with Project		●	●	●						
Integrate Station Area Planning with Dev Agrmt					●					
Utility Coordination										
Noticing Procedures Coordination Plan	●	●								
Private Utility Relocation Coordination - Design		●	●	●	●	●				

5. Process to Develop a Permit Processing Plan

The Code Amendment Permitting Framework technical working group will develop an agreed upon Permit Processing Plan, as described in Exhibit E of the MOU. The permit processing plan may be similar to negotiated permitting agreements the City has developed in the past. Items 1-3 below can be developed by October 2012 to inform final design advancement. Items 4-5 are intended to be informed by code amendments proposed by the Technical Working Group, and will be developed as soon as is practicable, but will be finalized within 120 days after any code amendments for the consolidated permitting process are approved. The plan will at a minimum address the following items:

1. Submittal standards, i.e. defining minimum acceptable content and quality, CAD standards, formatting, and delivery method.
2. Submittal timing to allow adequate time to process and approve permits or reach related decisions.
3. Turn-around times for City permit and plan review and for Sound Transit to provide response to permit/plan revision requests.

4. The establishment of permitting, plan review, inspection and other-Project-related fee estimates for use in the 60% Project baseline budget and cost reconciliation.
5. The parties anticipate action on final land use approvals for the Project in the first quarter of 2014.

6. Design Development, Cost Savings, and Value Engineering

The Design and Value Engineering technical working group is responsible to lead the collaborative efforts for the development of 60% design drawings, including resolution of PE comments and other comments offered by the City on Project design and mitigation, and incorporating results from the City Requested Modifications activities (Section 7), the Cost Savings and Value Engineering activities (Section 8) and other information as appropriate. The other technical working groups may support the Design and Value Engineering technical working group as needed and may lead some of the tasks listed below.

The tasks associated with this work effort include the following.

- Cost Savings Workshop
- Design Standard and Code Review
- Concept Screening
- Concept Engineering
- Construction Packaging
- Value Engineering Workshop
- Technical Working Group participation during production engineering
- 60% Plan Review
- 60% VE study (may break out eastside project into two to three workshops)
- East Link Cost Risk Assessment
- Prepare for Baselining Action at ST Board

The process for advancing design, identifying cost savings, and proceeding through the value engineering process should include, unless otherwise agreed to by the Collaboration Team, the following elements:

- City staff and/or consultants integrated with Sound Transit staff and consultants, including availability of a work space in Sound Transit offices.
- Development of a design evaluation process, based on the joint goals described in Section 1 of the CDP Plan, to facilitate full and fair evaluation of design options and trade-offs.
- Development of a clear timeline for when PE comments and other City comments will be addressed in the design development process (e.g. cost savings workshop, value engineering, Early Work, or design advancement to 60%).
- Agreement on a review schedule providing sufficient time for each party to review materials in advance of providing input on design, technical, and other project issues; agreement on minimum and maximum turnaround times.

- Agreement on the level of information needed at different decision thresholds and/or at different points in the design development process. When additional analysis is needed the Technical Working Group shall identify the most appropriate agency to develop additional analysis based on the technical nature of the issue and timeframe for decision making.

7. City Requested Modifications (112th Avenue SE)

The Design and Value Engineering technical working group will evaluate the City requested modifications described in Exhibit E of the MOU. The City-requested modifications on 112th Avenue SE are defined as "Option B: Flyover to Trench" in the *112th Avenue SE Alternatives Technical Memorandum* (October 2011). This design is the presumed configuration for the beginning of the cost-saving process. The 112th modifications will undergo the cost savings evaluation (based on the level of design available as of October 2011) along with the remainder of the alignment selected by the Sound Transit Board. Once the project configuration is selected (anticipated at the conclusion of the value engineering process), preliminary engineering on 112th will occur. Both the cost savings evaluation and the PE and final design for 112th will consider the following objectives as described in the MOU:

- Design flyover to allow minimum clearance over the right-of-way
- Minimize the elevated portion of the design as practicable and feasible
- Include permanent sound walls along the west side of the elevated portion
- Minimize the visual impact of the elevated portion
- Avoid the use of straddle bents where practical

If any audible warning systems are required for the 112th alignment, they will be evaluated by the Collaboration Team, who will present a recommendation to the Steering Committee.

The final design process will include specific outreach to and participation by residents adjacent to and along 112th as determined by the outreach plan developed by the Public Outreach and Government Relations technical working group.

8. Station Area Planning

Beginning in 2012, the City will undertake a station area planning (SAP) process.

The SAP technical working group will meet on a weekly basis or as needed to collaborate on the SAP process. Sound Transit will participate by providing staff for the group and sharing East Link project design info, data and analysis to inform the City's SAP objectives. City staff will provide relevant data and analysis to inform Sound Transit's final design. The Technical Working Group will review concepts and develop recommendations to address issues raised through the SAP process.

The SAP process provides the opportunity for the City and Sound Transit to jointly engage the community in a dialogue about station area concerns and opportunities. The City has lead responsibility for public engagement for the SAP process; Sound Transit will have an integral role in the SAP outreach effort, which will be coordinated consistent with the structure described earlier.

9. Project Cost Estimate and Budget

The MOU Accounting and Cost Estimating technical working group is responsible to fulfill the financial accounting tasks outlined in the MOU, including tasks identified in Section 4.0 City Funding Contributions for C9T Tunnel, and prepare the documentation to demonstrate completion of these tasks. This group is also responsible to work collaboratively to jointly review the final design consultant's cost estimating deliverables, resolve issues, and identify elements and timing for independent review of cost estimates to improve confidence in the final design consultant's cost estimate. This includes preparing documentation at each appropriate stage of the cost estimate development to have a roadmap of how the cost estimate was advanced from the values in the MOU to the final 60% updated project cost estimate.

Per the MOU Section 4.2 (b), Sound Transit will formally provide the City with the 60% updated project cost estimate, triggering a 45-day period in which either party may opt to terminate the agreement with no further obligation. The cost estimate will be prepared in accordance with Sound Transit's project control and phase gate procedures and based on 60% design drawings following any necessary land use approvals from the City. This formal provision of the 60% design cost estimate will be the culmination of the City's participation in the integrated team structure described previously. The goal of the City's participation in the development of the 60% design cost estimate and the opportunity for formal review and comment is to ensure that the City has a clear understanding of the basis of the cost estimate and confidence in the final 60% updated project cost estimate when it is provided to the City at Project baselining. To achieve this goal, the City will have the opportunity to participate in the development of the baseline cost estimate in, at a minimum, the following ways:

1. On-going, day-to-day participation in the cost estimate development as part of the Design and Value Engineering technical working group. This work will be guided by the principle of an integrated team, including the free flow of information between parties, City participation in the development of the cost estimate in real time, and a commitment to collaboration in spirit and actions.
2. Joint review of cost estimate deliverables as part of the MOU Accounting and Cost Estimating technical working group: The City and Sound Transit will jointly review cost estimate-related deliverables from the design consultants. City and Sound Transit staff will develop comments and collaboratively seek resolution with the consultant.
3. The City may utilize a consultant to assist in review of the cost estimating deliverables, which may include but is not limited to consultant's deliverables, price checks of quantities and materials, and independent review of cost estimates. Resources shall be used for betterment of the project, with the goal of ensuring the City has clear understanding of the basis of the cost estimate and confidence in the final 60% updated project cost estimate when it is provided to the City at Project baselining.

10. Reporting Procedures and Protocols

Sound Transit and City staff will coordinate and, as appropriate, jointly participate in briefings for the Sound Transit Board, City Council, and the community to ensure timely information sharing using the best available information. Each party will have different reporting needs and demands. Staff commits to coordinate briefings using the following guidelines:

1. Information will be reviewed by staff at both agencies prior to briefings or public release. Staff should work together to ensure that the best available information is released and to coordinate the timing of the release.
2. Sensitive information, such as items exempt from public disclosure, will be treated as confidential by staff of both agencies. The producing agency shall determine the appropriate timing for release of sensitive information.
3. Every effort should be made to allow the producing agency to present their information in briefings and at public meetings.
4. A copy of materials presented at non-confidential briefings will be provided to the partner agency in electronic format.

11. Private Utility Relocation Coordination

The City has agreements and franchises with third party utilities that describe processes and notice requirements associated with requests for relocation of such facilities for city projects. Sound Transit and the City will collaboratively develop procedures for ensuring that notices and required plans and specifications are prepared and provided to third party utility providers consistent with all applicable agreements and code provisions. It is anticipated that such procedures will be developed by the end of the second quarter of 2012. To facilitate development of these procedures, the City will provide a summary of applicable notice and other requirements from those franchises or other agreements with third party utility providers potentially impacted by the East Link project.

ATTACHMENT D

EAST LINK PUBLIC OUTREACH ACTIVITIES

East Link public meetings to date (2/25/2016)

** Open houses with mailed postcard notification and print/online advertisements*

Date	Event	Attendees
9/2006	Environmental Scoping: Bellevue	~210
9/2006	Environmental Scoping: Seattle	~105
9/2006	Environmental Scoping: Redmond	~60
9/2006	Environmental Scoping: Mercer Island	~60
3/2007	Route & Station Workshop: Bellevue	~160
3/2007	Route & Station Workshop: Seattle	~20
4/2007	Route & Station Workshop: Bel-Red/Overlake	~60
4/2007	Route & Station Workshop: Redmond	~70
4/2007	Route & Station Workshop: Mercer Island	~30
1/2009	EIS Open House: Redmond	~80
1/2009	EIS Open House: Mercer Island	~50
1/2009	EIS Open House: Seattle	~10
1/2009	EIS Open House: Bellevue (Downtown)	~175
1/2009	EIS Open House: Bellevue (South Bellevue)	~150
10/2009	Neighborhood Workshop: South Bellevue	~375 total
10/2009	Neighborhood Workshop: Downtown Bellevue	
10/2009	Neighborhood Workshop: Bel-Red	
11/2009	Neighborhood Workshop: Overlake	
2/2010	Downtown Bellevue Design Alternatives	~170
3/2010	Mercer Island Preliminary Engineering Open House	~90
4/2010	Bel-Red/Overlake Preliminary Engineering Open House	~60
6/2010	112th Ave. Options Workshop #1	~100
6/2010	112th Ave. Options Workshop #2	~100
7/2010	112th Ave. Options Workshop #3	~100
7/2010	112th Ave. Open House	~110
7/2010	Hospital Station Open House	~30
11/2010	Supplemental DEIS Public Hearing: Bellevue	~130
4/2012	Cost Savings Open House #1	~200
6/2012	Cost Savings Open House #2	~160
10/2012	Cost Savings Drop-In Session #1: Bellevue Way	~40
10/2012	Cost Savings Drop-In Session #2: 112th Ave SE	~35
10/2012	Cost Savings Drop-In Session #3: Downtown Bellevue	~40
3/2013	Final Design Open House: Bel-Red ~30% design	~115
4/2013	Cost Savings Open House #3	~100
5/2013	Final Design Open House: Downtown Bellevue ~30% design	~70
5/2013	Final Design Open House: South Bellevue ~30% design	~110
6/2013	Final Design Open House: Mercer Island ~30% design	~85
9/2013	Final Design Open House: Seattle ~30% design	~70
9/2013	Final Design Open House: Bel-Red 60% design	~95
11/2013	Pre-Final Design Open House: Overlake	~105

2/2014	Final Design Open House: South Bellevue Segment 60% design	~70
2/2014	Final Design Open House: East Main Station Segment 60% design	~100
3/2014	Final Design Open House: Downtown Bellevue Segment 60% design	~120
4/2014	Overlake Master Planned Development Permit Open House	~30
7/2014	Final Design Open House: Mercer Island Segment 60% design	~70
7/2014	Final Design Open House: Seattle 60% design	~55
9/2014	Completion of Final Design Open House: Bel-Red Segment	~65
11/2014	Completion of Final Design Open House: South Bellevue Segment	~85
11/2014	East Link Extension Update: Parking concepts & transit integration	~100
1/2016	Construction Kickoff Open House: Downtown Bellevue Tunnel	~125

ATTACHMENT E

BUILDING A BETTER BELLEVUE VS. USDOT

THE HONORABLE JOHN C. COUGHENOUR

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON
AT SEATTLE

BUILDING A BETTER BELLEVUE; and FRIENDS OF ENATAI,

Plaintiffs,

v.

U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL TRANSIT ADMINISTRATION; R.F. KROCHALIS, in his official capacity as the Regional Administrator of the FTA, Region X; U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION; and DANIEL M. MATHIS, in his official capacity as the Division Administrator, Washington Division, for the Federal Highway Administration,

Federal Defendants,

and

CENTRAL PUGET SOUND REGIONAL TRANSIT AUTHORITY ("SOUND TRANSIT"),

Interested Party.

CASE NO. C12-1019-JCC

ORDER GRANTING DEFENDANTS' MOTIONS FOR SUMMARY JUDGMENT

This matter comes before the Court on the parties' cross-motions for summary judgment (Dkt. Nos. 24, 28–29). Having thoroughly considered the parties' briefing and the relevant record, the Court finds oral argument unnecessary and hereby DENIES Plaintiffs' motion (Dkt. No. 24) and GRANTS Defendants' motions (Dkt. Nos. 28–29) for the reasons explained herein.

I. BACKGROUND

Central Puget Sound Regional Transit Authority ("Sound Transit") plans to construct an extension of its light rail transit system between Seattle and the east side of Lake Washington (the "East Link"). The East Link would cross Lake Washington and Mercer Island along U.S. Interstate 90 from Seattle to south Bellevue ("Segment A"), travel north from I-90 to downtown Bellevue ("Segment B"), continue through downtown Bellevue ("Segment C"), travel north to Overlake ("Segment D"), and finally connect Overlake to Redmond ("Segment E"). (AR 004527.) The stated purpose of the East Link project is "to expand the Sound Transit Link light rail system from Seattle to Mercer Island, Bellevue, and Redmond via I-90 in order to provide a reliable and efficient alternative for moving people throughout the region." (AR 004539.)

In connection with the East Link project, Sound Transit and Defendant Federal Transit Administration prepared a final environmental impact statement. The Federal Transit Administration found that the impact statement satisfied the requirements of the National Environmental Policy Act and that the project satisfied Section 4(f) of the Department of

Transportation Act of 1966. (AR 011415, 011419, 011426, 011432–11434.) Defendant Federal Highway Administration then adopted the final environmental impact statement for purposes of that agency's required approvals. (AR 017137, 017141.)

Plaintiff Building a Better Bellevue is an association of Bellevue homeowners, residents, businesses, and neighborhood groups. (Dkt. No. 1 at 3 ¶ 10.) Plaintiff Friends of Enatai is an association of residents of South Bellevue neighborhoods along Bellevue Way and 112th Avenue SE between I-90 and Bellevue's Main Street, along the Mercer Slough Nature Park. (*Id.* at 4 ¶ 13.) In this action, Building a Better Bellevue and Friends of Enatai seek a declaratory judgment that the Federal Transit and Highway Administrations were arbitrary and capricious and failed to comply with federal law when they found that the East Link final environmental impact statement satisfied the requirements of the National Environmental Policy Act and that the project satisfied Section 4(f) of the Department of Transportation Act.

II. DISCUSSION

A. National Environmental Policy Act

The National Environmental Policy Act "is a purely procedural statute." *Neighbors of Cuddy Mountain v. Alexander* ("*Cuddy Mountain II*"), 303 F.3d 1059, 1070 (9th Cir. 2002). It "does not mandate particular results, but simply provides the necessary process to ensure that federal agencies take a 'hard look' at the environmental consequences of their actions." *Muckleshoot Indian Tribe v. U.S. Forest Serv.*, 177 F.3d 800, 814 (9th Cir. 1999) (per curiam) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989)) (quotation marks omitted). One aspect of that process is the mandated preparation of an environmental impact statement for "major Federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C). "The goal of [the Act] is two-fold: (1) to ensure that the agency will have detailed information on significant environmental impacts when it makes decisions; and (2) to guarantee that this information will be available to a larger audience." *Cuddy Mountain II*, 303 F.3d at 1063.

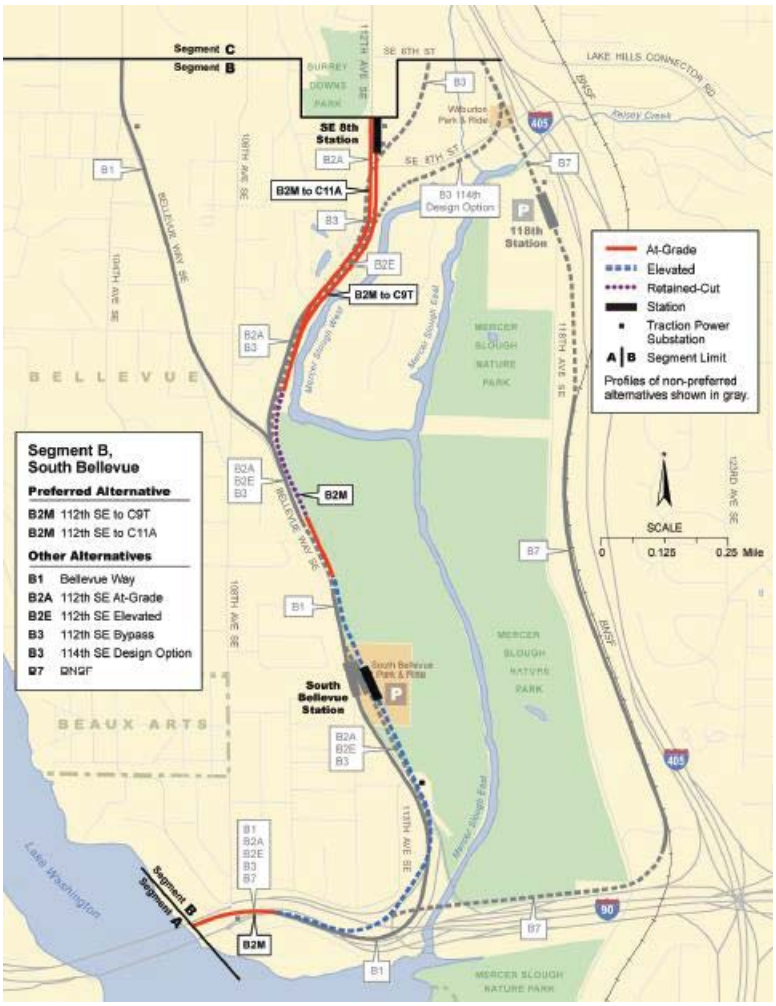
Courts assess the adequacy of an environmental impact statement under "a 'rule of reason' that does not materially differ from an 'arbitrary and capricious' review." *Id.* at 1071. The relevant inquiry is whether the impact statement contains a "reasonably thorough discussion of the significant aspects of probable environmental consequences." *Neighbors of Cuddy Mountain v. U.S. Forest Serv.* ("*Cuddy Mountain I*"), 137 F.3d 1372, 1376 (9th Cir. 1998) (quotation marks omitted). If the court is "satisfied that an agency's exercise of discretion is truly informed, [the court] must defer to that informed discretion." *Greenpeace Action v. Franklin*, 14 F.3d 1324, 1332 (9th Cir. 1992) (quotation marks and indications of alteration omitted).

1. Failure To Address Reasonable Alternatives

An environmental impact statement "shall inform decisionmakers and the public of the reasonable alternatives [for a project] which would avoid or minimize adverse impacts or enhance the quality of the human environment." 40 C.F.R. § 1502.1. It must "[r]igorously explore and objectively evaluate all reasonable alternatives"—*i.e.*, "alternatives that are 'reasonably related to the purposes of the project'"—and, "for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated." 40 C.F.R. § 1502.14(a); *League of Wilderness Defenders-Blue Mountains Biodiversity Project v. U.S. Forest Serv.*, 689 F.3d 1060, 1069 (9th Cir. 2012) (quoting *Westlands Water Dist. v. U.S. Dep't of Interior*, 376 F.3d 853, 868 (9th Cir. 2004)). An impact statement's consideration of alternatives is sufficient "if it considers an appropriate range of alternatives, even if it does not consider every available alternative." *Headwaters, Inc. v. Bureau of Land Mgmt.*, 914 F.2d 1174, 1181 (9th Cir. 1990); *see Vt. Yankee Nuclear Power Corp. v. Natural Res. Def. Council, Inc.*, 435 U.S. 519, 551 (1978) ("[T]he 'detailed statement of alternatives' cannot be found wanting simply because the agency failed to include every alternative device and thought conceivable by the mind of man."). The Court reviews "both the choice of alternatives as well as the extent to which the . . . Impact Statement . . . discuss[es] each alternative" under a rule of reason. *City of Carmel-By-The-Sea v. U.S. Dep't of Transp.*, 123 F.3d 1142, 1155 (9th Cir. 1997).

a. Segment B Tunnel Alternative

The East Link final environmental impact statement discusses six alternatives for Segment B: five following Bellevue Way SE north from I-90, parallel to the western edge of the Mercer Slough Nature Park and to the residential communities of south Bellevue, and one continuing east parallel to I-90 on an elevated structure across Mercer Slough before turning north to run parallel to I-405 (the "B7" alternative). (AR 004652, 004659–4662.) All of the alternatives are above-ground.



Plaintiffs contend that a tunnel for Segment B was a seventh reasonable alternative that the environmental impact statement should have considered. Sound Transit's determination that such a tunnel was not a reasonable alternative was not arbitrary and capricious. Sound Transit considered and screened out a tunnel alternative during the scoping phase[1] of the project because it did not meet Sound Transit's criteria for tunnel candidates: locations with steep slopes, physical barriers, inadequate rights of way, building density, and high train frequencies. (AR 004646, 020705, 020227; *see* AR 004642 (explaining that the voter-approved funding package provides funds for at-grade or elevated alternatives).) A tunnel alternative would also have been more expensive, risky, and disruptive, undermining several goals of the project.[2] (AR 004646, 020705, 020227; *see* AR 004636 (discussing project's goals of providing financially feasible solution and reducing construction risk).) By contrast, Sound Transit is considering a tunnel for Segment C (through downtown Bellevue) because of the density of development and limited availability of rights of way, and because the City of Bellevue executed an agreement with Sound Transit to find additional funding sources to pay for the tunnel. (AR 020227, 004663, 004642 (explaining that the non-tunnel alternative for Segment C "is preferred if additional funding and scope reductions cannot be found to afford the tunnel").)

Nor did Sound Transit "fail[] to discuss and explain the reasoning behind eliminating consideration of a tunnel within the [impact statement] itself." (Dkt. No. 30 at 11.) The impact statement explicitly addresses why a tunnel was considered a reasonable alternative for some

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[1] "The purpose of the scoping period is to notify those who may be affected by a proposed government action, which is governed by [the Act], that the relevant entity is beginning the [environmental impact statement] process. This notice requirement ensures that interested parties are aware of and able to participate meaningfully in the entire [impact statement] process, from start to finish." *Coalition for a Sustainable 520 v. U.S. Dep't of Transp.*, 881 F. Supp. 2d 1243, 1248–49 (W.D. Wash. 2012); *see* 40 C.F.R. § 1501.7.

[2] Plaintiffs' substanceless assertion that "[i]t is . . . reasonable to assume that a tunnel may be economical" (Dkt. No. 24 at 10; Dkt. No. 30 at 9) does not call into question the impact statement's operating assumption that tunnels involve substantially greater expense than above-ground builds.

segments (like Segment C) but not others (like Segment B). (AR 004646 (explaining that "[t]he proposed route and station alternatives vary in profile as traveling at-grade . . . , in an elevated configuration, or in a tunnel" and that, "[b]ecause of the conditions along the corridor, the East Link Project is largely elevated or at-grade; however, tunnel alternatives were also considered in Downtown Bellevue (Segment C)," and going on to describe the criteria for using tunnels).) Thus, even if the concept of a tunnel *had* developed into a standalone alternative that was nevertheless subsequently eliminated from detailed study, the environmental impact statement would have satisfied 40 C.F.R. § 1502.14(a)'s requirement of a "brief[] discuss[ion]" of reasons for eliminating it. But since Sound Transit eliminated the tunnel concept long before it became a studied alternative, even that brief discussion was not necessary to comply with the Act.

Adding to the reasonableness of Sound Transit's decision not to include a Segment B tunnel alternative in the final environmental impact statement is the fact that it also did not include this alternative in the *draft* or *supplemental draft* impact statements, and of the hundreds of comments it received on Segment B, none (including Plaintiffs') suggested that Sound Transit reconsider a Segment B tunnel alternative.[3] "[T]he very purpose of a draft [environmental impact statement] and the ensuing comment period is to elicit suggestions and criticisms to enhance the proposed project." *Carmel-By-The-Sea*, 123 F.3d at 1156; *see Dep't of Transp. v. Pub. Citizen*, 541 U.S. 752, 764 (2004) ("[Parties] challenging an agency's compliance with [the Act] must structure their participation so that it alerts the agency to the parties' position and contentions, in order to allow the agency to give the issue meaningful consideration.") (quotation marks and indications of alteration omitted). Had Plaintiffs objected to Sound Transit's failure to include a Segment B tunnel alternative in the drafts, Sound Transit *might* have had reason to discuss that alternative in the final impact statement. But no one objected; Sound Transit had already ruled that alternative out; and it was therefore neither arbitrary nor capricious for Sound Transit not to

[3] One person advanced the distinct and infeasible concept of a tunnel for Segments B–E, based on his view of "the destruction of what trains do to an area." (AR 008968.)

reintroduce it in the final impact statement.

In their reply, Plaintiffs move to supplement the record with a declaration prepared after the commencement of this litigation, purporting to show that Segment B meets Sound Transit's criteria for tunnel eligibility. The Court DENIES Plaintiffs' motion. Judicial review of agency actions is generally limited to the administrative record. *Nat'l Audubon Soc'y v. U.S. Forest Serv.*, 46 F.3d 1437, 1447 (9th Cir. 1993). "[C]ertain circumstances may justify expanding review beyond the record . . . ." *Id.* (quotation marks omitted). Two such circumstances include (1) when extra-record evidence is necessary to explain technical terms or complex subject matter and (2) when the agency has "swept stubborn problems or serious criticism under the rug." *Animal Def. Council v. Hodel*, 840 F.2d 1432, 1436–37 (9th Cir. 1988) (quotation marks and indications of alteration omitted). Plaintiffs argue the declaration should be admitted because it "addresses technical, complex subject matter that the agency 'swept under the rug.'" (Dkt. No. 30 at 6.) Not so. Early on in the scoping process, Sound Transit eliminated a tunnel alternative for Segment B because it determined that Segment B did not meet its (easy-to-understand) criteria for tunneling and would be riskier and more expensive. After that, no one resuscitated the tunnel idea, so there was no further analysis to be done—let alone to be "swept under the rug." Plaintiffs have not established the existence of circumstances creating an exception to the general rule that "[p]arties may not use post-decision information as a new rationalization either for sustaining or attacking the Agency's decision." *Ctr. for Biological Diversity v. U.S. Fish & Wildlife Serv.*, 450 F.3d 930, 943 (9th Cir. 2006) (quotation marks omitted).

b. B7R Alternative

While Sound Transit was preparing the supplemental draft environmental impact statement—and more than a year and a half after the draft environmental impact statement was issued—the City of Bellevue requested that Sound Transit consider a variation on the B7 alternative, called the "B7 Revised" alternative or "B7R." (AR 004640.) The two alternatives are similar, the chief differences being the location of a new station and parking garage. (AR

005232.) The final environmental impact statement does not consider B7R as a standalone alternative; instead, it compares B7 to B7R in detail (AR 004576–4577, 004670, 005231–5236; *see* 011365–11414) and concludes:

> With mitigation, B7R would result in improved traffic operations along Bellevue Way SE compared with B7 which does not affect or change this roadway. B7R would have greater residential displacements, property acquisition, visual, noise, park, and ecosystem impacts than B7 []. But, B7R would have less business and employee displacements than B7 []. The B7R [] Station parking garage would result in visual impacts and require residential acquisitions, while the 118th Station for B7 requires business displacements. Like B7, the B7R Mercer Slough Nature Park impacts are in areas of wetlands and wetland buffer. B7R would be on a retained fill on the east side of Sturtevant Creek, requiring relocation of the creek. Construction of B7R may result in higher ecosystem impacts along Mercer Slough, the wetland areas surrounding the slough and Sturtevant Creek than B7 [].

(AR 004576–4577.) The impact statement also observes that ridership within Segments B and C, and project-wide, would be 12,500 and 50,500, respectively, with B7R, and 10,500 and 49,000, respectively, with B7, and that "the B7R modifications increase the project cost [by] approximately $10 to $14 million [over] . . . B7." (AR 004576–4577.)

Plaintiffs argue that the impact statement fails to adequately consider B7R. But the detailed discussion of B7R versus B7 is more than sufficient to satisfy 40 C.F.R. § 1502.14(a)'s requirement of a "brief[] discuss[ion]" of reasons for not considering B7R as a standalone alternative. As the quoted text shows, B7R was not a clear winner over B7; it was better in some respects and worse in others. It was entirely reasonable, then, to compare only B7, and not also B7R, to the other six Segment B alternatives in determining the preferred Segment B alignment. *See Westlands*, 376 F.3d at 871–72 (9th Cir. 2004) (Act does not require agency to consider "every conceivable permutation" of alternatives); *Headwaters*, 914 F.2d at 1181 (agency need not undertake "separate analysis of alternatives which are not significantly distinguishable from alternatives actually considered, or which have substantially similar consequences"); *N. Alaska Envtl. Ctr. v. Kempthorne*, 457 F.3d 969, 978 (9th Cir. 2006) (agency need not "discuss alternatives similar to alternatives actually considered"); *see, e.g.*, *Laguna Greenbelt, Inc. v. U.S.*

Dep't of Transp., 42 F.3d 517, 524 (9th Cir. 1994); *520*, 881 F. Supp. 2d at 1256–57. The alternatives set forth in the impact statement, supplemented with a detailed discussion of B7R, "permit a reasoned choice" and an agency "hard look," and are sufficient to satisfy the Act. *California v. Block*, 690 F.2d 753, 767 (9th Cir. 1982).

c. Alternatives to Light Rail

Plaintiffs also complain that Sound Transit failed to consider any modes of high-capacity transit other than light rail. But the stated purpose of the project is to "[e]xpand the Sound Transit Link light rail" to the east side. (AR 004625.) Plaintiffs respond that, by confining the purpose to expanding the light rail—as opposed to high-capacity transit generally—Sound Transit "unreasonably avoided consideration of other transit modes, such as bus rapid transit," that might have had fewer environmental impacts. (Dkt. No. 24 at 13.)

This argument is a non-starter. The choice of light rail over bus service was the result of years of analysis and deliberation. (AR 004635–4636 (describing the process leading to "Identification of Light Rail as the Preferred Mode"), 011416–11418.) A 2004 assessment deemed bus rapid transit, light rail transit, and monorail appropriate for the east corridor. (AR 004635.) Around the same time, in connection with updating its long-range plan, Sound Transit analyzed potential high-capacity transit projects, implementing an "extensive public outreach process" to consider the alternatives. (*Id.*) In 2005, the board adopted an updated long-range plan, which identified light rail and rail-convertible bus rapid transit for further consideration. (*Id.*) It then directed staff to conduct additional analyses and feasibility and traffic studies, and based on the results, "identified light rail as the preferred [high-capacity transit] transportation mode for the East Corridor" in July 2006:

> The Sound Transit Board identified light rail because it provides the benefits of operating in an exclusive right-of-way separated from general-purpose and HOV traffic. . . . Light rail in the East Corridor would [also] use the same technology as the Central Link line and build on that investment. It would provide a higher level of system integration by interlining directly with the Central Link line and providing a direct ride between the Eastside, Downtown Seattle, and the North

> Corridor stations . . . . Light rail provides the highest level of ridership and the shortest travel times of all technologies evaluated in the corridor.

(AR 004635–4636.) In July 2008, Sound Transit adopted "ST2," known as the mass transit expansion proposal, a package of high-capacity transit investments in the regional transit system that includes the East Link project. (*Id.*) Voters approved ST2 in November 2008. (*Id.*)

Sound Transit's decision to confine the purpose of the East Link project to expanding the light rail system was anything but arbitrary. To the contrary, it was the result of a long, careful, and deliberative process, and the light rail-specific purpose responds precisely to the transportation problems that needed to be solved. *See* 23 C.F.R. § 450.212(a)(1) (allowing agency to use planning processes of state and local transportation authorities to narrow and focus purpose and need statements);[4] *see, e.g.*, *Carmel-By-The-Sea*, 123 F.3d at 1155–57 (rejecting Plaintiffs' argument that the agency "preordained . . . the preferred choice" by "unjustifiably narrow[ing] its statement of 'Purpose and Need,'" observing that the agency's goal was "legitimate" and reasonable because it directly responded to the identified needs to "significantly alleviate traffic congestion, reduce accidents and achieve other transportation goals"; "[t]hat the Federal Highway Administration and Caltrans viewed Level of Service C as important and as the most plausible project goal given the severe traffic problems along this stretch of Highway 1 cannot be said to be unreasonable simply because Level of Service D would have been a 'tolerable' alternative"). Because confining the purpose of the East Link to expanding light rail was reasonable, the environmental impact statement was not required to study alternatives—like bus rapid transit—that did not meet that purpose. *See City of Angoon v. Hodel*, 803 F.2d 1016,

[4] Plaintiffs argue that "the local transportation planning process relied upon to limit the purpose of the project to light rail took place prior to the 2007 adoption of 23 C.F.R. § 450.212" and that "[n]othing in the 2007 regulations allows for retroactive application." (Dkt. No. 30 at 19.) That the regulations explicitly approved the use of local planning processes to narrow an impact statement's purpose and need statements in 2007 does not mean that, prior to 2007, such use was impermissible. In any event, the draft impact statement was issued in December 2008, and the final impact statement was issued and approved in 2011—well after the regulations authorized use of local planning studies to produce purpose and need statements.

1021 (9th Cir. 1986).

2. Failure To Consider Cumulative Impact of Extending Light Rail to Issaquah

An environmental impact statement must consider the cumulative impact of the proposed action: "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions." 40 C.F.R. § 1508.7. "[R]easonably foreseeable actions . . . include proposed actions." *Ctr. for Envtl. Law & Policy v. U.S. Bureau of Reclamation*, 655 F.3d 1000, 1010 (9th Cir. 2011) (quotation marks and indications of alteration omitted). For example, when an agency issues a notice of intent to prepare an impact statement for an action, "[the] action is not too speculative to qualify as a proposed action . . . ." *Id.* (quotation marks omitted). On the other hand, when an action "could conceivably" occur but "it is at least as likely that it will never" occur, the "future activity is not reasonably foreseeable," and its possible cumulative effects need not be considered. *Headwaters*, 914 F.2d at 1182. Courts "defer to an agency's determination of the scope of its cumulative effects review." *Cuddy Mountain II*, 303 F.3d at 1071.

Plaintiffs argue that the environmental impact statement should have discussed the cumulative effect of the East Link project *and* a possible future project extending the light rail to Issaquah. They point out that one possible alignment for such an extension would connect the extension to the East Link around I-90 and Bellevue Way SE and continue east along the southern boundary of the Mercer Slough (as B7 and B7R would do). If such an extension were ultimately constructed, they argue, then the southern boundary of the Mercer Slough would eventually be impacted anyway, and so the East Link environmental impact statement should prefer B7 or B7R over the other Segment B alternatives, since B7 and B7R *also* run along the southern boundary, whereas the other Segment B alternatives run parallel to the *western* boundary, as well as impact the Winters House and Surrey Downs Park (discussed *infra*).

An Issaquah extension that runs along the southern boundary of the Mercer Slough is not

a reasonably foreseeable proposed action, and so the environmental impact statement appropriately did not consider it. The Issaquah extension is the subject of a preliminary study funded by ST2 that has not yet commenced. (AR 019886.) Voters would have to approve an ST3 or ST4 funding package before Sound Transit would even start seriously considering potential alternatives and alignments. Even assuming the Issaquah extension were ultimately planned, approved, permitted, and funded—a big if—it may not cross the Mercer Slough at the southern boundary—and thus may not strengthen the case for B7 or B7R. (AR 020614, 020617–20618.) In other words, such an alignment "could conceivably" be built, but "it is at least as likely that [that alignment] will never" be built, and that Sound Transit will choose an alternative alignment. *Headwaters*, 914 F.2d at 1182. The Issaquah extension—and the particulars about how it might connect to the preexisting light rail system—are far too speculative and uncertain to merit consideration in the East Link impact statement's cumulative effects analysis.

3. Failure To Adequately Identify Mitigation for Affected Wetlands and Wetland Buffers

The Act "requires only that an [impact statement] contain 'a reasonably complete discussion of possible mitigation measures.'" *Kempthorne*, 457 F.3d at 979 (quoting *Robertson*, 490 U.S. at 352). It need not contain a "complete mitigation plan [that is] actually formulated and adopted," *Robertson*, 490 U.S. at 352, and the mitigation plan may be "conceptual" and remain "flexible to adapt for future problems," *Carmel-By-The-Sea*, 123 F.3d at 1154; *see, e.g.*, *Laguna Greenbelt*, 42 F.3d at 528 (discussion of impacts and "potential" and possibly unsuccessful mitigation measures satisfies the Act). "[I]t would be inconsistent with [the Act's] reliance on procedural mechanisms—as opposed to substantive, result-based standards—to demand the presence of a fully developed plan that will mitigate environmental harm before an agency can act." *Robertson*, 490 U.S. at 353.

The East Link environmental impact statement sufficiently discusses possible mitigation measures to ensure that the agency fairly evaluated the project's environmental consequences.

Sound Transit commits in the impact statement to achieving no net loss of wetland function and area on a project-wide basis. (AR 005018, 010624.) Its plan for doing so is to apply interagency wetland mitigation guidance to identify compensatory mitigation sites—a proven wetlands mitigation method—within the same drainage basin as the affected areas and to compensate for lost functions in-kind. (AR 005018.) Although there are no existing approved mitigation banks in the Kelsey Creek subbasin—a subbasin affected by the project—"[d]uring field work, Sound Transit determined there are several opportunities for wetland mitigation within the study area close to potentially impacted areas that are expected to meet required mitigation ratios," and Plaintiffs have pointed to no evidence showing that Sound Transit's expectations are unreasonable. (*Id.*; *see also* AR 010626 (discussing four potential approaches to achieving wetlands mitigation goal).) Finally, the Federal Transit Administration has made mitigation achieving zero net wetlands loss a condition of its approval of the project and is requiring that Sound Transit establish a monitoring plan to ensure the effectiveness of its mitigation measures. (AR 011424–11425, 011430, 011478.) The impact statement's commitment to zero wetlands loss, made credible with a plan to use already-identified opportunities for compensatory mitigation, and by the Federal Transit Administration's conditioning approval of the project on achieving that commitment, is sufficient to "ensure that environmental consequences have been fairly evaluated." *Robertson*, 490 U.S. at 352. The Act requires nothing more. *See, e.g.*, *Okanogan Highlands Alliance v. Williams*, 236 F.3d 468, 476 (9th Cir. 2000) (that impact statement's discussion of "procedures for ensuring compliance with applicable water-quality standards . . . are stated in somewhat general terms" does not render them "deficient" under the Act); *Carmel-By-The-Sea*, 123 F.3d at 1154 (upholding "proposed mitigation plan [that] is intended to be 'conceptual' only"); *compare, e.g., Cuddy Mountain I*, 137 F.3d at 1381 (impact statement deficient where it "did not discuss which (or whether) mitigating measures might decrease the increased sedimentation in the three creeks affected by the timber sale," "suggest[ed] that the [agency] did not even consider mitigating measures for the creeks actually

affected by the sale," and failed to "provide[] an estimate of how effective the mitigation measures would be if adopted, or give[] a reasoned explanation as to why such an estimate is not possible," and where "it [wa]s also not clear whether any mitigating measures would in fact be adopted").

In reviewing Plaintiffs' challenges to the environmental impact statement under the National Environmental Policy Act, the Court may not "substitute [its own—or Plaintiffs'—] judgment for that of the agency concerning the wisdom or prudence of [the] proposed action." *Or. Envtl. Council v. Kunzman*, 817 F.2d 484, 492 (9th Cir. 1987). The Court's role is limited to ensuring that the agency took a hard look at a reasonable range of alternatives whose impacts on the environment were discussed in sufficient detail to render the agency's decision informed. The final environmental impact statement here meets that standard.

B. Department of Transportation Act Section 4(f)

Section 4(f) of the Department of Transportation Act of 1966 provides:

> [T]he Secretary may approve a transportation program or project . . . requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance . . . only if—
>
> > (1) there is no prudent and feasible alternative to using that land; and
> >
> > (2) the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

49 U.S.C. § 303(c). Section 4(f) thus requires a two-phase inquiry: First, the agency determines whether there are any feasible and prudent "avoidance alternatives" to the taking of protected property. 23 C.F.R. § 774.3(a)(1). If no avoidance alternative is available, the agency must approve the alternative that "[c]auses the least overall harm in light of the statute's preservation purpose" by balancing seven factors. 23 C.F.R. § 774.3(c)(1).

Here, the Federal Transit Administration issued a record of decision, adopting the final

environmental impact statement's preferred alignments for Segments B and C. (AR 011415–11854.) Those selected alignments impact the following Section 4(f) resources: (1) the Mercer Slough, a 320-acre park characterized by wetland systems and upland habitat (AR 005134), (2) the Winters House, a National Registry of Historic Places property located in the Mercer Slough (AR 005117), and (3) Surrey Downs Park, which contains athletic fields, play structures, internal trails, open space, remnant stands of heritage filbert trees, and the King County District Courthouse (AR 005134–5135). The agency determined that "no project alignment alternative provided a prudent and feasible alternative that avoids all [Section 4(f)] resources" and that the environmental impact statement identified all reasonable measures to cause the least overall harm to those resources. (AR 011433; *see* AR 011433–11434, 005354–5358.) The agency did not analyze the B7R alternative in its Section 4(f) evaluation because the proposal was not sufficiently formulated when the environmental impact statement and Section 4(f) analysis were prepared. (AR 005374.) The City of Bellevue and the Department of the Interior reviewed the agency's least-harm analysis and concurred with its conclusions. (AR 011631–11632, 015071–15072.)

Plaintiffs claim that the Federal Transit Administration's Section 4(f) analysis was "arbitrary and capricious." First, Plaintiffs argue that, "[b]y failing to take a hard look at a Segment B tunnel alternative, the Section 4(f) analysis failed to consider a feasible and prudent alternative that would avoid use of Section 4(f) resources." (Dkt. No. 24 at 22.) But because Sound Transit rejected the tunnel alternative during scoping, it was not a feasible and prudent 4(f) alternative that the agency was required to consider. *See 520*, 881 F. Supp. 2d at 1259 ("Section 4(f) does not require that the agency 'circle back' to reconsider an option that it has already ruled out as imprudent.") (quoting *Safeguarding the Historic Hanscom Area's Irreplaceable Res., Inc. v. Fed. Aviation Admin.*, 651 F.3d 202, 213 (1st Cir. 2011)). In any event, Plaintiffs' assertion that a tunnel-based alternative would *not* use Section 4(f) resources is entirely conclusory. Indeed, in their reply, they assert that "[a] tunnel alignment would eliminate

impacts to Section 4(f) resources, including at least the Winters House and Surrey Downs Park"—thus apparently conceding that it would not necessarily avoid the Mercer Slough. (Dkt. No. 30 at 27; *see also* Dkt. No. 24 at 10 (asserting that "[a] tunnel alternative would [only] *likely* avoid impacts to many Section 4(f) resources") (emphasis added).)

Plaintiffs next argue that B7 and B7R are "avoidance alternatives" to the preferred and adopted Segment B alignment, since B7 and B7R, unlike the adopted alignment, would completely avoid use of the Winters House and Surrey Downs Park. The agency did not see it this way. In its view, since *all* the Segment B alternatives (including B7 and B7R) impacted the Mercer Slough in one way or another, none of the alternatives was an "avoidance alternative"—*i.e.*, an alternative that avoided use of 4(f) properties altogether—and so the agency proceeded to the second phase of the inquiry and approved one of the alternatives that caused the "least overall harm." The agency's decision not to treat alternatives that would use the Mercer Slough as avoidance alternatives was neither arbitrary nor capricious. *See* 23 C.F.R. § 774.17 (defining "feasible and prudent avoidance alternative" as an alternative that "avoids using Section 4(f) property," and describing the § 774.3(a)(1) avoidance alternative analysis as one that "search[es] for feasible and prudent alternatives that *avoid Section 4(f) properties altogether*") (emphasis added). What *is* arbitrary is *Plaintiffs'* proposed 4(f) analysis—which would count an alternative as an "avoidance alternative" because it avoids some, but not all, Section 4(f) properties, thus immunizing it from a "least overall harm" comparison with the other alternatives. *See, e.g.*, *Druid Hills Civic Ass'n, Inc. v. Fed. Highway Admin.*, 772 F.2d 700, 715 (11th Cir. 1985).

Plaintiffs next argue that, even if B7 and B7R are not "avoidance alternatives," "the [agency]'s conclusion that the preferred . . . alternative would result in less harm to Section 4(f) resources than [the B7 or B7R] alternatives . . . arbitrarily failed to balance in favor of preservation and instead skewed the balance in favor of a possible slight increase in ridership and slight decrease in cost." (Dkt. No. 24 at 23.) First, as discussed, the agency did not consider the B7R alternative in its Section 4(f) analysis because the proposal was not sufficiently formulated

when the final environmental impact statement and Section 4(f) analysis were prepared. As for B7, a review of the agency's analysis belies Plaintiffs' contention that the agency arbitrarily tipped the Section 4(f) factors against that alternative. The agency carefully considered the seven factors: Using the seven criteria, it prepared a matrix examining all possible permutations of Segment B and C options for a total of thirty-five alternatives. (AR 005361, 005385–5390.) From those thirty-five options, it identified eleven that caused the least overall harm, and it chose its preferred alignments for Segments B and C from among those eleven. (AR 005384.)

B7 was not among the eleven "least harmful" options. That is because the combinations of B7 with the various Segment C alternatives were generally more expensive and less accessible, and significantly reduced ridership in Segments B and C, thus scoring lower on the factor of "degree to which each alternative meets the purpose and need for the project" and, at best, no better on the factor of "[s]ubstantial differences in costs among the alternatives." 23 C.F.R. § 774.3(c)(1)(v) & (vii). (AR 005375, 005378–5381, 005383.) The B7 combinations also scored equally to or lower than other Segment B options on "[t]he ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property)" and "[t]he relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection." *Id.* § 774.3(c)(1)(i) & (ii). That is because, while B7's impact on the Mercer Slough could not be mitigated to create a net benefit, other Segment B alternatives allowed for a plan to add to the Mercer Slough up to three acres of land to replace the land permanently occupied by the project, which is projected to yield a net *benefit* to the park.[5] (AR 005362–5365, 005367–5368.) Similarly, post-mitigation, some non-B7 alternatives would "have a net benefit to Surrey Downs Park" by "removing the King County District Courthouse and replacing the site with landscaped

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[5] As discussed *supra*, the expected net benefit to the Mercer Slough from compensatory mitigation is not, contrary to Plaintiffs' contention, "unfounded," "conclusory," or "speculative." (Dkt. No. 30 at 5, 30–31.)

park grounds"—something the B7 combinations could not offer. (AR 005366, 005368.) And post-mitigation, non-B7 alternatives (unlike B7) are projected to yield a net benefit to the Winters House by providing "more historically appropriate landscaping" and "new interpretive signage." (AR 005367–5368.)

Plaintiffs appear to believe that the only acceptable outcome of the Section 4(f) analysis was the emergence of B7 as the winner, since B7 would permanently impact fewer acres of the Mercer Slough and avoid any impact to the Winters House and Surrey Downs Park. But permanent, un-mitigated impact is not a factor for consideration under 23 C.F.R. § 774.3(c). Without exception, the § 774.3(c) factors direct the agency to consider *post*-mitigation impact, including any resulting net benefits. *Id.* § 774.3(c)(1)(i), (ii) & (vi). And as discussed, post-mitigation, the B7 alternatives fared no better than the non-B7 alternatives, and in some cases fared worse because they were not projected to yield a net benefit. Thus, even if, as Plaintiffs contend, "the balance must always be struck in favor of preservation of the Section 4(f) properties" and "the balance must . . . give paramount importance to preservation" (Dkt. No. 30 at 28, 30), there is no indication that the agency failed to strike the balance in favor of preservation here.

Finally, for the same reasons the environmental impact statement was not required to consider the cumulative impact of the possible Issaquah extension—with its possible alignment along the southern boundary of the Mercer Slough—the agency was not required to consider that impact in its Section 4(f) evaluation.

III. CONCLUSION

For the foregoing reasons, the Court GRANTS Sound Transit's and Defendants' motions for summary judgment (Dkt. Nos. 28–29) and DENIES Plaintiffs' motion for summary judgment (Dkt. No. 24).

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DATED this 7th day of March 2013.

John C. Coughenour
UNITED STATES DISTRICT JUDGE

ATTACHMENT F

SUMMARY OF APPLICABLE MITIGATION MEASURES FROM ROD

ROD Reference No.	Issue ID	Project Name	Commitment Type	Description	Current Work	Item Type	Path
1	19550	E330 Downtown tunnel	Transportation/Traffic	Traffic Control: All mitigation measures associated with the construction of the East Link Project will comply with local regulations governing construction traffic control and construction truck routing. Sound Transit will finalize detailed construction mitigation plans in coordination with local jurisdictions and WSDOT during the final design and permitting phase of the project. Options for mitigation measures are listed below and will be implemented, as necessary, to mitigate traffic impacts due to light rail construction: 1) Follow standard construction safety measures, such as installing advance warning signs, installing highly visible construction barriers, and using flaggers. 2) Use lighted or reflective signage to direct drivers to truck haul routes and enhance visibility during nighttime work hours. 3) Use temporary reflective truck prohibition signs on streets with a high likelihood of cut-through truck traffic. 4) In areas with high levels of traffic congestion, schedule traffic lane closures and high volumes of construction traffic during off-peak hours to minimize delays where practical.	Requirement has been documented in specs or other materials	Item	sites/legal/EC/ECTS/Lists/Committments
2	19551	E330 Downtown tunnel	Transportation/Traffic	Traffic Control: All mitigation measures associated with the construction of the East Link Project will comply with local regulations governing construction traffic control and construction truck routing. Sound Transit will finalize detailed construction mitigation plans in coordination with local jurisdictions and WSDOT during the final design and permitting phase of the project. Options for mitigation measures are listed below and will be implemented, as necessary, to mitigate traffic impacts due to light rail construction: 5) Provide public information through tools such as print, radio, posted signs, websites, and e-mail to provide information regarding street closures, hours of construction, business access, and parking impacts. 6) Access closures will be coordinated in person with affected businesses and residents. If access closures are required, property access to residences and businesses will be maintained to the extent possible. If access to the property was not able to be maintained, the specific construction activity will be reviewed to determine if it could occur during non-business hours, or if the parking and users of this access (for example deliveries) would, when deemed needed and effective to address adverse impacts, be provided at an alternative location. 7) Where necessary, the contractor would, when deemed needed and effective to address adverse impacts, be responsible for providing parking areas for construction workers and at locations that would not contribute to the construction traffic impacts.	Requirement has been documented in specs or other materials	Item	sites/legal/EC/ECTS/Lists/Committments
3	19554	E330 Downtown tunnel	Transportation/Traffic	During East Link construction, adverse truck impacts would likely be associated with business deliveries on arterials and local streets near surface or tunnel construction activities. To minimize these impacts, Sound Transit will work specifically with affected businesses throughout construction to maintain access as much as practical to each business and coordinate with businesses during times of limited access. During construction associated with I-90, SR 520, or I-405, Sound Transit will coordinate with freight stakeholder groups by providing construction information to WSDOT for use in the state's freight notification system. Sound Transit will provide information in a format required by WSDOT and compensate WSDOT for any direct costs associated with use of the freight notification system for East Link construction.	Requirement will be included in specs or other documents	Item	sites/legal/EC/ECTS/Lists/Committments
4	19555	E330 Downtown tunnel	Real Estate	No mitigation is proposed. As part of the project, Sound Transit will compensate affected property owners according to the provisions specified in Sound Transit's adopted Real Estate Property Acquisition and Relocation Policy, Procedures, and Guidelines. (Resolution #R98-20-1) Sound Transit will comply with provisions of the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Code of Federal Regulations [CFR] Title 49, Part 24), as amended, and the State of Washington's relocation and property acquisition regulations (WAC 468-100 and RCW 8.26). Benefits would vary depending on the level of impact, available relocation options, and other factors.	Requirement is being implemented	Item	sites/legal/EC/ECTS/Lists/Committments
5	19556	E330 Downtown tunnel	Outreach	To minimize or limit impacts on businesses during construction, Sound Transit will dedicate staff to work specifically with affected businesses. Construction mitigation plans will be developed to address the needs of businesses during construction and could include, but are not limited to, the following elements: 1) Provide a 24-hour construction telephone hotline. 2) Provide business cleaning services on a case by case basis. 3) Provide detour, open for business, and other signage as appropriate. 4) Establish effective communications with the public through measures such as meetings and construction updates, alerts, and schedules. 5) Promotion and marketing measures to help affected business districts maintain their customer base to the extent possible during construction. 6) Maintain access as much as practical to each business and coordinate with businesses during times of limited access. 7) Provide a community ombudsman as a contact person for citizens to present unresolved complaints about construction impacts to agency leadership.	Requirement will be included in specs or other documents	Item	sites/legal/EC/ECTS/Lists/Committments

ROD Reference No.	Issue ID	Project Name	Commitment Type	Description	Current Work	Item Type	Path
6	19558	E330 Downtown tunnel	Air Quality	For construction activities, Puget Sound Clean Air Agency (PSCAA) regulates particulate emissions (in the form of fugitive dust). To comply with the PSCAA policy of preventing air quality degradation, mitigation options are listed below and will be implemented as necessary and in accordance with standard practice to control particulate matter 10 microns or 2.5 microns or less in size (PM10 and PM2.5, respectively) and emissions of carbon monoxide (CO) and oxides of nitrogen (NOx) during construction of the project. Several of these measures would also reduce GHG emissions: 1) Spray exposed soil with dust control agent as necessary to reduce emissions of PM10 and deposition of particulate matter. 2) Cover all transported loads of soils and wet materials before transport, or provide adequate freeboard (i.e. space from the top of the material to the top of the truck) to reduce PM10 and deposition of particulate during transportation. 3) Provide wheel washes to reduce dust and mud that would be carried off site by vehicles and to decrease particulate matter on area roadways. 4) Remove the dust and mud that are deposited on paved, public roads to decrease particulate matter. 5) Route and schedule high volumes of construction traffic to reduce congestion during peak travel periods and reduce emissions of CO, NOx, and carbon dioxide equivalent (CO2e) where practical. 6) Require appropriate emission-control devices on all construction equipment powered by gasoline or diesel fuel to reduce CO and NOx emissions in vehicular exhaust. 7) Use well-maintained heavy equipment to reduce CO and NOx emissions, which may also reduce GHG emissions. 8) Cover, install mulch, or plant vegetation as soon as practical after grading to reduce windblown particulate in the area. The following other readily available mitigation measures could potentially be used: 1) Encourage contractors to employ emissions reduction technologies and practices for both on-road and off-road equipment/vehicles (e.g., retrofit equipment with diesel control technology and/or use of ultra low sulfer diesel). 2) Implement construction truck-idling restriction (e.g., no longer than 5 minutes). 3) Locate construction equipment and truck staging zones away from sensitive receptors as practical and in consideration of other factors such as noise.	Requirement has been documented in specs or other materials	Item	sites/legal/EC/ECTS/Lists/Committments
7	19560	E330 Downtown tunnel	Noise/Vibration	Traffic noise impacts will be mitigated by sound walls, where determined to be reasonable. For locations with residual traffic noise impacts caused by the project, residential sound insulation might also be considered by Sound Transit.	Ongoing analysis	Item	sites/legal/EC/ECTS/Lists/Committments
8	19563	E330 Downtown tunnel	Noise/Vibration	Several different jurisdictions are responsible for the regulation of construction noise. Most daytime construction activities will be exempt from the noise control ordinances. When required, Sound Transit or its contractor will seek the appropriate noise variance from the local jurisdiction. Sound Transit will control nighttime construction noise levels by applying noise level limits, established through the variance process, and use noise control measures where necessary. The contractor will have the fiexibility of either prohibiting certain noise-generating activities during nighttime hours or providing additional noise control measures to meet these noise limits.	Requirement has been documented in specs or other materials	Item	sites/legal/EC/ECTS/Lists/Committments
9	19565	E330 Downtown tunnel	Noise/Vibration	Pile driving might be required in Segments A, B, C, D, and E for construction of elevated profiles and bridges, and might also occur in areas of retained cuts in Segments B, C and D. To mitigate noise related to pile driving, the use of an augur to install the piles instead of a pile driver will reduce the noise levels. If pile driving is necessary, the only mitigation will be to limit the time of day the activity can occur. Pile driving is not expected at most construction locations.	No further action required	Item	sites/legal/EC/ECTS/Lists/Committments
10	19568	E330 Downtown tunnel	Noise/Vibration	In general, building damage from construction vibration would only be anticipated from impact pile driving close to buildings. If piling is more than 25 feet from buildings, or if alternative methods, such as auger cast piling or drilled shafts are used, then damage from construction would not be anticipated. Other sources of construction vibration, including potential ground improvement activities such as construction of subsurface stone columns, could generate high enough vibration levels for localized damage to occur, depending on the soil type and distance between the source of vibration and the nearest building. In any locations of concern, preconstruction surveys will be conducted to document the existing condition of buildings, in case there was an issue during or after construction, and vibration monitoring will be implemented during construction to establish levels of vibration. Where levels of vibration exceed preset limits for damage, the contractor will be required to stop work and switch to alternate construction methods.	No further action required	Item	sites/legal/EC/ECTS/Lists/Committments
11	19569	E330 Downtown tunnel	Noise/Vibration	Measures to minimize short-term annoyance from groundborne vibration and groundborne noise from construction activities such as pile installation or compaction of earth fills include use of alternate methods that result in less vibration or noise, such as auger cast piles or drilled shafts in place of driven piles, or use of static roller compactors rather than vibratory compactors. The hours and duration of these types of activities can also be restricted to hours when vibrations and noise are less noticeable. Vibration monitoring would be considered for pile driving, tunnel construction, vibratory sheet installation, and other construction activities that have the potential to cause high levels of vibration.	Ongoing analysis	Item	sites/legal/EC/ECTS/Lists/Committments

ROD Reference No.	Issue ID	Project Name	Commitment Type	Description	Current Work	Item Type	Path
12	19573	E330 Downtown tunnel	Ecosystem	High value habitat areas disturbed in the construction staging areas will be revegetated with native vegetation as soon as possible following construction. Sound Transit will update its survey of bird nests during final design. If a bald eagle nest is found within one-half mile of the proposed construction limits, a bald eagle management plan will be prepared. Under the Migratory Bird Treaty Act (MBTA), nesting migratory bird nests cannot be destroyed during the breeding season. Sound Transit will consult with the U. S. Fish and Wildlife Service on methods to implement during construction to avoid impacts on migratory birds consistent with the MBTA and the Bald and Golden Eagle Protection Act, such as limiting clearing activities in the Mercer Slough buffer outside the nesting season for migratory birds.	No further action required	Item	sites/legal/EC/ECTS/Lists/Committments
13	19577	E330 Downtown tunnel	Ecosystem	Engineering design standards and BMPs will be used to avoid and minimize potential construction impacts. Based on the review of potential impacts, the design and construction process will address seismic hazards, soft soils, settlement, steep-slope hazards, landslide hazards, erosion and sediment control, vibrations, and groundwater.	Requirement has been documented in specs or other materials	Item	sites/legal/EC/ECTS/Lists/Committments
14	19578	E330 Downtown tunnel	Hazardous Materials	In order to mitigate potential impacts from all potential sites, including railroad corridor and crossings, Sound Transit will perform a level of environmental due diligence appropriate to the size and presumed past use of the property at all properties along the corridor before they are acquired. Phase 2 Environmental Site Assessments would be conducted where appropriate. Where responsible, Sound Transit will remediate contaminated soil and groundwater, including those previously unknown and found during construction. To the extent practical, Sound Transit will limit construction activities that might encounter contaminated groundwater or contaminated soils.	Ongoing analysis	Item	sites/legal/EC/ECTS/Lists/Committments
15	19579	E330 Downtown tunnel	Public Service/Utilities	Sound Transit will coordinate with public service providers before and during construction to maintain reliable emergency access and alternative plans or routes to minimize delays in response times. Sound Transit will also coordinate with solid waste and recycling companies and schools if any rerouting of collection or bus routes will need to occur. Postal collection and delivery and solid waste and recycling collection will be maintained at all addresses.	Requirement will be included in specs or other documents	Item	sites/legal/EC/ECTS/Lists/Committments
16	19580	E330 Downtown tunnel	Public Service/Utilities	The project includes design measures and coordination with utility providers and the public to minimize impacts on utilities during light rail construction. These measures include potholing and preconstruction surveys to identify utility locations. Sound Transit will continue to work with utility providers to minimize service interruptions and perform outreach to notify the community in advance of potential service interruptions.	Requirement has been documented in specs or other materials	Item	sites/legal/EC/ECTS/Lists/Committments
17	19581	E330 Downtown tunnel	Land Use	NE 2nd Pocket Parks: One, or a combination of the following, as agreed to with the City: 3) Enhance entire northwest quadrant of the park as a public plaza in conjunction with the station entrance.	Requirement will be included in specs or other documents	Item	sites/legal/EC/ECTS/Lists/Committments
18	19582	E330 Downtown tunnel	Real Estate	NE 2nd Pocket Parks: One, or a combination of the following, as agreed to with the City: 1) Provide financial compensation as agreed to with the City. 2) Provide replacement land with an equivalent portion of the project's staging area located on the northeast quadrant of the park.	Requirement will be included in specs or other documents	Item	sites/legal/EC/ECTS/Lists/Committments
19	19583	E330 Downtown tunnel	Land Use	NE 2nd Pocket Parks: 2) Restore temporarily disturbed park area to existing conditions. 3) Preserve pedestrian access to southern park quadrants.	Requirement will be included in specs or other documents	Item	sites/legal/EC/ECTS/Lists/Committments
20	19584	E330 Downtown tunnel	Real Estate	NE 2nd Pocket Parks: 1) Provide financial compensation for the temporary use of land as agreed to with the City.	Duplicate commitment	Item	sites/legal/EC/ECTS/Lists/Committments
21	19546	E335 Downtown to Spring District	Transportation/Traffic	Sound Transit will perform any measures that may be identified by the Federal Highway Administration's Interchange Justification Report and environmental Record of Decision.	Requirement will be included in specs or other documents	Item	sites/legal/EC/ECTS/Lists/Committments
22	19547	E335 Downtown to Spring District	Transportation/Traffic	During East Link construction, Sound Transit will coordinate with the Washington State Department of Transportation (WSDOT) on incident management, construction staging, and traffic control where the light rail construction might affect freeway traffic. Sound Transit will also coordinate with WSDOT to disseminate construction closure information to the public as needed.	Requirement will be included in specs or other documents	Item	sites/legal/EC/ECTS/Lists/Committments
23	19548	E335 Downtown to Spring District	Transportation/Traffic	Arterial and local street mitigation will be implemented where deemed effective to address adverse impacts at intersections where the intersection LOS with the East Link Project is predicted to degrade to levels that do not meet the LOS standards of the jurisdiction and are predicted to operate worse than the No Build Alternative. Final mitigation will be coordinated with each affected jurisdiction through subsequent phases of this project.	Ongoing analysis	Item	sites/legal/EC/ECTS/Lists/Committments
24	19549	E335 Downtown to Spring District	Transportation/Traffic	Segment C: At the NE 4th Street and 108th Avenue NE intersection, mitigation to better use the roadway capacity would be implemented when deemed needed and effective to address adverse impacts, such as providing active traffic management strategies. For example, active signing could be installed to more effectively route vehicles to less congested streets; turn movements could be restricted during congested periods; or adaptive signal controllers could be installed to better respond to changing traffic conditions. Mitigation will be coordinated with the City of Bellevue.	No further action required	Item	sites/legal/EC/ECTS/Lists/Committments

ROD Reference No.	Issue ID	Project Name	Commitment Type	Description	Current Work	Item Type	Path
25	19552	E335 Downtown to Spring District	Transportation/Traffic	Sound Transit will provide non-motorized improvements at East Link stations, as shown in the conceptual engineering drawings in East Link Final EIS Appendix G1. Sound Transit will work with the local agencies regarding alternatives and stations that are located within the median of roadways so that the most appropriate treatments are provided for safe and effective pedestrian crossings and access. These treatments could include painted crosswalks or signals, street lighting, warning lights, or signage.	Requirement will be included in specs or other documents	Item	sites/legal/EC/ECTS/Lists/Committments
26	19553	E335 Downtown to Spring District	Transportation/Traffic	During construction, Sound Transit will minimize potential impacts on pedestrian and bicycle facilities by providing detours or clearly delineated facilities within construction areas such as walkways and notify the public as determined appropriate by the project. Multiuse trails affected by construction will generally be kept open for use, but detours will be provided when trails are unless they are closed for short durations or in areas where a detour is not feasible. Public notification efforts will be conducted for trail closures during construction.	Requirement will be included in specs or other documents	Item	sites/legal/EC/ECTS/Lists/Committments
27	19557	E335 Downtown to Spring District	Other	During construction, Sound Transit will provide visual screening along the south side of the tunnel portal construction area along Main Street for Segment C. Nighttime construction lighting would be shielded and directed downward to avoid light spillover onto adjacent sensitive uses.	Ongoing analysis	Item	sites/legal/EC/ECTS/Lists/Committments
28	19559	E335 Downtown to Spring District	Noise/Vibration	Noise Mitigation Policy (Motion No. M2004-08). The FTA manual also defines when mitigation is needed and bases this on the impact's severity, with severe impacts requiring the most consideration. During final design, all predicted impacts and mitigation measures will be reviewed for verification. During final design, if it is discovered that equivalent mitigation can be achieved by a less costly means or if the detailed analysis show no impact, then the mitigation measure may be eliminated or modified. Prior FTA approval is required for any elimination or substantial modification to mitigation measures. The potential mitigation options available for noise from transit operations on the East Link Project are primarily sound walls, special trackwork, lubricated curves, and residential building sound insulation. Sound walls are proposed where feasible and reasonable, as determined by Sound Transit (and the Federal Transit Administration, at its discretion) based on specific site conditions. Sound walls would be located on the ground for at-grade profiles and on the guideway structure for elevated profiles. Sound walls are preferred because they are effective at reducing noise. For locations where there is a potential for traffic noise to be reflected off the sound walls, Sound Transit will include where feasible the use of absorptive treatments to remedy this issue. A crossover track uses a frog (a rail-crossing structure) to allow the train to either cross over to another track or continue moving on the same track. A gap is provided on top of the frog so that vehicle wheels can pass regardless of which track is in use. With typical frogs, noise and vibration are generated when the wheels pass over the gap. Special trackwork, such as movable point or spring rail frogs, eliminates the gap betvween tracks at crossovers that causes noise and vibration at these locations and will be used where feasible. Sound Transit is currently investigating the use of non-audible warnings for gated and ungated at-grade crossings. If non-audible warning devices are found to be viable, this option could be used to reduce or eliminate bell noise at specific crossings. Where practical, grade separation of at-grade light rail crossings would also be considered to eliminate the need for bells or other audible warning devices. If bells are used at gated crossings, the bells would be set at the minimum noise level that maintains a safe crossing. Finally, the use of acoustic bell shrouds would be examined during final design; the shrouds would direct the bell noise at gated crossings to the intersection. When source	Ongoing analysis	Item	sites/legal/EC/ECTS/Lists/Committments
29	19561	E335 Downtown to Spring District	Noise/Vibration	Segment C: Sound walls and special track work at the crossover will be used to mitigate impacts on the Coast Bellevue Hotel and Lake Bellevue Village Condominiums. Impacts located on SE 4th Street will be mitigated with a sound wall if possible; otherwise sound insulation will be employed for mitigation. Single- and multi-family units located on Main Street and NE 6th Street will be mitigated with sound insulation where necessary. (See Exhibits A-10-Na, A-10-Nb, A-12-Na, and A-12-Nb in East Link Final EIS Appendix H2) Sound walls and/or, if determined that they are not feasible, other reasonable and feasible noise mitigation measures will be employed at those areas where noise impacts have not been anticipated but are shown evident after operations commence.	Ongoing analysis	Item	sites/legal/EC/ECTS/Lists/Committments
30	19562	E335 Downtown to Spring District	Noise/Vibration	Wheel Squeal: For curves of 600-foot radius or less, a trackside or vehicle-mounted lubrication system will be used to mitigate wheel squeal noise. For curves of 600- to 1,000-foot radius, the project will be designed to accommodate a lubrication system if wheel squeal occurs during operations.	Ongoing analysis	Item	sites/legal/EC/ECTS/Lists/Committments
31	19570	E335 Downtown to Spring District	Ecosystem	Project impacts on high-value wildlife habitats regulated by local agencies will be mitigated with habitat replacement or enhancement. The type of habitat to be established will depend on the affected species. The type of habitat to be replaced and mitigation ratios will be determined through discussions with federal, state, and local permitting agencies during final design and project permitting. Sound Transit will adhere to local ordinances regarding tree replacement ratios.	Ongoing analysis	Item	sites/legal/EC/ECTS/Lists/Committments

ROD Reference No.	Issue ID	Project Name	Commitment Type	Description	Current Work	Item Type	Path
32	19571	E335 Downtown to Spring District	Ecosystem	Sound Transit has committed to achieving no net loss of wetland function and area on a project-wide basis. Sound Transit will apply the interagency wetland mitigation guidance prepared by Ecology, United States Army Corps of Engineers (USACE), and United States Environmental Protection Agency (EPA) (2006). Compensatory mitigation sites will be identified within the same drainage basin and compensate for lost functions in-kind. The specific compensatory mitigation sites for unavoidable impacts on wetlands will be determined during final design and project permitting. Compensatory mitigation-to-impact ratios for replacement of wetlands will comply with the requirements of the local critical area ordinances (CAOs) and the interagency wetland mitigation guidance (Ecology et al., 2006). During field work, Sound Transit determined there are several opportunities for wetland mitigation within the study area close to potentially impacted areas that are expected to meet required mitigation ratios. Additional compensatory mitigation may be required for impacts on existing wetland mitigation sites and will be determined during final design and project permitting. There are no exi sting approved mitigation banks in the Kelsey Creek subbasin. However, it is possible that a bank could become certified in the project study area in the future and could be used to mitigate project impacts.	Requirement will be included in specs or other documents	Item	sites/legal/EC/ECTS/Lists/Committments
33	19572	E335 Downtown to Spring District	Ecosystem	Realignment of the Sturtevant Creek channel at the Hospital Station will be required. Sound Transit will reconstruct the new channel with natural stream habitat features. Riparian habitat functions are expected to improve with native riparian plantings. This reach is currently lacking shade. The newly shaded reach is expected to help lower stream temperatures in the downstream reaches that support salmonids. Specific requirements and details of these measures will be established during final design and project permitting.	Requirement has been documented in specs or other materials	Item	sites/legal/EC/ECTS/Lists/Committments
34	19574	E335 Downtown to Spring District	Ecosystem	Wetlands and wetland/stream buffer areas disturbed by construction will be protected by best management practices (BMPs) and revegetated as soon as possible after construction. BMPs will be implemented to avoid construction impacts on wetlands and wetland buffers. For wetlands to be restored after construction, Sound Transit will conduct detailed site surveys to establish existing topography and conduct hydrologic monitoring to restore topography. Restoration would include soil amendment and vegetation replacement.	Requirement will be included in specs or other documents	Item	sites/legal/EC/ECTS/Lists/Committments
35	19575	E335 Downtown to Spring District	Ecosystem	BMPs will be implemented to avoid construction impacts on aquatic resources. Except for the in-water construction in Lake Washington, any in-water work will be isolated from adjacent waters using a coffer dam or other suitable technique. Such isolation is not necessary in Lake Washington due to the type of work done there (welding or bolting metal jackets together). In-water work will be conducted during approved in-water construction windows. Where ESA-listed species might be present, stream crossings will not require in-water work and the project will not install infrastructure below the ordinary high water mark (OHWM). Disturbed or temporarily cleared riparian vegetation will be replanted with suitable native species. The proposed channel relocation of Sturtevant Creek adjacent to the Hospital Station will follow guidelines found in the Integrated Streambank Protection Guidelines manual (WDFW et al., 2002) and other current stream design documents. If over-water construction is conducted over the Sammamish River during the migratory period of Endangered Species Act (ESA)-protected species, nighttime lighting will be shielded from the waters below.	Requirement will be included in specs or other documents	Item	sites/legal/EC/ECTS/Lists/Committments
36	19576	E335 Downtown to Spring District	Ecosystem	During final design, opportunities for regional management of project stormwater and on-site control of stormwater runoff will be explored. The project design team will work with local jurisdictions to identify opportunities to incorporate low-impact development features into the project. Stormwater management and treatment principles of Low-Impact Development (LID) will be favored over "traditional" stormwater treatment where practical.	Ongoing analysis	Item	sites/legal/EC/ECTS/Lists/Committments
37	19960	E335 Downtown to Spring District	Transportation/Traffic	During construction of the project crossing at I405, lower the existing northbound signal head 3 feet from the mast arm by using a typical signal extension, including 1) speed reduction and signal ahead signing at the beginning of the ramp and 2) operator notice to ramp users (bus service) including a description of construction acitivies and duration.	Requirement will be included in specs or other documents	Item	sites/legal/EC/ECTS/Lists/Committments
38	19961	E335 Downtown to Spring District	Transportation/Traffic	Achieve a minimum vertical clearance of 14.5 feet during construction to accommodate a design vehicle on the ramp (bus) and an oversized load would not be permitted on the ramp, therefore, the agreed to mitigation is field verification of the vertical clearance once the false deck/containment is in place.	Ongoing analysis	Item	sites/legal/EC/ECTS/Lists/Committments

ROD Reference No.	Issue ID	Project Name	Commitment Type	Description	Current Work	Item Type	Path
39	19979	E335 Downtown to Spring District	Transportation/Traffic	Traffic Control: All mitigation measures associated with the construction of the East Link Project will comply with local regulations governing construction traffic control and construction truck routing. Sound Transit will finalize detailed construction mitigation plans in coordination with local jurisdictions and WSDOT during the final design and permitting phase of the project. Options for mitigation measures are listed below and will be implemented, as necessary, to mitigate traffic impacts due to light rail construction: 1) Follow standard construction safety measures, such as installing advance warning signs, installing highly visible construction barriers, and using flaggers. 2) Use lighted or reflective signage to direct drivers to truck haul routes and enhance visibility during nighttime work hours. 3) Use temporary reflective truck prohibition signs on streets with a high likelihood of cut-through truck traffic. 4) In areas with high levels of traffic congestion, schedule traffic lane closures and high volumes of construction traffic during off-peak hours to minimize delays where practical.	Requirement will be included in specs or other documents	Item	sites/legal/EC/ECTS/Lists/Committments
40	19980	E335 Downtown to Spring District	Transportation/Traffic	Traffic Control: All mitigation measures associated with the construction of the East Link Project will comply with local regulations governing construction traffic control and construction truck routing. Sound Transit will finalize detailed construction mitigation plans in coordination with local jurisdictions and WSDOT during the final design and permitting phase of the project. Options for mitigation measures are listed below and will be implemented, as necessary, to mitigate traffic impacts due to light rail construction: 5) Provide public information through tools such as print, radio, posted signs, websites, and e-mail to provide information regarding street closures, hours of construction, business access, and parking impacts. 6) Access closures will be coordinated in person with affected businesses and residents. If access closures are required, property access to residences and businesses will be maintained to the extent possible. If access to the property was not able to be maintained, the specific construction activity will be reviewed to determine if it could occur during non-business hours, or if the parking and users of this access (for example deliveries) would, when deemed needed and effective to address adverse impacts, be provided at an alternative location. 7) Where necessary, the contractor would, when deemed needed and effective to address adverse impacts, be responsible for providing parking areas for construction workers and at locations that would not contribute to the construction traffic impacts.	Requirement will be included in specs or other documents	Item	sites/legal/EC/ECTS/Lists/Committments
41	19981	E335 Downtown to Spring District	Transportation/Traffic	During East Link construction, adverse truck impacts would likely be associated with business deliveries on arterials and local streets near surface or tunnel construction activities. To minimize these impacts, Sound Transit will work specifically with affected businesses throughout construction to maintain access as much as practical to each business and coordinate with businesses during times of limited access. During construction associated with I-90, SR 520, or I-405, Sound Transit will coordinate with freight stakeholder groups by providing construction information to WSDOT for use in the state's freight notification system. Sound Transit will provide information in a format required by WSDOT and compensate WSDOT for any direct costs associated with use of the freight notification system for East Link construction.	Requirement will be included in specs or other documents	Item	sites/legal/EC/ECTS/Lists/Committments
42	19982	E335 Downtown to Spring District	Real Estate	No mitigation is proposed. As part of the project, Sound Transit will compensate affected property owners according to the provisions specified in Sound Transit's adopted Real Estate Property Acquisition and Relocation Policy, Procedures, and Guidelines. (Resolution #R98-20-1) Sound Transit will comply with provisions of the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Code of Federal Regulations [CFR] Title 49, Part 24), as amended, and the State of Washington's relocation and property acquisition regulations (WAC 468-100 and RCW 8.26). Benefits would vary depending on the level of impact, available relocation options, and other factors.	Ongoing analysis	Item	sites/legal/EC/ECTS/Lists/Committments
43	19983	E335 Downtown to Spring District	Outreach	To minimize or limit impacts on businesses during construction, Sound Transit will dedicate staff to work specifically with affected businesses. Construction mitigation plans will be developed to address the needs of businesses during construction and could include, but are not limited to, the following elements: 1) Provide a 24-hour construction telephone hotline. 2) Provide business cleaning services on a case by case basis. 3) Provide detour, open for business, and other signage as appropriate. 4) Establish effective communications with the public through measures such as meetings and construction updates, alerts, and schedules. 5) Promotion and marketing measures to help affected business districts maintain their customer base to the extent possible during construction. 6) Maintain access as much as practical to each business and coordinate with businesses during times of limited access. 7) Provide a community ombudsman as a contact person for citizens to present unresolved complaints about construction impacts to agency leadership.	No action taken this quarter	Item	sites/legal/EC/ECTS/Lists/Committments

ROD Reference No.	Issue ID	Project Name	Commitment Type	Description	Current Work	Item Type	Path
44	19984	E335 Downtown to Spring District	Air Quality	For construction activities, Puget Sound Clean Air Agency (PSCAA) regulates particulate emissions (in the form of fugitive dust). To comply with the PSCAA policy of preventing air quality degradation, mitigation options are listed below and will be implemented as necessary and in accordance with standard practice to control particulate matter 10 microns or 2.5 microns or less in size (PM10 and PM2.5, respectively) and emissions of carbon monoxide (CO) and oxides of nitrogen (NOx) during construction of the project. Several of these measures would also reduce GHG emissions: 1) Spray exposed soil with dust control agent as necessary to reduce emissions of PM10 and deposition of particulate matter. 2) Cover all transported loads of soils and wet materials before transport, or provide adequate freeboard (i.e. space from the top of the material to the top of the truck) to reduce PM10 and deposition of particulate during transportation. 3) Provide wheel washes to reduce dust and mud that would be carried off site by vehicles and to decrease particulate matter on area roadways. 4) Remove the dust and mud that are deposited on paved, public roads to decrease particulate matter. 5) Route and schedule high volumes of construction traffic to reduce congestion during peak travel periods and reduce emissions of CO, NOx, and carbon dioxide equivalent (CO2e) where practical. 6) Require appropriate emission-control devices on all construction equipment powered by gasoline or diesel fuel to reduce CO and NOx emissions in vehicular exhaust. 7) Use well-maintained heavy equipment to reduce CO and NOx emissions, which may also reduce GHG emissions. 8) Cover, install mulch, or plant vegetation as soon as practical after grading to reduce windblown particulate in the area. The following other readily available mitigation measures could potentially be used: 1) Encourage contractors to employ emissions reduction technologies and practices for both on-road and off-road equipment/vehicles (e.g., retrofit equipment with diesel control technology and/or use of ultra low sulfer diesel). 2) Implement construction truck-idling restriction (e.g., no longer than 5 minutes). 3) Locate construction equipment and truck staging zones away from sensitive receptors as practical and in consideration of other factors such as noise.	Requirement has been documented in specs or other materials	Item	sites/legal/EC/ECTS/Lists/Committments
45	19985	E335 Downtown to Spring District	Noise/Vibration	Traffic noise impacts will be mitigated by sound walls, where determined to be reasonable. For locations with residual traffic noise impacts caused by the project, residential sound insulation might also be considered by Sound Transit.	Ongoing analysis	Item	sites/legal/EC/ECTS/Lists/Committments
46	19986	E335 Downtown to Spring District	Noise/Vibration	Several different jurisdictions are responsible for the regulation of construction noise. Most daytime construction activities will be exempt from the noise control ordinances. When required, Sound Transit or its contractor will seek the appropriate noise variance from the local jurisdiction. Sound Transit will control nighttime construction noise levels by applying noise level limits, established through the variance process, and use noise control measures where necessary. The contractor will have the fiexibility of either prohibiting certain noise-generating activities during nighttime hours or providing additional noise control measures to meet these noise limits.	Requirement will be included in specs or other documents	Item	sites/legal/EC/ECTS/Lists/Committments
47	19987	E335 Downtown to Spring District	Noise/Vibration	Pile driving might be required in Segments A, B, C, D, and E for construction of elevated profiles and bridges, and might also occur in areas of retained cuts in Segments B, C and D. To mitigate noise related to pile driving, the use of an augur to install the piles instead of a pile driver will reduce the noise levels. If pile driving is necessary, the only mitigation will be to limit the time of day the activity can occur. Pile driving is not expected at most construction locations.	No further action required	Item	sites/legal/EC/ECTS/Lists/Committments
48	19988	E335 Downtown to Spring District	Noise/Vibration	Measures to minimize short-term annoyance from groundborne vibration and groundborne noise from construction activities such as pile installation or compaction of earth fills include use of alternate methods that result in less vibration or noise, such as auger cast piles or drilled shafts in place of driven piles, or use of static roller compactors rather than vibratory compactors. The hours and duration of these types of activities can also be restricted to hours when vibrations and noise are less noticeable. Vibration monitoring would be considered for pile driving, tunnel construction, vibratory sheet installation, and other construction activities that have the potential to cause high levels of vibration.	Ongoing analysis	Item	sites/legal/EC/ECTS/Lists/Committments
49	19989	E335 Downtown to Spring District	Ecosystem	High value habitat areas disturbed in the construction staging areas will be revegetated with native vegetation as soon as possible following construction. Sound Transit will update its survey of bird nests during final design. If a bald eagle nest is found within one-half mile of the proposed construction limits, a bald eagle management plan will be prepared. Under the Migratory Bird Treaty Act (MBTA), nesting migratory bird nests cannot be destroyed during the breeding season. Sound Transit will consult with the U. S. Fish and Wildlife Service on methods to implement during construction to avoid impacts on migratory birds consistent with the MBTA and the Bald and Golden Eagle Protection Act, such as limiting clearing activities in the Mercer Slough buffer outside the nesting season for migratory birds.	Ongoing analysis	Item	sites/legal/EC/ECTS/Lists/Committments
50	19990	E335 Downtown to Spring District	Ecosystem	Engineering design standards and BMPs will be used to avoid and minimize potential construction impacts. Based on the review of potential impacts, the design and construction process will address seismic hazards, soft soils, settlement, steep-slope hazards, landslide hazards, erosion and sediment control, vibrations, and groundwater.	Requirement will be included in specs or other documents	Item	sites/legal/EC/ECTS/Lists/Committments

ROD Reference No.	Issue ID	Project Name	Commitment Type	Description	Current Work	Item Type	Path
51	19991	E335 Downtown to Spring District	Hazardous Materials	In order to mitigate potential impacts from all potential sites, including railroad corridor and crossings, Sound Transit will perform a level of environmental due diligence appropriate to the size and presumed past use of the property at all properties along the corridor before they are acquired. Phase 2 Environmental Site Assessments would be conducted where appropriate. Where responsible, Sound Transit will remediate contaminated soil and groundwater, including those previously unknown and found during construction. To the extent practical, Sound Transit will limit construction activities that might encounter contaminated groundwater or contaminated soils.	Ongoing analysis	Item	sites/legal/EC/ECTS/Lists/Committments
52	19992	E335 Downtown to Spring District	Public Service/Utilities	Sound Transit will coordinate with public service providers before and during construction to maintain reliable emergency access and alternative plans or routes to minimize delays in response times. Sound Transit will also coordinate with solid waste and recycling companies and schools if any rerouting of collection or bus routes will need to occur. Postal collection and delivery and solid waste and recycling collection will be maintained at all addresses.	Requirement will be included in specs or other documents	Item	sites/legal/EC/ECTS/Lists/Committments

ATTACHMENT G

FEIS AND ROD REFERENCES THAT ADDRESS THE CITY'S LAND USE CODE

East Link Project
City of Bellevue Land Use Code 20.25H FEIS/ROD Mitigation Reference Chart

STREAMS				
LUC 20.25H.055. C.2	**Item**	**FEIS Reference (Section)**	**FEIS Appendix/Backup Report Reference**	**Appendix F ROD/Mitigation Summary (ROD Reference No.)**
…a.i	Existing Infrastructure	2.3.1, 2.3.2, 3.3.2, 3.4.2, 3.5.2, 3.6.2, 3.7.2. 3.8.2, 3.9.1	N.A.	19, 31, 33, 34, 35
…a.ii	Function/objective of proposed system	1.1.2	N.A.	N.A.
…a.iii	Alternatives	2.3	N.A.	N.A.
…a.iv	Cost Analysis	6.2	N.A.	N.A.
…a.v	Mitigation	4.8.4, 4.9.4	Appendix C, Appendix H3, Appendix I	19, 31, 33, 34, 35
…b.i	Minimize Impacts to Critical Areas	4.8.3, 4.9.3	Appendix C, Appendix H3	19, 31, 33, 35
…b.ii	Disturbance of Critical Areas	4.8.2, 4.8.3, 4.9.2, 4.9.3	Appendix C, Appendix H3	19, 31, 33, 35
…b.iii	Disturbance of Salmonid Habitat	4.8.3	Appendix H3	31, 33, 35
…b.iv	Wetland/stream crossings	4.8.3	Appendix H3	33, 35
…b.v	COB Codes and Standards	N.A.	N.A.	N.A.
…b.vi	Impact to aquatic systems	4.9.2, 4.9.3. 4.9.4	Appendix H3	19, 31, 33, 34, 35
…b.vii	Parking	2.3.2	Appendix G1	35
…b.viii	Mitigation	2.5, 4.8.4, 4.9.4	Appendix H3, Appendix I	19, 31, 33, 34, 35

LUC 20.25H.080.A	Item	FEIS Reference (Section)	FEIS Appendix/Backup Report Reference	Appendix F ROD/Mitigation Summary (ROD Reference No.)
…1	Stream lighting impacts	4.8.2, 4.8.3, 4.8.4, 4.9.2, 4.9.3, 4.9.4	Appendix H3 Appendix I	35
…2	Noise minimization	4.8.4, 4.9.4	Appendix H3 Appendix I	8, 13, 46, 50
…3	Stream Protection from Toxic Runoff	4.8.4, 4.9.4	Appendix H3 Appendix I	6, 13, 14, 34, 35, 44, 50, 51
…4	Treated water allowed in stream buffer	4.8.4, 4.9.4	Appendix H3 Appendix I	N.A.
…5	Plant stream buffer with dense vegetation	4.8.4, 4.9.4	Appendix H3 Appendix I	31, 33, 34, 35
…6	No pesticides, insecticides or fertilizers within 150 feet of edge of buffer	N.A.	N.A.	13, 34, 35, 50
LUC 20.25H.080.B	**Item**	**FEIS Reference (Section)**	**FEIS Appendix/Backup Report Reference**	**Appendix F ROD/Mitigation Summary (ROD Reference No.)**
…1	Stream channel modification allowed with approved use	N.A.	N.A.	33
…2	Critical Areas Report	4.8.2, 4.8.3, 4.9.2, 4.9.3	Appendix H3 Appendix I	N.A.
…3	Relocation of closed stream channel	4.8.2, 4.8.3, 4.9.2, 4.9.3	Appendix H3 Appendix I	33

WETLANDS				
LUC 20.25H.055. C.2	**Item**	**FEIS Reference (Section)**	**FEIS Appendix/Backup Report Reference**	**Appendix F ROD/Mitigation Summary (ROD Reference No.)**
…a.i	Existing Infrastructure	2.3.1, 2.3.2, 3.3.2, 3.4.2, 3.5.2, 3.6.2, 3.7.2. 3.8.2,	N.A.	12, 19, 32, 34, 49
…a.ii	Function/objective of proposed system	1.1.2	N.A.	N.A.
…a.iii	Alternatives	2.3	N.A.	N.A.
…a.iv	Cost Analysis	6.2	N.A.	N.A.
…a.v	Mitigation	4.8.4	Appendix C, Appendix H3, Appendix I	12, 19, 31, 32, 34, 49
…b.i	Impacts to Critical Areas	4.8.2, 4.8.3	Appendix C, Appendix H3	6, 12, 19, 31, 32, 34, 35, 44, 49
…b.ii	Disturbance of Critical Areas	4.8.2, 4.8.3,	Appendix C, Appendix H3	6, 12, 19, 32, 34, 35, 44, 49
…b.iii	Disturbance of Salmonid Habitat	4.8.3	Appendix H3	N.A.
…b.iv	Wetland/stream crossings	4.8.3	Appendix H3	35
…b.v	COB Codes and Standards	N.A.	N.A.	N.A.
…b.vi	Impact to aquatic systems	4.9.2, 4.9.3, 4.9.4	Appendix H3	12, 19, 32, 34, 35, 49
…b.vii	Parking	2.3.2	Appendix G1	N.A.
…b.viii	Mitigation	2.5, 4.8.4, 4.9.4	Appendix H3, Appendix I	12, 19, 31, 32, 34, 49

LUC 20.25H.100	Item	FEIS Reference (Section)	FEIS Appendix/Backup Report Reference	Appendix F ROD/Mitigation Summary (ROD Reference No.)
…A	Wetland lighting impacts	4.8.2, 4.8.3, 4.8.4	Appendix H3, Appendix I	35
…B	Noise minimization	4.8.4	Appendix H3, Appendix I	8, 13, 46, 50
…C	Wetland Protection from Toxic Runoff	4.8.4	Appendix H3, Appendix I	13, 14, 34, 35, 48, 49, 50
…D	Treated water allowed in wetland buffer	4.8.4	Appendix H3, Appendix I	N.A.
…E	Plant wetland buffer with dense vegetation	4.8.4	Appendix H3, Appendix I	12, 19, 31, 34, 49
…F	No pesticides, insecticides or fertilizers within 150 feet of edge of buffer	N.A.	N.A.	13, 34, 35, 50

SHORELINES				
LUC 20.25H.055. C.2	**Item**	**FEIS Reference (Section)**	**FEIS Appendix/Backup Report Reference**	**Appendix F ROD/Mitigation Summary (ROD Reference No.)**
…a.i	Existing Infrastructure	2.3.1, 2.3.2, 3.3.2, 3.4.2, 3.5.2, 3.6.2, 3.7.2. 3.8.2,	N.A.	N.A.
…a.ii	Function/objective of proposed system	1.1.2	N.A.	N.A.
…a.iii	Alternatives	2.3	N.A.	N.A.
…a.iv	Cost Analysis	6.2	N.A.	N.A.
…a.v	Mitigation	4.8.4, 4.9.4	Appendix C, Appendix H3, Appendix I	N.A.
…b.i	Impacts to Critical Areas	4.8.3, 4.9.3	Appendix C, Appendix H3	N.A.
…b.ii	Disturbance of Critical Areas	4.8.2, 4.8.3, 4.9.2, 4.9.3	Appendix C, Appendix H3	N.A.
…b.iii	Disturbance of Salmonid Habitat	4.8.3	Appendix H3	N.A.
…b.iv	Wetland/stream crossings	4.8.3	Appendix H3	35
…b.v	COB Codes and Standards	N.A.	N.A.	N.A.
…b.vi	Impact to aquatic systems	4.9.2, 4.9.3. 4.9.4	Appendix H3	N.A.
…b.vii	Parking	2.3.2	Appendix G1	N.A.
…b.viii	Mitigation	2.5, 4.8.4, 4.9.4	Appendix H3, Appendix I	N.A.

LUC 20.25E.080.B	Item	FEIS Reference (Section)	FEIS Appendix/Backup Report Reference	Appendix F ROD/Mitigation Summary (ROD Reference No.)
…1	Water Quality Standards	4.9.1	Appendix H3	N.A.
…2	Shoreline Overlay District Property	2.3.2.2	N/A	N.A.
…3	Shoreline Overlay District Development	2.5, 4.8.4, 4.9.4	Appendix C, Appendix I	N.A.
…4	Critical Area Impacts	4.8.3, 4.8.4, 4.9.3, 4.9.4	Appendix C, Appendix H3, Appendix I	N.A.
…5	Maximum Height Restriction	2.3.2.2	N/A	N.A.
…6	Bellevue Shoreline Master Program	N.A.	N.A.	N.A.
…7	COB Codes and Standards	N.A.	N.A.	N.A.
…8	Dead Storage of Watercraft	2.3.2.2, 3.9.2	N.A.	N.A.
…9	COB Environmental Best Practices	4.8.4, 4.9.4	Appendix H3, Appendix I	N.A.
…10	Storm Drainage Facilities	2.4.1, 4.9.1	N.A.	N.A.

GEOLOGIC HAZARD AREAS				
LUC 20.25H.055. C.2	**Item**	**FEIS Reference (Section)**	**FEIS Appendix/Backup Report Reference**	**Appendix F ROD/Mitigation Summary (ROD Reference No.)**
…a.i	Existing Infrastructure	2.3.1, 2.3.2, 3.3.2, 3.4.2, 3.5.2, 3.6.2, 3.7.2. 3.8.2,	N.A.	13, 50
…a.ii	Function/objective of proposed system	1.1.2	N.A.	N.A.
…a.iii	Alternatives	2.3	N.A.	N.A.
…a.iv	Cost Analysis	6.2	N.A.	N.A.
…a.v	Mitigation	4.11.4	Appendix C, Appendix H3, Appendix I	13, 50
…b.i	Impacts to Critical Areas	4.11.2.2, 4.11.3	Appendix C, Appendix H3	13, 50
…b.ii	Disturbance of Critical Areas	4.11.2.2, 4.11.3	Appendix C, Appendix H3	13, 50
…b.iii	Disturbance of Salmonid Habitat	4.8.3	Appendix H3	31, 35
…b.iv	Wetland/stream crossings	4.8.3	Appendix H3	35
…b.v	COB Codes and Standards	N.A.	N.A.	N.A.
…b.vi	Impact to aquatic systems	4.9.2, 4.9.3. 4.9.4	Appendix H3	12, 19, 32, 35, 49
…b.vii	Parking	2.3.2	Appendix G1	N.A.
…b.viii	Mitigation	2.5, 4.8.4, 4.9.4	Appendix H3, Appendix I	13, 50

LUC 20.25H.125	Item	FEIS Reference (Section)	FEIS Appendix/Backup Report Reference	Appendix F ROD/Mitigation Summary (ROD Reference No.)
…A	Structure and improvements impacts	4.11.2.2, 4.11.3	Appendix F4.11	13, 50
…B	Structure and improvements location	4.11.2.2, 4.11.3	Appendix F4.11	13, 50
…C	No increase of buffer need on neighbor properties	4.11.2.2, 4.11.3	Appendix F4.11	13, 50
…D	Retaining wall preferred to artificial slopes	4.11.2.2, 4.11.3	Appendix F4.11	13, 50
…E	Minimize impervious surfaces within critical area and buffer	4.11.2.2, 4.11.3	Appendix F4.11	13, 50
…F	Change in grade outside building footprint	4.11.2.2, 4.11.3	Appendix F4.11	13, 50
…G	Building foundation walls	4.11.2.2, 4.11.3	Appendix F4.11	13, 50
…H	Pole-type construction required on slopes over 40%	4.11.2.2, 4.11.3	Appendix F4.11	13, 50
…I	Piled deck support structures	4.11.2.2, 4.11.3	Appendix F4.11	13, 50
…J	Areas of permanent and temporary disturbance	4.11.2.2, 4.11.3, 4.8.4	Appendix F4.11	13, 50

AREAS OF SPECIAL FLOOD HAZARD				
LUC 20.25H.055. C.2	**Item**	**FEIS Reference (Section)**	**FEIS Appendix/Backup Report Reference**	**Appendix F ROD/Mitigation Summary (ROD Reference No.)**
…a.i	Existing Infrastructure	2.3.1, 2.3.2, 3.3.2, 3.4.2, 3.5.2, 3.6.2, 3.7.2. 3.8.2,	N.A.	34, 35
…a.ii	Function/objective of proposed system	1.1.2	N.A.	N.A.
…a.iii	Alternatives	2.3	N.A.	N.A.
…a.iv	Cost Analysis	6.2	N.A.	N.A.
…a.v	Mitigation	4.9.4	Appendix C, Appendix H3, Appendix I	34, 35
…b.i	Impacts to Critical Areas	4.9.2.3, 4.9.3	Appendix C, Appendix H3	34, 35
…b.ii	Disturbance of Critical Areas	4.9.2.3, 4.9.3	Appendix C, Appendix H3	34, 35
…b.iii	Disturbance of Salmonid Habitat	4.8.3	Appendix H3	31, 35
…b.iv	Wetland/stream crossings	4.8.3	Appendix H3	35
…b.v	COB Codes and Standards	N.A.	N.A.	N.A.
…b.vi	Impact to aquatic systems	4.9.2, 4.9.3. 4.9.4	Appendix H3	12, 19, 32, 34, 35, 49
…b.vii	Parking	2.3.2	Appendix G1	
…b.viii	Mitigation	2.5, 4.8.4, 4.9.4	Appendix H3, Appendix I	34, 35

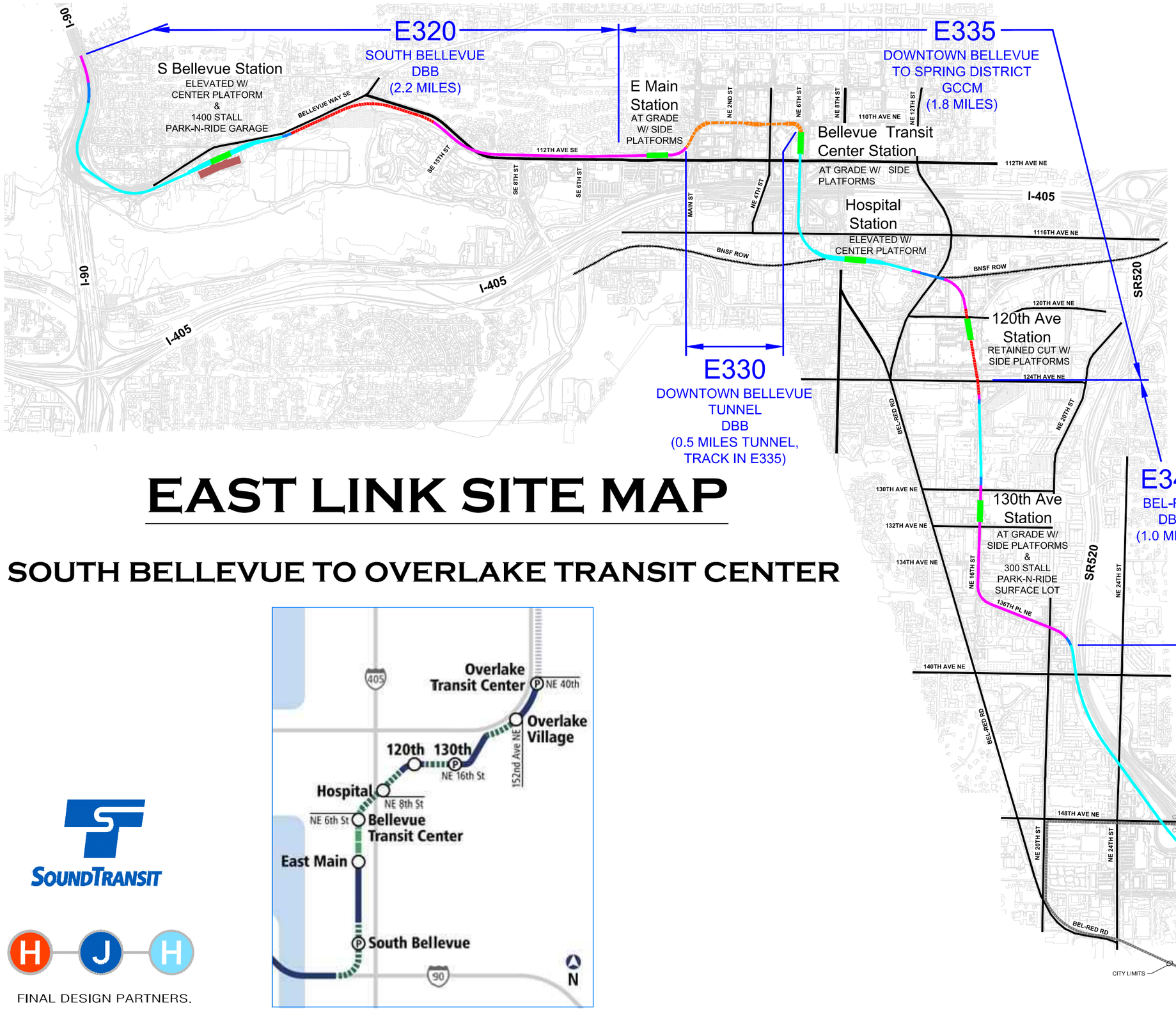
LUC 20.25H.180.C	Item	FEIS Reference (Section)	FEIS Appendix/Backup Report Reference	Appendix F ROD/Mitigation Summary (ROD Reference No.)
…1	Intrusion over the area of special flood hazard allowed	4.9.2.3, 4.9.3	N.A.	N.A.
…2	Elevation certificate following construction	4.9.2.3, 4.9.3	N.A.	N.A.
…3	Construction materials and methods	4.9.2.3, 4.9.3	N.A.	N.A.
…4	No rise in base flood elevation (BFE)	4.9.2.3, 4.9.3	N.A.	N.A.
…5	Development in regulatory floodway	4.9.2.3, 4.9.3	N.A.	34, 35
…6	Modification of stream channel	4.9.2.3, 4.9.3	N.A.	N.A.
…7	Compensatory storage	4.9.2.3, 4.9.3	N.A.	N.A.

ATTACHMENT H

CITY OF BELLEVUE EAST LINK CONTRACT PACKAGES MAP

EAST LINK SITE MAP

SOUTH BELLEVUE TO OVERLAKE TRANSIT CENTER



LEGEND:

- STATIONS
- GARAGES
- ELEVATED
- AT GRADE
- RETAINED CUT
- RETAINED FILL
- TUNNEL

EXXX - PACKAGE NUMBER

DBB - DESIGN BID BUILD

GCCM - GENERAL CONTRACTOR CONSTRUCTION MANAGER

D/B - DESIGN BUILD

SOUNDTRANSIT

H J H

FINAL DESIGN PARTNERS.

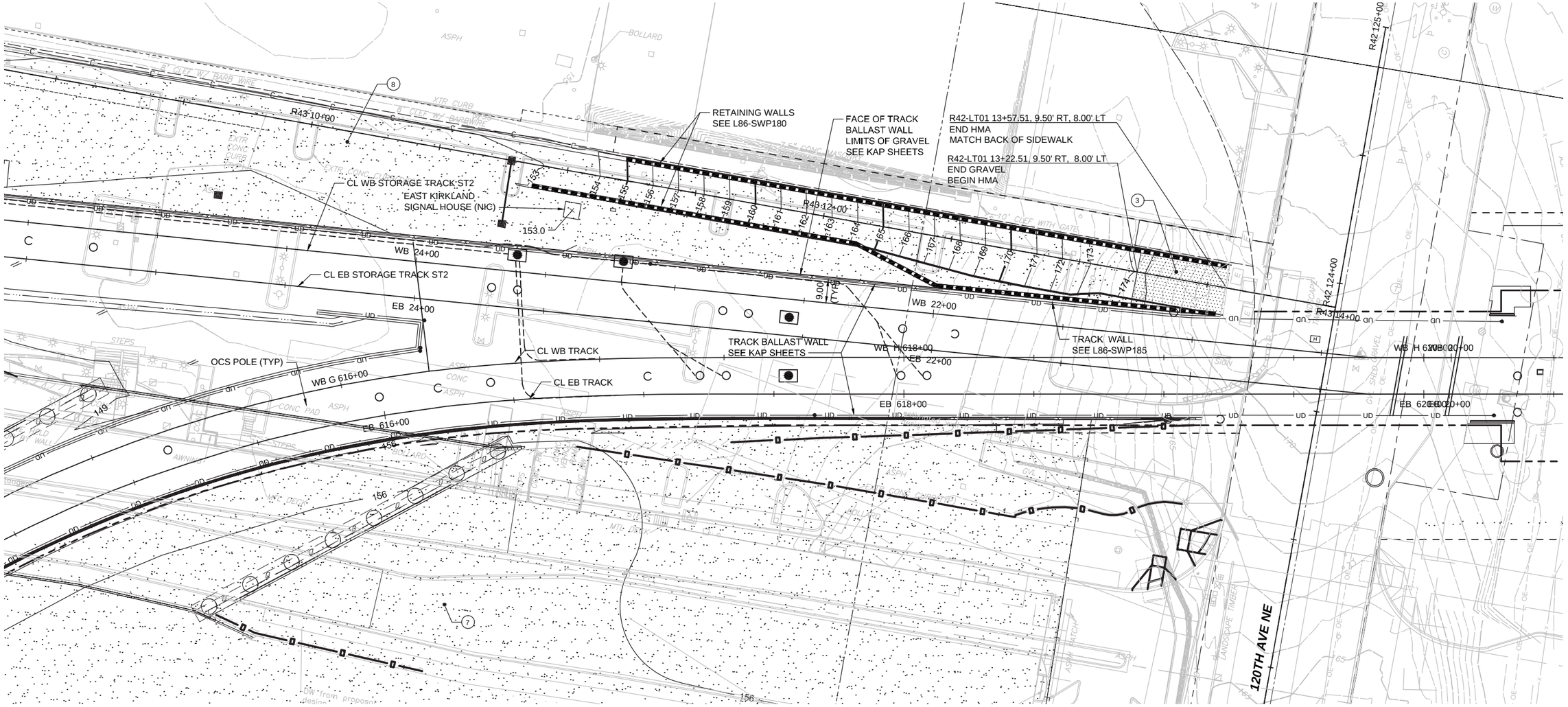
ATTACHMENT I

CONSTRUCTION STAGING PLANS

XREF LIST:
xEL-0531rx
xEL-0531sf
xEL-0531ut
xE335-L86-CAP100
xE335-L86-KAP100
xE335-L86-RPP100
xE340-L87-RZV020
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CRP100
xE335-L86-CGP100
xE335-L86-CPP100
xEL-0831cn
xEL-0531cn
xE335-L86-SWP100
xE335-L86-SEP100
xE335-L86-JEP100
xE335-L86-JOP100
xE335-L86-CGP400
xE340_B120S3C-PPLAN
xE335-L86-KAP101
GB-SEAL-GDS48863
xE335_207199_BR_Design_East
xE335_207199_BR_Design_West
xE335_207323_RD_Design
xE335_207199_RD_Design

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
01/22/16 | 7:29 AM | CALDWELLJ
C:\WORK\TEMP-E335-100PCT-DUDI\E335-L86-CGP118.DWG

CORRECTED BY: / DATE:
VERIFIED BY: / DATE:



SEE DWG L86-CGP146

NOTES:

1. FOR PAVEMENT HATCHING LEGEND, SEE DRAWINGS G86-GZN006 & G86-GZN007.
2. FOR PAVEMENT SECTIONS AND MATERIALS, SEE TYPICAL SECTIONS AND PAVING AND GRADING DETAILS, CYX AND CDP DRAWINGS.
3. SITE GRADING CONTOURS ARE SHOWN FOR CONSTRUCTION, ROADWAY CONTOURS SHOWN FOR REFERENCE ONLY AND ARE NOT FOR CONSTRUCTION.
4. SEE CPD DRAWINGS FOR ADDITIONAL ROADWAY, SIDEWALK AND DRIVEWAY PAVING AND AND GRADING ENLARGEMENTS.
5. ROADWAY WIDTHS ARE GIVEN TO FACE OF CURB, UNLESS OTHERWISE NOTED.
6. ALL CURBS ARE 6 INCHES TALL UNLESS OTHERWISE NOTED.
7. ELEVATIONS REFERENCE FLOW LINE OF CURB UNLESS OTHERWISE NOTED.
8. SEE CXP DRAWINGS FOR SAWCUT LIMITS.

CONSTRUCTION NOTES:

(3) COMMERCIAL ROADWAY HMA PAVEMENT, SEE DETAIL A/L86-CPD101.
(7) GRAVEL SURFACING, SEE DETAIL E/L86-CPD101.
(8) HEAVY DUTY GRAVEL, SEE DETAIL C/L86-CPD101.

N
20 10 0 20 40
SCALE IN FEET

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: J. MATTHEWS
APPROVED BY: J. SCHUTT

GLENN D. SCHWANTES STATE OF WASHINGTON 48863 REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

HNTB
SUBMITTED BY:

H J H FINAL DESIGN PARTNERS.
DATE:

LINE IS 1" AT FULL SCALE

REVIEWED BY:
DATE:

SOUNDTRANSIT

SCALE: 1" = 20'
FILENAME: E335-L86-CGP118
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

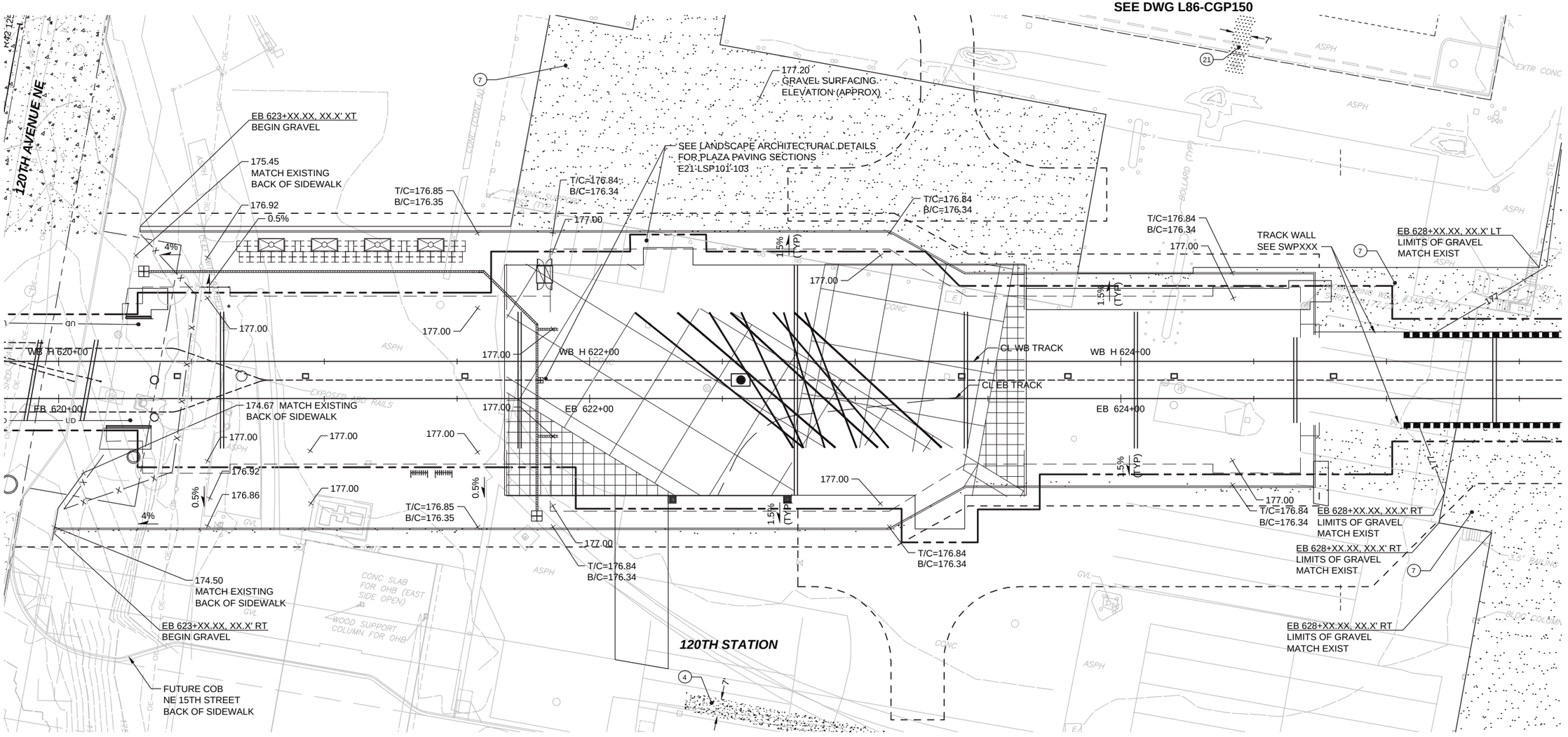
EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
CIVIL
GRADING AND PAVING PLAN
EB STA 615+00 TO EB STA 620+00

DRAWING No.: L86-CGP118
LOCATION ID: E20
SHEET No.: 22
REV: 0

SEE DWG L86-CGP150

SEE DWG L86-CGP118

SEE DWG L86-CGP120



SEE DWG L86-CGP147

NOTES:

1. FOR PAVEMENT HATCHING LEGEND, SEE DRAWINGS G86-GZN006 & G86-GZN007.
2. FOR PAVEMENT SECTIONS AND MATERIALS, SEE TYPICAL SECTIONS AND PAVING AND GRADING DETAILS, CYX AND CDP DRAWINGS.
3. SITE GRADING CONTOURS ARE SHOWN FOR CONSTRUCTION, ROADWAY CONTOURS SHOWN FOR REFERENCE ONLY AND ARE NOT FOR CONSTRUCTION.
4. SEE CPD DRAWINGS FOR ADDITIONAL ROADWAY, SIDEWALK AND DRIVEWAY PAVING AND AND GRADING ENLARGEMENTS.
5. ROADWAY WIDTHS ARE GIVEN TO FACE OF CURB, UNLESS OTHERWISE NOTED.
6. ALL CURBS ARE 6 INCHES TALL UNLESS OTHERWISE NOTED.
7. ELEVATIONS REFERENCE FLOW LINE OF CURB UNLESS OTHERWISE NOTED.
8. SEE CXP DRAWINGS FOR SAWCUT LIMITS.

CONSTRUCTION NOTES:

(4) PARKING LOT HMA PAVEMENT, SEE DETAIL B/L86-CPD101.

(7) GRAVEL SURFACING, SEE DETAIL E/L86-CPD101.

N

20 10 0 20 40

SCALE IN FEET

XREF LIST:
xE335-L86-CAP100
xE335-L86-KAP100
xE335-L86-RPP100
xE340-L87-RZV020
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CRP100
xE335-L86-CGP100
xE335-L86-CPP100
xE335-L86-SWP100
xE335-L86-SEP100
xEL-0831cn
xE335-L86-JEP100
xE335-L86-JOP100
xE340_B120S3C-PPLAN
xE335-E21-SGP200
xE335-E21-LSP100
xE335_207323_RD_Design
GB-SEAL-GDS48863

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

01/22/16 | 7:30 AM | CALDWELLJ
C:\WORK\TEMP-E335-100PCT-DUD\E335-L86-CGP119.DWG

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: J. MATTHEWS
APPROVED BY: J. SCHUTT

GLENN D. SCHWANTES STATE OF WASHINGTON 48852 REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

HNTB

H J H FINAL DESIGN PARTNERS.

SUBMITTED BY: | DATE: | REVIEWED BY: | DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

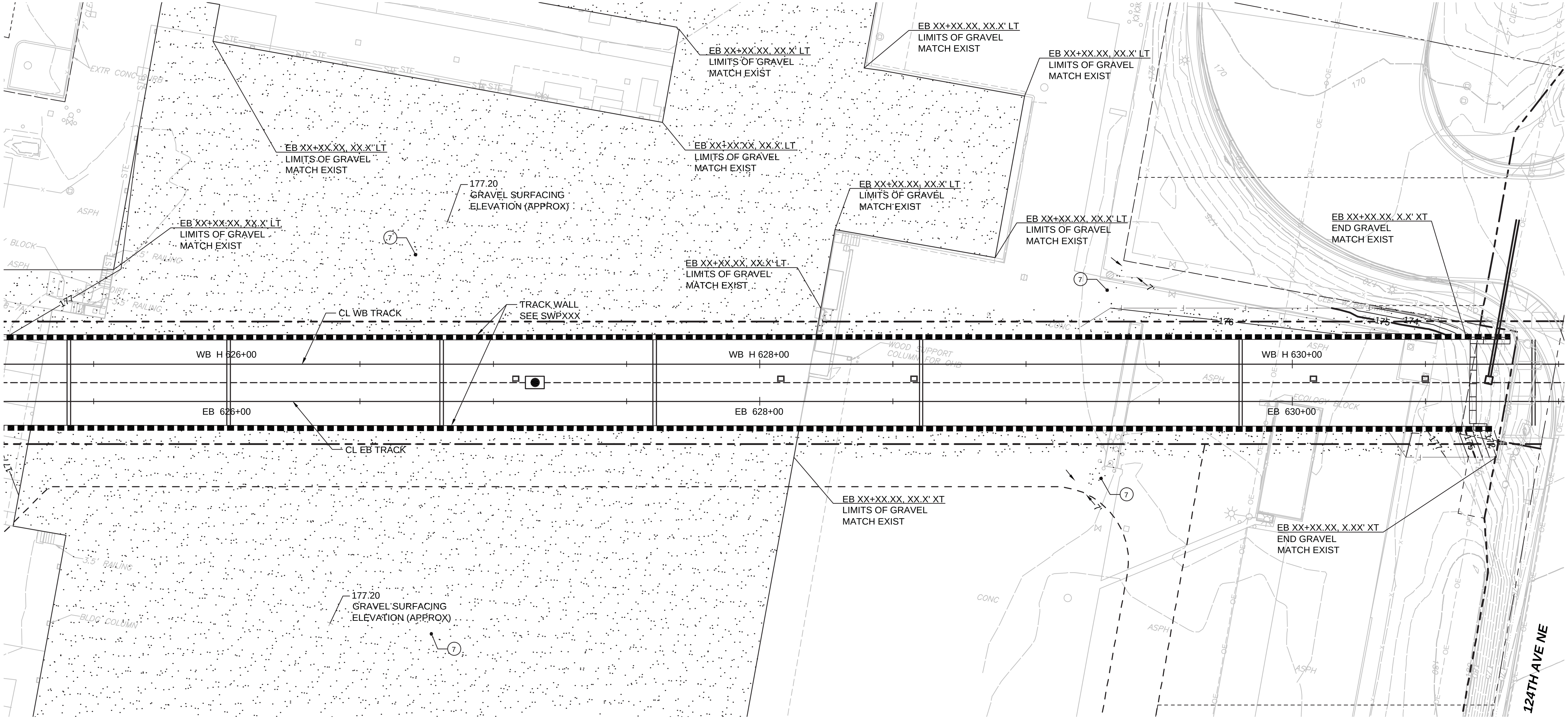
SCALE: 1" = 20'
FILENAME: E335-L86-CGP119
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
CIVIL
GRADING AND PAVING PLAN
EB STA 620+00 TO EB STA 625+50

DRAWING No.: L86-CGP119
LOCATION ID: E21
SHEET No.: 23
REV: 0

XREF LIST:
xE335-L86-CAP100
xE335-L86-KAP100
xE335-L86-RPP100
xE340-L87-RZV020
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CRP100
xE335-L86-CGP100
xE335-L86-CPP100
xE335-L86-SWP100
xE335-L86-SEP100
xEL-0831cn
xE335-L86-JEP100
xE335-L86-KAP001
xE335-L86-JOP100
xE340_192465_RD_Design
xE335_207199_RD_Design
xE335_207323_RD_Design
GB-SEAL-GDS48863

SEE DWG L86-CGP151



SEE DWG L86-CGP119

SEE DWG L86-CGP121

SEE DWG L86-CGP148

NOTES:

1. FOR PAVEMENT HATCHING LEGEND, SEE DRAWINGS G86-GZN006 & G86-GZN007.
2. FOR PAVEMENT SECTIONS AND MATERIALS, SEE TYPICAL SECTIONS AND PAVING AND GRADING DETAILS, CYX AND CDP DRAWINGS.
3. SITE GRADING CONTOURS ARE SHOWN FOR CONSTRUCTION, ROADWAY CONTOURS SHOWN FOR REFERENCE ONLY AND ARE NOT FOR CONSTRUCTION.
4. SEE CPD DRAWINGS FOR ADDITIONAL ROADWAY, SIDEWALK AND DRIVEWAY PAVING AND AND GRADING ENLARGEMENTS.
5. ROADWAY WIDTHS ARE GIVEN TO FACE OF CURB, UNLESS OTHERWISE NOTED.
6. ALL CURBS ARE 6 INCHES TALL UNLESS OTHERWISE NOTED.
7. ELEVATIONS REFERENCE FLOW LINE OF CURB UNLESS OTHERWISE NOTED.
8. SEE CXP DRAWINGS FOR SAWCUT LIMITS.

CONSTRUCTION NOTES:

(7) GRAVEL SURFACING, SEE DETAIL E/L86-CPD101.

N

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
VERIFIED BY: / DATE:
01/22/16 | 7:31 AM | CALDWELLJ
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PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: J. MATTHEWS
APPROVED BY: J. SCHUTT

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

HNTB

FINAL DESIGN PARTNERS.

SUBMITTED BY: | DATE: | REVIEWED BY: | DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1" = 20'
FILENAME: E335-L86-CGP120
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
CIVIL
GRADING AND PAVING PLAN
EB STA 625+50 TO EB STA 631+00

DRAWING No.: L86-CGP120
LOCATION ID: E22
SHEET No.: 24
REV: 0

SEE DWG L86-CGP119

SEE DWG L86-CGP146

SEE DWG L86-CGP148

SEE DWG L86-CGP149

LIMITS OF GRAVEL MATCH EXISTING

LIMITS OF GRAVEL MATCH EXISTING

177.20
GRAVEL SURFACING ELEVATION (APPROX)

XREF LIST:
xE330-L86-KAP100
xE320-L85-KAP100
xE335-L86-CAP100
xE335-L86-CMP100
xE335-L86-KAP100
xE335-L86-RPP100
xE340-L87-RZV020
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE340-E21-APP200
xE340-E21-APP100
xE335-L86-CRP100
xE335-L86-CGP100
xE335-L86-CPP100
xEL-0831cn
xE335-L86-JOP100
xE335-L86-JEP100
xE335_207323_RD_Design
GB-SEAL-GDS48863

NOTES:

1. FOR PAVEMENT HATCHING LEGEND, SEE DRAWINGS G86-GZN006 & G86-GZN007.
2. FOR PAVEMENT SECTIONS AND MATERIALS, SEE TYPICAL SECTIONS AND PAVING AND GRADING DETAILS, CYX AND CDP DRAWINGS.
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5. ROADWAY WIDTHS ARE GIVEN TO FACE OF CURB, UNLESS OTHERWISE NOTED.
6. ALL CURBS ARE 6 INCHES TALL UNLESS OTHERWISE NOTED.
7. ELEVATIONS REFERENCE FLOW LINE OF CURB UNLESS OTHERWISE NOTED.
8. SEE CXP DRAWINGS FOR SAWCUT LIMITS.

CONSTRUCTION NOTES:

(4) PARKING LOT HMA PAVEMENT, SEE DETAIL B/L86-CPD101.

(7) GRAVEL SURFACING, SEE DETAIL E/L86-CPD101.

N

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
01/22/16 | 7:32 AM | CALDWELLJ
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CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: J. MATTHEWS
APPROVED BY: J. SCHUTT

GLENN D. SCHWANTES — STATE OF WASHINGTON — 48863 — REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

HNTB

H J H FINAL DESIGN PARTNERS.

SUBMITTED BY: | DATE: | REVIEWED BY: | DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1" = 20'
FILENAME: E335-L86-CGP147
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT

CIVIL
GRADING AND PAVING PLAN

DRAWING No.: L86-CGP147
LOCATION ID: E22
SHEET No.: 25
REV: 0

XREF LIST:
xE330-L86-KAP100
xE320-L85-KAP100
xE335-L86-CAP100
xE335-L86-CMP100
xE335-L86-KAP100
xE335-L86-RPP100
xE340-L87-RZV020
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CRP100
xE335-L86-CGP100
xE335-L86-CPP100
xEL-0831cn
xE335-L86-JOP100
xE335-L86-JEP100
xE340_124th-COB_Interim_Design_-EL PD
xE335_207323_RD_Design
xE340_192465_RD_Design
GB-SEAL-GDS48863

SEE DWG L86-CGP147

SEE DWG L86-CGP120

LIMITS OF GRAVEL MATCH EXIST

7

177.20
GRAVEL SURFACING ELEVATION (APPROX)

LIMITS OF GRAVEL MATCH EXIST

124TH AVE NE

SEE DWG L86-CGP149

NOTES:

1. FOR PAVEMENT HATCHING LEGEND, SEE DRAWINGS G86-GZN006 & G86-GZN007.
2. FOR PAVEMENT SECTIONS AND MATERIALS, SEE TYPICAL SECTIONS AND PAVING AND GRADING DETAILS, CYX AND CDP DRAWINGS.
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6. ALL CURBS ARE 6 INCHES TALL UNLESS OTHERWISE NOTED.
7. ELEVATIONS REFERENCE FLOW LINE OF CURB UNLESS OTHERWISE NOTED.
8. SEE CXP DRAWINGS FOR SAWCUT LIMITS.

CONSTRUCTION NOTES:

7 GRAVEL SURFACING, SEE DETAIL E/L86-CPD101.

N

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
01/22/16 | 7:32 AM | CALDWELLJ
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CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: J. MATTHEWS
APPROVED BY: J. SCHUTT

SUBMITTED BY:
DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

SCALE: 1" = 20'
FILENAME: E335-L86-CGP148
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
CIVIL
GRADING AND PAVING PLAN

DRAWING No.: L86-CGP148
LOCATION ID: E22
SHEET No.: 26
REV: 0

SEE DWG L86-CGP147

SEE DWG L86-CGP148

176.50
GRAVEL SURFACING
ELEVATION (APPROX)

7

LIMITS OF GRAVEL
MATCH EXIST

LIMITS OF GRAVEL
MATCH EXIST

NOTES:

1. FOR PAVEMENT HATCHING LEGEND, SEE DRAWINGS G86-GZN006 & G86-GZN007.
2. FOR PAVEMENT SECTIONS AND MATERIALS, SEE TYPICAL SECTIONS AND PAVING AND GRADING DETAILS, CYX AND CDP DRAWINGS.
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7. ELEVATIONS REFERENCE FLOW LINE OF CURB UNLESS OTHERWISE NOTED.
8. SEE CXP DRAWINGS FOR SAWCUT LIMITS.

CONSTRUCTION NOTES:

(7) GRAVEL SURFACING, SEE DETAIL E/L86-CPD101.

N

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
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CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: J. MATTHEWS
APPROVED BY: J. SCHUTT

REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — GLENN D. SCHWANTES

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

HNTB

H J H FINAL DESIGN PARTNERS.

SUBMITTED BY: | DATE: | REVIEWED BY: | DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1" = 20'
FILENAME: E335-L86-CGP149
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
CIVIL
GRADING AND PAVING PLAN

DRAWING No.: L86-CGP149
LOCATION ID: E22
SHEET No.: 27
REV: 0

XREF LIST:
xE330-L86-KAP100
xE320-L85-KAP100
xE335-L86-CAP100
xE335-L86-CMP100
xE335-L86-KAP100
xE335-L86-RPP100
xE340-L87-RZV020
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CRP100
xE335-L86-CGP100
xE335-L86-CPP100
xE335-L86-KAP001
xEL-0831cn
xE335-L86-JOP100
xE335-L86-JEP100
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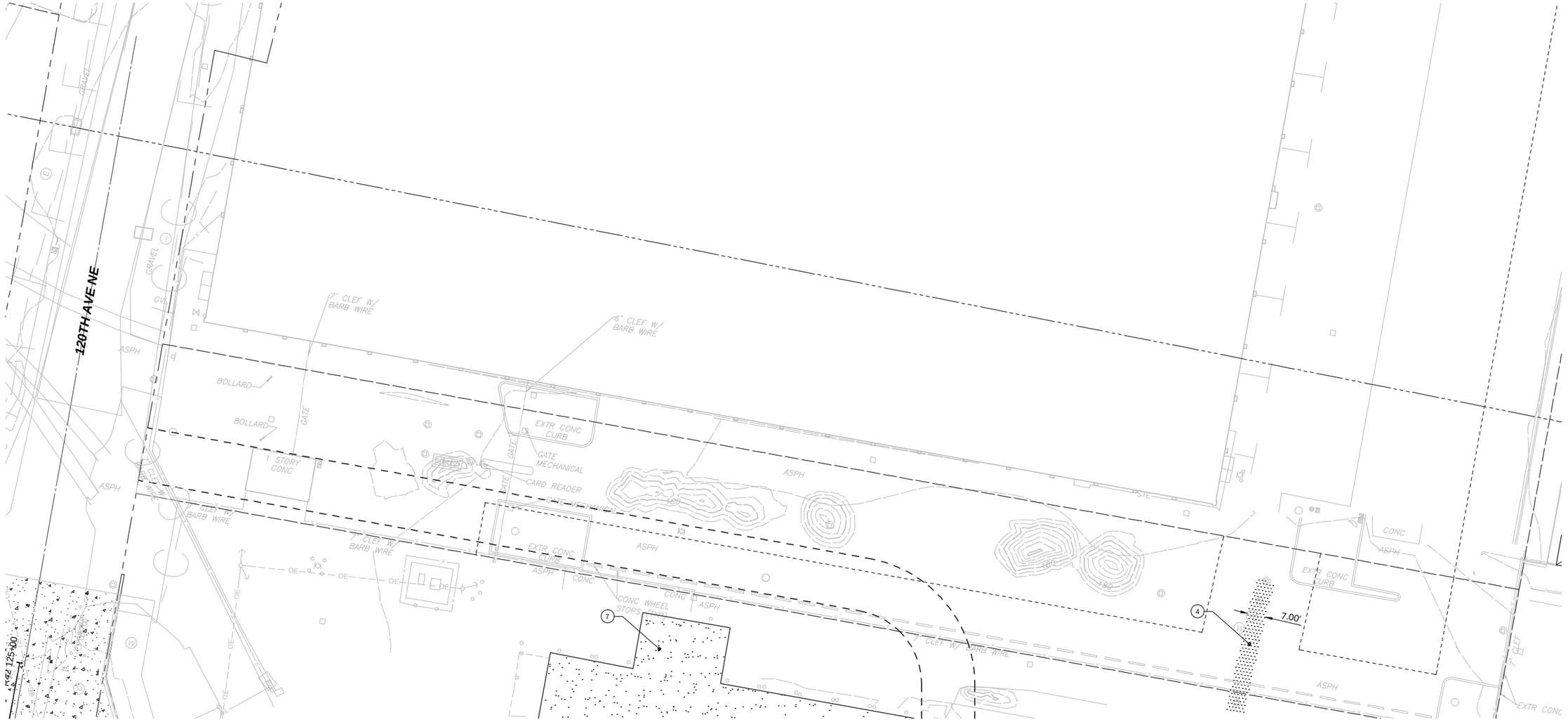
GB-SEAL-GDS48863



SEE DWG L86-CGP151

SEE DWG L86-CGP119

NOTES:

1. FOR PAVEMENT HATCHING LEGEND, SEE DRAWINGS G86-GZN006 & G86-GZN007.
2. FOR PAVEMENT SECTIONS AND MATERIALS, SEE TYPICAL SECTIONS AND PAVING AND GRADING DETAILS, CYX AND CDP DRAWINGS.
3. SITE GRADING CONTOURS ARE SHOWN FOR CONSTRUCTION, ROADWAY CONTOURS SHOWN FOR REFERENCE ONLY AND ARE NOT FOR CONSTRUCTION.
4. SEE CPD DRAWINGS FOR ADDITIONAL ROADWAY, SIDEWALK AND DRIVEWAY PAVING AND AND GRADING ENLARGEMENTS.
5. ROADWAY WIDTHS ARE GIVEN TO FACE OF CURB, UNLESS OTHERWISE NOTED.
6. ALL CURBS ARE 6 INCHES TALL UNLESS OTHERWISE NOTED.
7. ELEVATIONS REFERENCE FLOW LINE OF CURB UNLESS OTHERWISE NOTED.
8. SEE CXP DRAWINGS FOR SAWCUT LIMITS.

CONSTRUCTION NOTES:

(4) PARKING LOT HMA PAVEMENT, SEE DETAIL B/L86-CPD101.
(7) GRAVEL SURFACING, SEE DETAIL E/L86-CPD101.

N

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
01/22/16 | 7:34 AM | CALDWELLJ
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CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: J. MATTHEWS
APPROVED BY: J. SCHUTT

GLENN D. SCHWANTES — STATE OF WASHINGTON — 23853 — REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

HNTB

H J H FINAL DESIGN PARTNERS.

SUBMITTED BY: | DATE: | REVIEWED BY: | DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1" = 20'
FILENAME: E335-L86-CGP150
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
CIVIL
GRADING AND PAVING PLAN

DRAWING No.: L86-CGP150
LOCATION ID: E22
SHEET No.: 28
REV: 0

XREF LIST:
xE330-L86-KAP100
xE320-L85-KAP100
xE335-L86-CAP100
xE335-L86-CMP100
xE335-L86-KAP100
xE335-L86-RPP100
xE340-L87-RZV020
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CRP100
xE335-L86-CGP100
xE335-L86-CPP100
xEL-0831cn
xE335-L86-JOP100
xE335-L86-JEP100
xE340_192465_RD_Design
GB-SEAL-GDS48863

SEE DWG L86-CGP105

NOTES:

1. FOR PAVEMENT HATCHING LEGEND, SEE DRAWINGS G86-GZN006 & G86-GZN007.
2. FOR PAVEMENT SECTIONS AND MATERIALS, SEE TYPICAL SECTIONS AND PAVING AND GRADING DETAILS, CYX AND CDP DRAWINGS.
3. SITE GRADING CONTOURS ARE SHOWN FOR CONSTRUCTION, ROADWAY CONTOURS SHOWN FOR REFERENCE ONLY AND ARE NOT FOR CONSTRUCTION.
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6. ALL CURBS ARE 6 INCHES TALL UNLESS OTHERWISE NOTED.
7. ELEVATIONS REFERENCE FLOW LINE OF CURB UNLESS OTHERWISE NOTED.
8. SEE CXP DRAWINGS FOR SAWCUT LIMITS.

CONSTRUCTION NOTES:

(7) GRAVEL SURFACING, SEE DETAIL E/L86-CPD101.

N

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
01/22/16 | 7:35 AM | CALDWELLJ
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CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: J. MATTHEWS
APPROVED BY: J. SCHUTT

GLENN D. SCHWANTES STATE OF WASHINGTON 18800 REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

HNTB
SUBMITTED BY:

H J H FINAL DESIGN PARTNERS.
DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT
REVIEWED BY:
DATE:

SCALE: 1" = 20'
FILENAME: E335-L86-CGP151
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

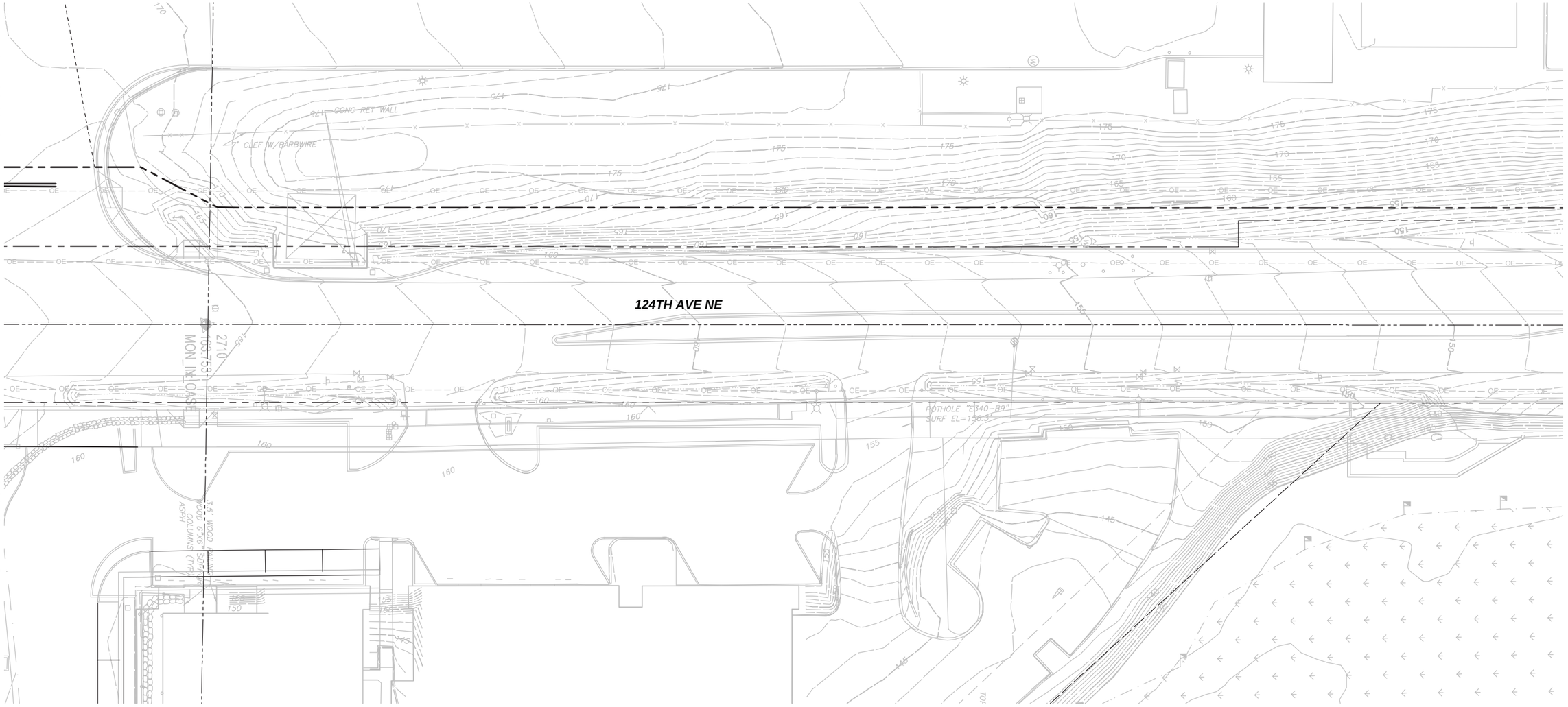
EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
CIVIL
GRADING AND PAVING PLAN

DRAWING No.: **L86-CGP151**
LOCATION ID: E22
SHEET No.: 29
REV: 0

SEE DWG L86-CGP151

SEE DWG L86-CGP120

SEE DWG L86-CGP121



XREF LIST:
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xE320-L85-KAP100
xE335-L86-CAP100
xE335-L86-CMP100
xE335-L86-KAP100
xE335-L86-RPP100
xE340-L87-RZV020
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xEL-0834rx
xEL-0834sf
xEL-0834ut
xE335-L86-CRP100
xE335-L86-CGP100
xE335-L86-CPP100
xEL-0834cn
xEL-0831cn
xE335-L86-JOP100
xE335-L86-JEP100
xE340_192465_RD_Design
GB-SEAL-GDS48863

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
01/22/16 | 7:36 AM | CALDWELLJ
C:\WORK\TEMP-E335-100PCT-DUDE\E335-L86-CGP152.DWG

CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

NOTES:

1. FOR PAVEMENT HATCHING LEGEND, SEE DRAWINGS G86-GZN006 & G86-GZN007.
2. FOR PAVEMENT SECTIONS AND MATERIALS, SEE TYPICAL SECTIONS AND PAVING AND GRADING DETAILS, CYX AND CDP DRAWINGS.
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8. SEE CXP DRAWINGS FOR SAWCUT LIMITS.

N

20 10 0 20 40
SCALE IN FEET

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: J. MATTHEWS
APPROVED BY: J. SCHUTT

STATE OF WASHINGTON GLENN D. SCHWANTES 24893 REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

HNTB

SUBMITTED BY:

H J H FINAL DESIGN PARTNERS.

DATE:

REVIEWED BY:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

DATE:

SCALE: 1" = 20'
FILENAME: E335-L86-CGP152
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT

CIVIL
GRADING AND PAVING PLAN

DRAWING No.: **L86-CGP152**
LOCATION ID: E22
SHEET No.: 30
REV: 0

ATTACHMENT J

DESIGN AND VALUE ENGINEERING CHARTER

DESIGN AND VALUE ENGINEERING (DAVE) TECHNICAL WORKING GROUP TEAM CHARTER

Purpose:

The purpose of the Design and Value Engineering technical working group is to support the advancement of all aspects of the design development, to ensure adequate resources are available, and to reach agreement on 60% design plans in the fall of 2013 that can serve as the basis of cost estimating for project baselining and final land use approvals.

The group will review design progress, identify possible cost savings, resolve Preliminary Engineering (PE) comments, resolve other City comments, advance design development and mitigation associated with the 112th design modifications, discuss possible design changes, and participate in the VE process.

Philosophy: Core assumption is that this will work. Approach issues assuming a resolution is available.

Functions:

Support design progress, identify potential issues and provide timely resolutions.

Support the concept development during the Early Work.

Support VE workshops, schedule development, Contract packaging development and Risk Assessments.

The tasks associated with this work effort include the following:

- Review and support concept development during the Early Work
- Support Construction Packaging development
- Early work Value Engineering Workshop
- Technical Working Group participation during production engineering
- Provide 60% Plan Review
- Support the 60% VE study (may break out eastside project into two to three workshops)
- Support East Link Cost Risk Assessment
- Support for work associated with the Baselining Action at ST Board

Composition:

Design and Value Engineering Work Technical Work Group	
City of Bellevue	**Sound Transit**
Co-Lead(s)	
Maher Welaye	Tony Raben
Core Staff	
Darek Jarzynski	Traffic Engineering and Operation
Kam Szabo	Traffic Engineering – Signals and Lighting
Mike Kattermann	Planning & Coordination
Patti Wilma	Planning, and Use Design and Environmental
Regan Sidie	City Utilities - Water, Sewer & Stormwater
Rick Logwood	Cost Estimating
Maria Koengeter	Planning & Coordination
Camron Parker	Parks
As needed	
Max Jacobs	Real Property
Travis Ripley	Fire
Lee Kranz	Building
Nancy Lacombe	Design
Dave Cieri	Construction
Tim Stever	Private Utilities
Abdy Farid	Development Review

Jason Bailey	Civil roads and track
John Walser	Architecture, Urban Design, and Landscaping
John Walser	Mechanical, Electrical, and Plumbing
Barbara Luecke	Art
John Walser	FLS
Elma Borbe	Environmental
Joel Theodore	Geotechnical
Tanveer Sahoo	Structures
Cliff Kurtzweg	Traffic and traffic signals
Robert Bean	Utilities and storm water
Leonard McGhee	Project Development - Segment D
Sue Comis	Project Development - Segment B & C / Coordination
ST Final Design Team	Start date anticipated mid-March
	Real Property
	ROW engineering
	Outreach

Relationships:

The group will work cooperatively to support the East Link final design. Relationships with all other Technical Work Groups and the Collaboration Team must be present and maintained in order for the group to succeed.

An early deliverable is a review and identification of conflicting codes, standards and criteria. With respect to codes, the DAVE group will work closely with the CAP group to identify potential conflicts and to determine whether code variances or modification are required and the implantation of the variance or modification.

Method of Operation:

Design Development:

The team will be sub-divided into sub-groups by discipline. Each group will develop a list of elements required to complete permit ready final design packages. The groups will provide over the shoulder review as the design develops confirming the elements required for permit ready documents are addressed. These elements will be logged and tracked to monitor completion.

Support for Early design work, cost saving concept development, VE, and Contract Packaging

The team will work closely with the project designers, review and provide comments.

Issue resolution: Impasses at the sub-group level will be escalated to the Co-Chairs of the DAVE group. Impasses at the Co-Chair level will be escalated to the Collaboration Team for resolution.

Four main deliverables are anticipated:

- Code review resulting in potential variances or modifications
- Site specific concurrence on project scope (i.e. design of the 120th LRT crossing including cross section, profile, limits of construction, utility relocation, landscaping requirements, etc.).
- Standards, criteria and specification review; identify conflicts or suggested modifications and determine resolutions
- Over the shoulder review to confirm required elements are addressed.

Conduct:

DAVE members will conduct themselves in accordance with the following:

- Be prepared
- Meet deadlines
- Respect opinions
- Attend meetings and participate
- Active listening
- Avoid talking over others
- Results driven
- Seek feedback
- Maintain fun and collaborative climate
- Assume accountability for assigned work

Administration:

Meetings: The Co-leads will convene meetings of the Core Team and As Needed Team

Members on a weekly basis and or as frequently as needed. The Co-leads will provide at least 2 days advance notice whenever possible. The meetings will be held at Sound Transit offices.

Record Keeping: Co-Leads will assign a note-taker for each meeting. The note-taker will provide the Co-Leads with the notes within 2 days of the meeting and the Co-Leads will then be responsible for distributing the notes and any required follow-up on tasks, coordination, etc. All meeting notes and other TWG materials will be made available on the agencies' respective intranet sites.

Communication: The Co-leads should be copied on all communication within sub-groups, between team members, and with other workgroups. Communication with the public should always go through the co-leads. The co-leads will communicate with other work group and the collaboration team as needed.

It is expected that this Team Charter may be modified, refined or amended throughout the Collaborative Design Process to ensure that the work continues to meet and support project objectives.

ATTACHMENT K

LUC 20.25M.010(C) WHO MAY APPLY – SUPPORTING DOCUMENTS

Washington State Department of Transportation

Lynn Peterson
Secretary of Transportation

Transportation Building
310 Maple Park Avenue S.E.
P.O. Box 47300
Olympia, WA 98504-7300
360-705-7000
TTY: 1-800-833-6388
www.wsdot.wa.gov

September 25, 2013

Mr. Mike Brennan
Director, Department of Development Services
City of Bellevue
450 110th Ave NE
Bellevue, WA

Re: East Link Project – Sound Transit permit applications on WSDOT property

Dear Mr. Brennan,

WSDOT is the owner of certain properties located in the City of Bellevue and upon which Sound Transit intends to apply to the City for permits to develop portions of the proposed East Link Project. WSDOT was co-lead in preparation of the environmental documents for the proposed East Link Project and is aware of the Project's alignment and station locations.

Please be advised that the principal approvals for Sound Transit's construction on WSDOT owned property will be granted by WSDOT. Sound Transit also has WSDOT's consent to apply for City permits on WSDOT owned property as may be necessary for development of the East Link Project.
Please contact me at (206) 464-1232 if you have any questions in this regard.

Sincerely,

Dylan Counts, Sound Transit Liaison
Public Transportation Division

Cc Terry Beals

CITY OF BELLEVUE

P.O. Box 90012 • Bellevue, WA • 98009-9012

December 18, 2013

Joni Earl
Chief Executive Officer
Sound Transit
401 South Jackson Street
Seattle, Washington 98104

Re: East Link Project – Applications Affecting City of Bellevue Property

Dear Ms. Earl:

Sound Transit is in the process of applying for its Design and Mitigation Permits under Part 20.25M of the Bellevue City Code. Section 20.25M.010.C requires Sound Transit to demonstrate that it has authority to apply for the permit for each property affected by the application. That authority can be demonstrated a number of ways, as further detailed in the Land Use Code.

This letter serves as the written consent of the City of Bellevue to apply for Design and Mitigation Permits affecting City-owned property, where such City property is the subject of existing agreements between our two agencies. The Memorandum of Understanding dated November 15, 2011, the Transit Way Agreement dated November 2011, as each has been amended, and Resolution 8452 each describe City-owned properties that will ultimately be used in the construction and operation of East Link light rail.

This letter does not modify any existing agreement between the City and Sound Transit, nor does it authorize entry onto or modification of City property. Finally, this letter does not transfer any property interest to Sound Transit.

Sincerely,

Brad Miyake
Acting City Manager

Cc: Steve Sheehy, Sound Transit counsel
Terry Beals, Sound Transit permit manager
Carol Helland, Land Use Division Director

RESOLUTION R2013-11
EAST LINK EXTENSION

EXHIBIT A

R/W No	Tax Parcel No	Owner
~~EL185~~	~~1402400000~~	~~Carriage Place Condominium~~
~~EL185.01~~	~~1402400010~~	~~Karin K McGregor~~
~~EL185.02~~	~~1402400020~~	~~Chun Chia (Eric) Huang and Rebecca L Huang~~
~~EL185.03~~	~~1402400030~~	~~Elaine Steinberg~~
~~EL185.04~~	~~1402400040~~	~~Kenneth E Barnett and Rachel M Barnett~~
~~EL185.05~~	~~1402400050~~	~~Richard Teal and Joell C Teal~~
~~EL185.06~~	~~1402400060~~	~~Haitao Song and Yan Liu~~
~~EL185.07~~	~~1402400070~~	~~Kathryn G Hennessey~~
~~EL185.08~~	~~1402400080~~	~~Jiu-Lan Chen and Tung Hwa~~
~~EL185.09~~	~~1402400090~~	~~Kristina Northcutt and Harris Lu~~
~~EL185.10~~	~~1402400100~~	~~Jay D Doughten~~
~~EL185.11~~	~~1402400110~~	~~Wilson A Geegh~~
~~EL185.12~~	~~1402400120~~	~~Michiko A Sanford~~
~~EL185.13~~	~~1402400130~~	~~Cynthia L Bredy~~
~~EL185.14~~	~~1402400140~~	~~Ronaldo L Fernandez and Angela L Fernandez~~
~~EL185.15~~	~~1402400150~~	~~Scott Rodgers~~
~~EL185.16~~	~~1402400160~~	~~Emilie C Ellis~~
~~EL185.17~~	~~1402400170~~	~~Patrick M Sheehan~~
~~EL185.18~~	~~1402400180~~	~~David T Tong and Marguerita Palomique~~
~~EL185.19~~	~~1402400190~~	~~Charles A Ward~~
~~EL185.20~~	~~1402400200~~	~~George R Blair and Bernice E Blair~~
~~EL185.21~~	~~1402400210~~	~~Paul W Boothe and Marjorie M Boothe~~
~~EL185.22~~	~~1402400220~~	~~Cheryl D Nelsen~~
~~EL185.23~~	~~1402400230~~	~~Richard C Lo and Cheryl A Lo~~
~~EL185.24~~	~~1402400240~~	~~Douglas C White~~
EL193	1401000000	Carriage Hills Condominium
EL193.01	1401000010	Stephen K Heath
EL193.02	1401000020	Ronald J Ciro
EL193.03	1401000030	Suzanne Williams
EL193.04	1401000040	Nancy Williams
EL193.05	1401000050	Cynthia R Berrio - Williams
EL193.06	1401000060	Kale Fong
EL193.07	1401000070	Peter M Sivesind
EL193.08	1401000080	Nana Arzumanyan

R/W No	Tax Parcel No	Owner
EL193.09	1401000090	Nana Arzumanyan and Nona Davydova
EL193.10	1401000100	Christopher M Lipe
EL193.11	1401000110	Ryan M Pack and Erin L Pack
EL193.12	1401000120	Basant Singh and Sheila K Singh
EL193.13	1401000130	Kevin Lee
EL193.14	1401000140	Yongning Wu and Cao Xiao
EL193.15	1401000150	Clay Wallace and Mary C Wallace
EL193.16	1401000160	Kerry S Reid
EL193.17	1401000170	Ian Toms

R/W No.	Owner/Contact	Parcel #	Site Address
EL193	Carriage Hills Condominium	1401000000	111 112th Avenue SE Bellevue, WA 98004

ALL UNITS, CARRIAGE HILLS CONDOMINIUM, SURVEY MAP AND PLANS RECORDED IN VOLUME 6 OF CONDOMINIUMS, PAGES 91 THROUGH 94, INCLUSIVE, CONDOMINIUM DECLARATION RECORDED UNDER RECORDING NUMBER(S) 7310020460, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Site Address
EL193.01	Stephen K Heath	1401000010	111 112th Avenue SE Unit 111-1 Bellevue, WA 98004

UNIT 111-1, CARRIAGE HILLS, A CONDOMINIUM, SURVEY MAP AND PLANS RECORDED IN VOLUME 6 OF CONDOMINIUMS, PAGES 91 THROUGH 94, INCLUSIVE; CONDOMINIUM DECLARATION RECORDED UNDER RECORDING NUMBER(S) 7310020460, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Site Address
EL193.02	Ronald J Ciro	1401000020	111 112th Avenue SE Unit 111-2 Bellevue, WA 98004

UNIT 111-2, CARRIAGE HILLS, A CONDOMINIUM, SURVEY MAP AND PLANS RECORDED IN VOLUME 6 OF CONDOMINIUMS, PAGES 91 THROUGH 94, INCLUSIVE; CONDOMINIUM DECLARATION RECORDED UNDER RECORDING NUMBER(S) 7310020460, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Site Address
EL193.03	Suzanne Williams	1401000030	111 112th Avenue SE Unit 111-3 Bellevue, WA 98004

UNIT 111-3, CARRIAGE HILLS, A CONDOMINIUM, SURVEY MAP AND PLANS RECORDED IN VOLUME 6 OF CONDOMINIUMS, PAGES 91 THROUGH 94, INCLUSIVE; CONDOMINIUM DECLARATION RECORDED UNDER RECORDING NUMBER(S) 7310020460, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Site Address
EL193.04	Nancy Williams	1401000040	111 112th Avenue SE Unit 111-4 Bellevue, WA 98004

UNIT 111-4, CARRIAGE HILLS, A CONDOMINIUM, SURVEY MAP AND PLANS RECORDED IN VOLUME 6 OF CONDOMINIUMS, PAGES 91 THROUGH 94, INCLUSIVE; CONDOMINIUM DECLARATION RECORDED UNDER RECORDING NUMBER(S) 7310020460, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Site Address
EL193.05	Cynthia R Berrio - Williams	1401000050	111 112th Avenue SE Unit 111-5 Bellevue, WA 98004

UNIT 111-5, CARRIAGE HILLS, A CONDOMINIUM, SURVEY MAP AND PLANS RECORDED IN VOLUME 6 OF CONDOMINIUMS, PAGES 91 THROUGH 94, INCLUSIVE; CONDOMINIUM DECLARATION RECORDED UNDER RECORDING NUMBER(S) 7310020460, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Site Address
EL193.06	Kale Fong	1401000060	111 112th Avenue SE Unit 111-6 Bellevue, WA 98004

UNIT 111-6, CARRIAGE HILLS, A CONDOMINIUM, SURVEY MAP AND PLANS RECORDED IN VOLUME 6 OF CONDOMINIUMS, PAGES 91 THROUGH 94, INCLUSIVE; CONDOMINIUM DECLARATION RECORDED UNDER RECORDING NUMBER(S) 7310020460, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Site Address
EL193.07	Peter M Sivesind	1401000070	111 112th Avenue SE Unit 111-7 Bellevue, WA 98004

UNIT 111-7, CARRIAGE HILLS, A CONDOMINIUM, SURVEY MAP AND PLANS RECORDED IN VOLUME 6 OF CONDOMINIUMS, PAGES 91 THROUGH 94, INCLUSIVE; CONDOMINIUM DECLARATION RECORDED UNDER RECORDING NUMBER(S) 7310020460, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Site Address
EL193.08	Nana Arzumanyan	1401000080	111 112th Avenue SE Unit 221-1 Bellevue, WA 98004

UNIT 221-1, CARRIAGE HILLS, A CONDOMINIUM, SURVEY MAP AND PLANS RECORDED IN VOLUME 6 OF CONDOMINIUMS, PAGES 91 THROUGH 94, INCLUSIVE; CONDOMINIUM DECLARATION RECORDED UNDER RECORDING NUMBER(S) 7310020460, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Site Address
EL193.09	Nana Arzumanyan and Nona Davydova	1401000090	111 112th Avenue SE Unit 221-2 Bellevue, WA 98004

UNIT 221-2, CARRIAGE HILLS, A CONDOMINIUM, SURVEY MAP AND PLANS RECORDED IN VOLUME 6 OF CONDOMINIUMS, PAGES 91 THROUGH 94, INCLUSIVE; CONDOMINIUM DECLARATION RECORDED UNDER RECORDING NUMBER(S) 7310020460, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Site Address
EL193.10	Christopher M Lipe	1401000100	111 112th Avenue SE Unit 221-3 Bellevue, WA 98004

UNIT 221-3, CARRIAGE HILLS, A CONDOMINIUM, SURVEY MAP AND PLANS RECORDED IN VOLUME 6 OF CONDOMINIUMS, PAGES 91 THROUGH 94, INCLUSIVE; CONDOMINIUM DECLARATION RECORDED UNDER RECORDING NUMBER(S) 7310020460, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Site Address
EL193.11	Ryan M Pack and Erin L Pack	1401000110	111 112th Avenue SE Unit 221-4 Bellevue, WA 98004

UNIT 221-4, CARRIAGE HILLS, A CONDOMINIUM, SURVEY MAP AND PLANS RECORDED IN VOLUME 6 OF CONDOMINIUMS, PAGES 91 THROUGH 94, INCLUSIVE; CONDOMINIUM DECLARATION RECORDED UNDER RECORDING NUMBER(S) 7310020460, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Site Address
EL193.12	Basant and Sheila K Singh	1401000120	111 112th Avenue SE Unit 221-5 Bellevue, WA 98004

UNIT 221-5, CARRIAGE HILLS, A CONDOMINIUM, SURVEY MAP AND PLANS RECORDED IN VOLUME 6 OF CONDOMINIUMS, PAGES 91 THROUGH 94, INCLUSIVE; CONDOMINIUM DECLARATION RECORDED UNDER RECORDING NUMBER(S) 7310020460, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Site Address
EL193.13	Kevin Lee	1401000130	111 112th Avenue SE Unit 281-1 Bellevue, WA 98004

UNIT 281-1, CARRIAGE HILLS, A CONDOMINIUM, SURVEY MAP AND PLANS RECORDED IN VOLUME 6 OF CONDOMINIUMS, PAGES 91 THROUGH 94, INCLUSIVE; CONDOMINIUM DECLARATION RECORDED UNDER RECORDING NUMBER(S) 7310020460, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Site Address
EL193.14	Yongning Wu and Cao Xiao	1401000140	111 112th Avenue SE Unit 281-2 Bellevue, WA 98004

UNIT 281-2, CARRIAGE HILLS, A CONDOMINIUM, SURVEY MAP AND PLANS RECORDED IN VOLUME 6 OF CONDOMINIUMS, PAGES 91 THROUGH 94, INCLUSIVE; CONDOMINIUM DECLARATION RECORDED UNDER RECORDING NUMBER(S) 7310020460, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Site Address
EL193.15	Clay Wallace and Mary C Wallace	1401000150	111 112th Avenue SE Unit 281-3 Bellevue, WA 98004

UNIT 281-3, CARRIAGE HILLS, A CONDOMINIUM, SURVEY MAP AND PLANS RECORDED IN VOLUME 6 OF CONDOMINIUMS, PAGES 91 THROUGH 94, INCLUSIVE; CONDOMINIUM DECLARATION RECORDED UNDER RECORDING NUMBER(S) 7310020460, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Site Address
EL193.16	Kerry S Reid	1401000160	111 112th Avenue SE Unit 281-4 Bellevue, WA 98004

UNIT 281-4, CARRIAGE HILLS, A CONDOMINIUM, SURVEY MAP AND PLANS RECORDED IN VOLUME 6 OF CONDOMINIUMS, PAGES 91 THROUGH 94, INCLUSIVE; CONDOMINIUM DECLARATION RECORDED UNDER RECORDING NUMBER(S) 7310020460, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Site Address
EL193.17	Ian Toms	1401000170	111 112th Avenue SE Unit 281-5 Bellevue, WA 98004

UNIT 281-5, CARRIAGE HILLS, A CONDOMINIUM, SURVEY MAP AND PLANS RECORDED IN VOLUME 6 OF CONDOMINIUMS, PAGES 91 THROUGH 94, INCLUSIVE; CONDOMINIUM DECLARATION RECORDED UNDER RECORDING NUMBER(S) 7310020460, IN KING COUNTY, WASHINGTON.

RESOLUTION 2013-14
EAST LINK EXTENSION

EXHIBIT A

R/W No	Tax Parcel No	Owner
EL 155	3210700080	Sang Do Ahn and Inhee Um
EL 157	3210700070	Kristoffer W Tangen
EL 159	3210700060	Chuan Hai Lin
EL 161	3210700040	Jilla Motaman
EL 162	3210700030	Susan L Huenefeld
EL 163	3210700020	Arjun K Sirohi and Neeraj Sirohi
EL 164	3210700010	Susan Ilvanakis
EL 165	3210600220	Alison Summers and Laura Summers
EL 166	3210600210	F Kent Kuiper and Joyce E Kuiper
EL 167	3210600200	Kelly A Huston
EL 168	3210600190	Ronald A Bennett & Estate of Patricia Rae Bennett
EL 176	8146300275	Aman K Kanna and Vijay L Kanna
EL 178	8146300665	John David Griffin and Eleanor Hung Griffin, Trustees of Griffin Family Trust
EL 197	8146100670	Roy W Poler and Jeanne L Poler
EL 198	8146100665	John Carl Simmonds
EL 200	8146100640	Daniel P Greene
EL 202	8146100635	Robert J Halligan and Sheila B Halligan
EL 205	8146100630	Timothy E Osburn

R/W No.	Owner/Contact	Parcel #	Site Address
EL197	Roy W Poler and Jeanne L Poler	8146100670	104 111th Ave SE Bellevue, WA 98004

LOT 2, BLOCK 8, SURREY DOWNS ADDITION NO. 1, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 50 OF PLATS, PAGE(S) 32, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Site Address
EL198	John Carl Simmonds	8146100665	11123 SE 1st Pl Bellevue, WA 98004

LOT 1, BLOCK 8, SURREY DOWNS ADDITION NO. 1, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 50 OF PLATS, PAGE(S) 32, IN KING COUNTY, WASHINGTON; SITUATE IN THE CITY OF BELLEVUE, COUNTY OF KING, STATE OF WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Site Address
EL200	Daniel P Greene	8146100640	11126 SE 1st Pl Bellevue, WA 98004

LOT 15, IN BLOCK 7 OF SURREY ROAD DOWNS ADDITION NO. 1, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 50 OF PLATS, PAGES 32, 33 AND 34, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Site Address
EL202	Robert J Halligan and Sheila B Halligan	8146100635	11118 SE 1st Pl Bellevue, WA 98004

LOT 14, BLOCK 7, SURREY DOWNS ADDITION NO. 1, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 50 OF PLATS, PAGE(S) 32, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	
EL205	Timothy E Osburn	8146100630	11110 SE 1st Pl Bellevue, WA 98004

LOT 13, BLOCK 7, SURREY DOWNS ADDITION NO. 1, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 50 OF PLATS, PAGE(S) 32, IN KING COUNTY, WASHINGTON.

RESOLUTION R2013-21
EAST LINK EXTENSION
BEL-RED SPRING DISTRICT PROPERTIES

EXHIBIT A

R/W No	Tax Parcel No	Owner
EL265	1099100003	BNSF Railway Company
EL266	1099100025	Pine Forest Transitory Company
EL280	1099100001	Pine Forest Properties, Inc.
EL278	1099100011	Barrier Properties 1533, LLC
EL277	1099100002	Barrier Properties 1553, LLC
EL281	1099100101	Safeway, Inc.
EL282	0671000000	WR-SRI 120th LLC
EL283	1099100100	Safeway, Inc.
EL284	2825059204	Ann Seena Jacobsen Living Trust
EL285	2825059003	Stemoff L. P.
EL288	2825059230	Frank E. Everett
EL290	2825059041	Cadman, Inc.
EL295	2825059058	Kellco, LLC
EL296	2825059159	Elufa, LLC
EL298	2825059285	Curran Properties LP
EL299	2825059191	Enilom Properties, LLC
EL300	0672100005	Simone Associates, LLC
EL301	2725059198	Elliott Kahn Investments, LLC and Ruth Kahn Bellevue, LLC
EL302	2725059199	Dunavant Trusts (2), Harold Gorlick and Diane Gorlick, Morris Gorlick
EL304	0672100004	Jessen Management LLC
EL305	2725059008	Mayers MGI Building Holding, LLC
EL306	0672100191	Trident Heritage Holdings, LLC
EL307	2725059213	Mayers MGI Building Holding, Inc.
EL308	2725059237	Mayers MGI Building Holding, Inc.
EL309	2725059217	Charles J. Arnone, LLC
EL310	2725059009	Mayers MGI Building Holding, LLC
EL311	0672100176	T. Wade Gaughran and Lisa R. Gaughran
EL313	2725059263	William A. Regalia IV and Patricia G. Regalia
EL315	2725059062	Mayers MGI Building Holding, LLC
EL316	2725059262	Lenfred J. Mattson and Sally L. Mattson
EL317	2725059067	Mayers MGI Building Holding, LLC
EL318	2725059088	Carlotta T. Esmoris
EL319	2725059240	Leroy D. Kingland Trust
EL320	2725059142	Fencing Properties, LLC
EL321	2725059212	Mayers MGI Building Holding, LLC

RESOLUTION R2013-21
EAST LINK EXTENSION
BEL-RED SPRING DISTRICT PROPERTIES

EXHIBIT A

R/W No.	Owner/Contact	Parcel #	Address
EL265	BNSF Railway Company	1099100003	11801 N.E. 12th St. Bellevue, WA 98005

THE WESTERLY 15 FEET OF THAT PORTION OF VACATED 118TH AVENUE N.E. (FORMERLY GRIFFIN AVENUE) LYING NORTHERLY OF THE WESTERLY EXTENSION OF THE SOUTH LINE OF LOT 9, BRIERWOOD PARK, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 17 OF PLATS, PAGE 18, IN KING COUNTY, WASHINGTON, AND SOUTHERLY OF THE WESTERLY EXTENSION OF THE NORTH LINE OF CITY OF BELLEVUE SHORT PLAT NO. 76-56 RECORDED UNDER RECORDING NUMBER 7701250758; EXCEPT THAT PORTION THEREOF LYING WITHIN NORTHEAST 12TH STREET.

R/W No.	Owner/Contact	Parcel #	Address
EL266	Pine Forest Transitory Company	1099100025	1215 120th Ave. N.E. Bellevue, WA 98005

LOTS 1 THROUGH 4, INCLUSIVE, CITY OF BELLEVUE SHORT PLAT NO. 76-56, RECORDED UNDER RECORDING NUMBER 7701250758, BEING PORTIONS OF LOTS 6 THROUGH 13, INCLUSIVE, AND A PORTION OF THE "RESERVE", ALL IN BRIERWOOD PARK, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 17 OF PLATS, PAGE 18, IN KING COUNTY, WASHINGTON, TOGETHER WITH VACATED STREETS ADJOINING;
(NOW ALL KNOWN AS CITY OF BELLEVUE SHORT PLAT NO. 84-23, RECORDED UNDER RECORDING NO. 8407099012).

R/W No.	Owner/Contact	Parcel #	Address
EL280	Pine Forest Properties, Inc	1099100001	1425 120th Ave. N.E. Bellevue, WA 98005

THOSE PORTIONS OF LOTS 6 AND 13 LYING WEST OF 120TH AVENUE N.E. ALL IN BRIERWOOD PARK, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 17 OF PLATS, PAGE 18, IN KING COUNTY, WASHINGTON; TOGETHER WITH THAT PORTION OF VACATED 118TH AVENUE N.E. (FORMERLY GRIFFIN AVENUE) LYING WESTERLY OF SAID LOT 6 (ALL OF SAID LAND BEING A PORTION OF THE NORTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 28, TOWNSHIP 25 NORTH, RANGE 5 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON) AND LYING BETWEEN THE FOLLOWING DESCRIBED PLATS: CITY OF BELLEVUE SHORT PLAT NO. 80-16 RECORDED UNDER RECORDING NUMBER 8101239001 AND CITY OF BELLEVUE SHORT PLAT NO. 76-56 RECORDED UNDER RECORDING NUMBER 7701250758 AND THE WESTERLY PRODUCTION OF THE NORTH LINE OF SAID SHORT PLAT NO. 76-56.

R/W No.	Owner/Contact	Parcel #	Address
EL278	Barrier Properties 1533, LLC	1099100011	1533 120th Ave. N.E. Bellevue, WA 98005

PARCEL 2 CITY OF BELLEVUE SHORT PLAT NUMBER 80-16, RECORDED UNDER RECORDING NUMBER 8101239001, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Address
EL277	Barrier Properties 1533, LLC	1099100002	1601 120th Ave. N.E. Bellevue, WA 98005

TRACT "A", CITY OF BELLEVUE SHORT PLAT NUMBER 80-16, RECORDED UNDER RECORDING NUMBER 8101239001, IN KING COUNTY, WASHINGTON.

RESOLUTION NO. R2013-28
EAST LINK EXTENSION
E330 SEGMENT

EXHIBIT A

R/W No	Tax Parcel No	Owner
~~EL170~~	~~0662880010~~	~~W2007 Seattle Office Bellefield Office Park Realty LLC~~
EL201	8146100645	Robert A Grella & Sharon K Grella
EL203	8146100650	Main Street Business, LLC
EL204	8146100655	Paradise Holdings, LLC
EL207	8146100660	Mac Lane Investments, LLC
EL209	6729700005	Rose Property Management Corp.
EL212	3225059089	CBD Properties, LLC

RESOLUTION NO. R2013-28
EAST LINK EXTENSION
E330 SEGMENT

EXHIBIT A

R/W No.	Owner/Contact	Parcel #	Address
EL201	Robert A Grella and Sharon K Grella	8146100645	11121 Main St. Bellevue, WA 98004

LOT 16, BLOCK 7, SURREY DOWNS ADDITION NO. 1, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 50 OF PLATS, PAGE(S) 32, IN KING COUNTY, WASHINGTON;
EXCEPT THOSE PORTIONS THEREOF CONVEYED TO THE CITY OF BELLEVUE BY DEEDS RECORDED UNDER RECORDING NUMBERS 6551569 AND 20051216002698.

R/W No.	Owner/Contact	Parcel #	Address
EL203	Main Street Business, LLC	8146100650	11113 Main St. Bellevue, WA 98004

LOT 17, BLOCK 7, SURREY DOWNS ADDITION NO. 1, ACCORDING TO THE PLAT RECORDED IN VOLUME 50 OF PLATS, PAGES 32, 33, AND 34, IN THE CITY OF BELLEVUE, COUNTY OF KING, STATE OF WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Address
EL204	Paradise Holdings, LLC	8146100655	11105 Main St. Bellevue, WA 98004

LOT 18, BLOCK 7, SURREY DOWNS ADDITION NO. 1, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 50 OF PLATS, PAGE(S) 32, 33 AND 34, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Address
EL207	Mac Lane Investments, LLC	8146100660	11041 Main St. Bellevue, WA 98004

LOT 19, BLOCK 7, SURREY DOWNS ADDITION NO. 1, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 50 OF PLATS, PAGE(S) 32, 33 AND 34, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Address
EL209	Rose Property Management Corp.	6729700005	106 110th Pl. S.E. Bellevue, WA 98004

LOT 1, PETERSONS ADDITION TO BELLEVUE, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 49 OF PLATS, PAGE(S) 48, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Address
EL212	CBD Properties, LLC	3225059089	11100 Main St. Bellevue, WA 98004

THAT PORTION OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 32, TOWNSHIP 25 NORTH, RANGE 5 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:
BEGINNING AT THE SOUTHEAST CORNER OF SAID SUBDIVISION;
THENCE NORTH 88°01'42" WEST ALONG SOUTHERLY LINE THEREOF 569.30 FEET TO THE TRUE POINT OF BEGINNING;
THENCE NORTH 0°12'48" EAST PARALLEL WITH THE EASTERLY LINE OF SAID SUBDIVISION 177.50 FEET;
THENCE NORTH 88°01'42" WEST 107.50 FEET;
THENCE SOUTH 0°12'48" WEST 177.50 FEET TO THE SOUTHERLY LINE OF SAID SUBDIVISION;
THENCE SOUTH 88°01'42" EAST ALONG SAID SOUTHERLY LINE 107.50 FEET TO THE TRUE POINT OF BEGINNING;
EXCEPT THE SOUTHERLY 30.00 FEET IN WIDTH THEREOF FOR STREET; AND
EXCEPT THE WEST 30 FEET THEREOF CONVEYED TO THE CITY OF BELLEVUE FOR STREET PURPOSES BY DEED RECORDED UNDER RECORDING NUMBER 5282770.

RESOLUTION NO. R2014-08
EAST LINK EXTENSION
E320, 330, 335, 340 and 360 SEGMENTS

EXHIBIT A

R/W No	Tax Parcel No	Owner
~~EL104.1~~	~~7000100460~~	~~Steven R Karpman and Danielle L Belisle~~
~~EL114~~	~~0644200035~~	~~Jeffrey V Fowler and Noel A Murphy~~
~~EL171~~	~~0662870010~~	~~W2007 Seattle Office Bellevue Gateway 1 Realty, LLC~~
~~EL172~~	~~3225059134~~	~~Bellevue Lincoln Plaza, LLC~~
~~EL174~~	~~8146300280~~	~~Jia Lin Chen~~
~~EL177~~	~~3225059046~~	~~Pacific Recreation Associates~~
EL187	8146300025	Ivan J Jimenez and Frances H Jimenez
EL188	3225059061	PD Bellevue Associates, LLC
EL189	8146300020	Brian W Smith
EL190	8146300015	Eva Jones Smith Trustee of the Eva Jones Smith Living Trust
EL191	8146300010	Kevin Y Chae and Jawon Chae
EL192	8146300005	Eva Gill
EL194	8146100685	Wei Liu and Li Qian
EL195	8146100680	Pamela R Davis and Nathan W Unger
EL196	8146100675	Yi-Hsing Jack Chen
EL206	8146100625	James V Hamilton
EL208	6729700010	Daren M Gertz and Nancy A Gertz
EL210	3225059103	Sir Gallahad, LLC
EL215	3225059057	Benenson Bellevue II, LP
EL226.1	8081200010	Summit REIT, Inc.
EL231	3225059058	FSP - City Center Plaza, LLC
EL238	3225059201	Legacy Bellevue 530, LLC
EL238.1	3225059171	JG 520 Building, LLC
EL241	3225059005	City of Bellevue
EL243	3325059124	Fazenda, LLC
EL244	3325059036	Beta-Bellevue Auto Center, LLC
EL250	3325059209	TRF Capital, LLC
EL252	3325059210	Midlakes, LLC
EL253	1099100496	Thomas H Codwin Jr. et al. (7 owners total)
EL253.1	1099100480	Robert D Griffith and Danielle Griffith
EL255	1099100490	RBJK Ventures, LLC
EL256	2825059083	Rosen Building Supply, LLC
EL258	6093500000	Nine Lake Bellevue Condominium – owners of record
EL256.2	2825059080	RCJ Properties II, LLC
EL257	2825059019	Design Market Properties, LLC
~~EL305.1~~	~~2725059132~~	~~Lakeside Northwest, LLC~~

R/W No.	Owner/Contact	Parcel #	Address
EL187	IVAN J JIMENEZ AND FRANCES H JIMENEZ	8146300025	240 111TH AVE SE BELLEVUE, WA 98004

LOT 10, BLOCK 8, SURREY DOWNS ADDITION NO. 2, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 60 OF PLATS, PAGE(S) 10, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Address
EL188	PD BELLEVUE ASSOCIATES, LLC	3225059061	300 112TH AVE SE BELLEVUE, WA 98004

PARCEL 1:
THAT PORTION OF THE SOUTH HALF OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 32, TOWNSHIP 25 NORTH, RANGE 5 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, LYING WESTERLY OF STATE HIGHWAY (SR 405 MIDLAKES TO KIRKLAND)

EXCEPT THAT PORTION THEREOF LYING WESTERLY OF THE EASTERLY MARGIN OF 112TH AVENUE SOUTHEAST, AS CONVEYED BY DEED RECORDED UNDER RECORDING NUMBER 8003140834.

PARCEL 2:
AN EASEMENT FOR INGRESS AND EGRESS, 26 FEET WIDE, HAVING 13 FEET OF SUCH WIDTH ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE: COMMENCING AT THE NORTHEAST CORNER OF THAT PORTION OF THE NORTH HALF OF THE NORTHEAST QUARTER OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 32, TOWNSHIP 25 NORTH, RANGE 5 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, LYING WESTERLY OF THAT PORTION CONVEYED TO THE STATE OF WASHINGTON FOR HIGHWAY PURPOSES BY DEEDS RECORDED UNDER RECORDING NUMBERS 3208353, 4342024 AND 4913774;
THENCE NORTH 88°17'22" WEST ALONG THE NORTH LINE OF SAID SUBDIVISION, 109.50 FEET TO THE POINT OF BEGINNING;
THENCE SOUTH 00°25'16" WEST PARALLEL TO THE WEST LINE THEREOF, 291.09 FEET;
THENCE SOUTH 88°21'43" EAST PARALLEL TO THE SOUTH LINE THEREOF, 243.55 FEET;
THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 42.25 FEET THROUGH A CENTRAL ANGLE OF 27°37'09", AN ARC DISTANCE OF 20.35 FEET TO THE TERMINUS AT A POINT ON THE WESTERLY MARGIN OF SAID STATE HIGHWAY, WHICH IS 50 FEET NORTHWESTERLY, AS MEASURED ALONG SAID MARGIN FROM THE SOUTHEAST CORNER OF SAID PARCEL.

R/W No.	Owner/Contact	Parcel #	Address
EL189	BRIAN W SMITH	8146300020	236 111TH AVE. SE BELLEVUE, WA 98004

LOT 9, BLOCK 8, SURREY DOWNS ADDITION NO. 2, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 60 OF PLATS, PAGE(S) 10, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Address
EL190	EVA JONES SMITH TRUSTEE OF THE EVA JONES SMITH LIVING TRUST	8146300015	226 111TH AVE. SE BELLEVUE, WA 98004

LOT 8, BLOCK 8, SURREY DOWNS ADDITION NO. 2, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 60 OF PLATS, PAGE(S) 10, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Address
EL191	KEVIN Y CHAE AND JAWON CHAE	8146300010	220 111TH AVE SE BELLEVUE, WA 98004

LOT 7, BLOCK 8, SURREY DOWNS NO. 2, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 60 OF PLATS, PAGE(S) 10, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Address
EL192	EVA GILL	8146300005	212 111TH AVE SE BELLEVUE, WA 98004

LOT 6, BLOCK 8, SURREY DOWNS NO. 2, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 60 OF PLATS, PAGE(S) 10, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Address
EL194	WEI LIU AND LI QIAN	8146100685	204 111TH AVE SE BELLEVUE, WA 98004

LOT 5, BLOCK 8, SURREY DOWNS ADDITION NO. 1, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 50 OF PLATS, PAGE(S) 32, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Address
EL195	PAMELA R DAVIS AND NATHAN W UNGER	8146100680	200 111TH AVE SE BELLEVUE, WA 98004

LOT 4, BLOCK 8, SURREY DOWNS ADDITION NO. 1, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 50 OF PLATS, PAGE(S) 32, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Address
EL196	YI-HSING JACK CHEN	8146100675	112 111TH AVE SE BELLEVUE, WA 98004

LOT 3, BLOCK 8, SURREY DOWNS ADDITION NO. 1, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 50 OF PLATS, PAGE(S) 32, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Address
EL206	JAMES V HAMILTON	8146100625	11102 SE 1ST PL BELLEVUE, WA 98004

LOT 12, BLOCK 7, SURREY DOWNS ADDITION NO. 1, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 50 OF PLATS, PAGE(S) 32 TO 34 INCLUSIVE, RECORDS OF KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Address
EL208	DAREN M GERTZ AND NANCY A GERTZ	6729700010	112 110TH PL SE BELLEVUE, WA 98004

LOT 2, PETERSON'S ADDITION TO BELLEVUE, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 49 OF PLATS, PAGE 48, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Address
EL210	SIR GALLAHAD, LLC	3225059103	11030 MAIN ST BELLEVUE, WA 98004

PARCEL A:
THAT PORTION OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 32, TOWNSHIP 25 NORTH, RANGE 5 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON DESCRIBED AS FOLLOWS:
BEGINNING AT THE SOUTHEAST CORNER OF SAID SUBDIVISION;
THENCE NORTH 88°01'42" WEST ALONG THE SOUTHERLY LINE THEREOF 476.80 FEET;
THENCE NORTH 0°12'48" EAST PARALLEL WITH THE EASTERLY LINE OF SAID SUBDIVISION 177.50 FEET TO THE TRUE POINT OF BEGINNING;
THENCE CONTINUING NORTH 0°12'48" EAST PARALLEL WITH THE EASTERLY LINE OF SAID SUBDIVISION 100.00 FEET;
THENCE NORTH 88°01'42" WEST PARALLEL WITH THE SOUTHERLY LINE OF SAID SUBDIVISION 200.00 FEET;
THENCE SOUTH 0°12'48" WEST PARALLEL WITH THE EASTERLY LINE OF SAID SUBDIVISION 100.00 FEET;
THENCE SOUTH 88°01'42" EAST 200.00 FEET TO THE TRUE POINT OF BEGINNING;

EXCEPT THE WEST 30 FEET THEREOF CONVEYED TO THE CITY OF BELLEVUE FOR STREET PURPOSES BY DEED RECORDED UNDER RECORDING NUMBER 5440651.

PARCEL B:
THAT PORTION OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 32, TOWNSHIP 25 NORTH, RANGE 5 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:
BEGINNING AT THE SOUTHEAST CORNER OF SAID SUBDIVISION;
THENCE NORTH 88°01'42" WEST ALONG THE SOUTHERLY LINE THEREOF 476.80 FEET TO THE TRUE POINT OF BEGINNING;
THENCE NORTH 0°12'48" EAST PARALLEL WITH THE EASTERLY LINE OF SAID SUBDIVISION 177.50 FEET;
THENCE NORTH 88°01'42" WEST 92.50 FEET;

THENCE SOUTH 0°12'48" WEST 177.50 FEET TO THE SOUTHERLY LINE OF SAID SUBDIVISION;
THENCE SOUTH 88°01'42" EAST ALONG SAID SOUTHERLY LINE 92.50 FEET TO THE TRUE POINT OF BEGINNING;

EXCEPT THE SOUTHERLY 30.00 FEET IN WIDTH THEREOF FOR STREET; AND
EXCEPT THAT PORTION CONVEYED TO THE CITY OF BELLEVUE BY DEED RECORDED UNDER RECORDING NUMBER 20031126001870; (BEING KNOWN AS TRACT 1, BERKEY'S ADDITION TO BELLEVUE, ACCORDING TO THE UNRECORDED PLAT THEREOF).

R/W No.	Owner/Contact	Parcel #	Address
EL215	BENENSON BELLEVUE II, LP	3225059057	103 110TH AVE NE BELLEVUE, WA 98004

THAT PORTION OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 32, TOWNSHIP 25 NORTH, RANGE 5 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:
COMMENCING AT THE SOUTHEAST CORNER OF SAID SUBDIVISION;
THENCE NORTH 88°03'32" WEST, ALONG THE SOUTH LINE OF SAID SUBDIVISION, 706.81 FEET TO ITS INTERSECTION WITH THE WESTERLY MARGIN OF 110TH AVENUE NORTHEAST, EXTENDED SOUTHERLY;
THENCE NORTH 00°12'17" EAST, ALONG SAID EXTENSION AND SAID MARGIN, TO A LINE 145.00 FEET NORTH OF AND PARALLEL TO, WHEN MEASURED AT RIGHT ANGLES TO THE CENTERLINE OF MAIN STREET, AND THE TRUE POINT OF BEGINNING OF THIS DESCRIPTION;
THENCE NORTH 88°03'32" WEST, ALONG SAID PARALLEL LINE 224.48 FEET TO THE EAST BOUNDARY OF A PARCEL OF LAND DESCRIBED UNDER RECORDING NUMBER 5866571, IN KING COUNTY, WASHINGTON;
THENCE NORTH 01°56'16" EAST, ALONG SAID BOUNDARY, 517.68 FEET TO THE SOUTH MARGIN OF NORTHEAST 2ND STREET;
THENCE SOUTH 89°12'58" EAST, ALONG SAID MARGIN, 208.73 FEET TO THE WEST MARGIN OF SAID 110TH AVENUE NORTHEAST;
THENCE SOUTH 00°12'17" WEST, ALONG SAID WEST MARGIN, 522.13 FEET TO THE TRUE POINT OF BEGINNING.

R/W No.	Owner/Contact	Parcel #	Address
EL226.1	SUMMIT REIT, INC	8081200010	325 110TH AVE NE BELLEVUE, WA 98004

LOT 1, THE SUMMIT (BINDING SITE PLAN), ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 255 OF PLATS, PAGE(S) 44 THROUGH 47, INCLUSIVE, IN KING COUNTY, WASHINGTON; (ALSO KNOWN AS LOT 1, CITY OF BELLEVUE BINDING SITE PLAN NUMBER 10-107177 LJ, RECORDED UNDER RECORDING NUMBER 20100810001366, IN KING COUNTY, WASHINGTON).

R/W No.	Owner/Contact	Parcel #	Address
EL231	FSP - CITY CENTER PLAZA, LLC	3225059058	555 110TH AVE NE BELLEVUE, WA 98004

LOTS 2 AND 3, CITY OF BELLEVUE SHORT PLAT NUMBER 85-18, RECORDED UNDER RECORDING NUMBER 8508209012 IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Address
EL238	LEGACY BELLEVUE 530, LLC	3225059201	530 112TH AVE NE BELLEVUE, WA 98004

THAT PORTION OF LOT 1, CITY OF BELLEVUE, SHORT PLAT NUMBER 76-24, RECORDED UNDER AUDITOR'S FILE NO. 7606180653, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:
COMMENCING AT THE NORTHWEST CORNER OF LOT 1;
THENCE ALONG THE WEST LINE OF LOT 1, SOUTH 0°11'40" WEST 236.00 FEET;
THENCE LEAVING SAID WEST LINE AND PARALLEL WITH THE NORTH LINE OF LOT 1, SOUTH 88°04'15" EAST 5.03 FEET TO THE POINT OF BEGINNING;
THENCE NORTH 02°24'28" WEST 145.58 FEET TO A POINT OF CURVATURE OF A 34.50 FOOT RADIUS CURVE TO THE RIGHT;
THENCE ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 94°13'03" SUBTENDED BY AN ARC LENGTH OF 56.73 FEET TO A POINT OF TANGENCY;
THENCE SOUTH 86°11'25" EAST 158.83 FEET TO A POINT OF CURVATURE OF A 157.62 FOOT RADIUS CURVE TO THE RIGHT;
THENCE ALONG SAID CURVE, THROUGH A CENTRAL ANGLE OF 10°32'32" SUBTENDED BY AN ARC LENGTH OF 29.00 FEET;
THENCE RADIALLY SOUTH 14°21'07" WEST 50.46 FEET;
THENCE SOUTH 35°47'12" EAST 105.00 FEET;
THENCE SOUTH 1°20'23" WEST 28.00 FEET;
THENCE SOUTH 54°20'25" WEST 20.00 FEET;
THENCE NORTH 88°04'15" WEST 254.97 FEET TO THE POINT OF BEGINNING, ALL IN KING COUNTY, WASHINGTON; (BEING A PORTION OF THE CITY OF BELLEVUE, BOUNDARY LINE ADJUSTMENT NUMBER 93-6573, RECORDED UNDER RECORDING NUMBER 9407149001, IN KING COUNTY, WASHINGTON);

EXCEPT ANY PORTION THEREOF CONDEMNED BY CENTRAL PUGET SOUND REGIONAL TRANSIT AUTHORITY BY STIPULATED DECREE OF APPROPRIATION ENTERED OCTOBER 27, 2004 IN KING COUNTY SUPERIOR COURT CAUSE NO. 02-2-31674-3, RECORDED UNDER RECORDING NUMBER 20041201001268, AND ALSO DESCRIBED IN DEEDS RECORDED UNDER RECORDING NUMBERS 20071206000712 AND 20081001001415;
TOGETHER WITH EASEMENT RIGHTS FOR VEHICULAR AND PEDESTRIAN INGRESS AND EGRESS AS ESTABLISHED UNDER RECORDING NUMBERS 7611120570, 8007180111 AND 9407251495.

R/W No.	Owner/Contact	Parcel #	Address
EL238.1	JG 520 BUILDING, LLC	3225059171	520 112TH AVE NE BELLEVUE, WA 98004

PARCEL A:

THAT PORTION OF LOTS 1 AND 2, CITY OF BELLEVUE SHORT PLAT NUMBER 76-24, RECORDED UNDER RECORDING NUMBER 7606180653, KING COUNTY, WASHINGTON, BEING A PORTION OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 32, TOWNSHIP 25 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:
COMMENCING AT THE NORTHWEST CORNER OF LOT 1;
THENCE ALONG THE WEST LINE OF LOT 1 SOUTH 0°11’40" WEST 236.00 FEET;
THENCE LEAVING SAID WEST LINE AND PARALLEL WITH THE NORTH LINE OF LOT 1 SOUTH 88°04’15" EAST 5.03 FEET TO THE POINT OF BEGINNING;

THENCE CONTINUING SOUTH 88°04’15" EAST 254.97 FEET;
THENCE NORTH 54°20’25" EAST 20.00 FEET;
THENCE NORTH 1°20’23" EAST 28.00 FEET;
THENCE NORTH 35°47’12" WEST 105.00 FEET;
THENCE NORTH 14°21’07" EAST 50.46 FEET TO A POINT ON A NON-TANGENT CURVE;
THENCE SOUTHEASTERLY ALONG SAID CURVE, OF WHICH THE CENTER BEARS SOUTH 14°21’07" WEST 157.62 FEET, THROUGH A CENTRAL ANGLE OF 54°33’03", SUBTENDED BY AN ARC LENGTH OF 150.07 FEET TO THE WESTERLY MARGIN OF STATE ROAD NO. 405, AS CONDEMNED BY THAT CERTAIN ACTION RECORDED UNDER SUPERIOR COURT CAUSE NUMBER 87-2-00618-2;
THENCE ALONG SAID WESTERLY MARGIN SOUTH 3°31’28" EAST 162.56 FEET;
THENCE SOUTH 1°36’46" EAST 97.86 FEET TO A LINE BEING 260.00 FEET NORTHERLY OF, AS MEASURED AT RIGHT ANGLES TO, THE SOUTH LINE OF THE NORTHEAST QUARTER, OF THE NORTHEAST QUARTER OF SECTION 32, TOWNSHIP 25 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON;
THENCE LEAVING SAID WESTERLY MARGIN AND PARALLEL WITH SAID SOUTH LINE NORTH 88°03’53" WEST 343.89 FEET;
THENCE NORTH 1°37’36" EAST 39.66 FEET TO A POINT BEING 6.50 FEET EASTERLY OF, AS MEASURED AT RIGHT ANGLES TO, THE WEST LINE OF LOT 2;
THENCE NORTH 0°24’28" WEST 139.67 FEET TO THE POINT OF BEGINNING, AND THERE ENDING, ALL IN KING COUNTY, WASHINGTON;

EXCEPT THE FOLLOWING PORTION THEREOF AS APPROPRIATED FOR THE CENTRAL PUGET REGIONAL TRANSIT AUTHORITY BY STIPULATED DECREE OF APPROPRIATION DATED MARCH 2, 2005 UNDER KING COUNTY SUPERIOR COUNTY CAUSE NO. 02-2-31675-1 AND RECORDED UNDER RECORDING NUMBER 20060315000840, DESCRIBED AS FOLLOWS: THAT PORTION OF THE FOLLOWING DESCRIBED EXISTING TAX LOT PARCEL NO. 322505-9171-02 WHICH LIES NORTHERLY OF A LINE THAT IS 28.87 FEET SOUTHERLY FROM AND PARALLEL WITH THE NE 6TH LINE SURVEY OF “SR 405, NE 2ND ST. VICINITY TO NE 8TH STREET”, AND BEARING AN APPROVAL DATE OF OCTOBER 16, 2002, REVISED MARCH 3, 2003, ON FILE IN THE OFFICE OF THE OFFICE OF THE SECRETARY OF TRANSPORTATION AT OLYMPIA, WASHINGTON; AND
ALSO EXCEPT THE FOLLOWING PORTION THEREOF AS APPROPRIATED FOR THE CENTRAL PUGET SOUND REGIONAL TRANSIT AUTHORITY BY STIPULATED DECREE OF APPROPRIATION DATED MARCH 2, 2005 UNDER KING COUNTY SUPERIOR COURT CAUSE NO. 02-2-31675-1 AND RECORDED UNDER RECORDING NUMBER 20060315000840, DESCRIBED AS FOLLOWS: COMMENCING ON THE NORTHEAST CORNER OF SECTION 32, TOWNSHIP 25 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON;
THENCE ALONG THE NORTH LINE OF SAID SECTION 32, NORTH 88° 04’10” WEST A DISTANCE OF 760.10 FEET TO THE SR 405 LINE SURVEY OF “SR 405, NE 2ND ST. VICINITY TO NE 8TH ST” AND BEARING AN APPROVAL DATE OF OCTOBER 16, 2002, REVISED MARCH 3, 2003, ON FILE IN THE OFFICE OF THE SECRETARY OF TRANSPORTATION AT OLYMPIA, WASHINGTON;
THENCE ALONG SAID SR 405 LINE SURVEY, SOUTH 00°17’07” WEST A DISTANCE OF 767.11 FEET;
THENCE AT A RIGHT ANGLE TO SAID SR 405 LINE SURVEY NORTH 89° 42’53”. WEST A DISTANCE OF 214.84 FEET TO A POINT AT HIGHWAY ENGINEER’S STATION (HEREINAFTER REFERRED TO AS HES) SOUTH 27+57.71 ON THE SOUTH LINE SURVEY OF SAID HIGHWAY, SAID POINT ALSO BEING THE RADIUS POINT OF THE FOLLOWING DESCRIBED CURVE (OF RADIUS 48.50 FEET);
THENCE ALONG A RADIAL LINE (OF THE FOLLOWING DESCRIBED CURVE), SOUTH 01° 58’ 19” WEST A DISTANCE OF 48.50 FEET TO THE BEGINNING OF A NONTANGENT CURVE TO THE RIGHT, CONCAVE TO THE NORTHEAST, WITH RADIUS OF 48.50 FEET (THE RADIUS POINT WHICH IS STATED ABOVE) ANDTHE TRUE POINT OF BEGINNING;
THENCE WESTERLY, NORTHWESTERLY, NORTHERLY AND NORTHEASTERLY ALONG SAID CURVE, AN ARC LENGTH OF 111.81 FEET, THROUGH AN ANGLE OF 132°05’10” TO A NON-TANGENT CURVE TO THE RIGHT, SAID CURVE BEING ALONG THE NORTHEASTERLY LINE OF THE FOLLOWING DESCRIBED EXISTING TAX LOT PARCEL NO. 322505-9171-02, CONCAVE TO

THE SOUTHWEST, THE RADIUS POINT OF WHICH BEARS SOUTH 34°45'19" WEST A DISTANCE OF 157.62 FEET;
THENCE SOUTHEASTERLY ALONG SAID CURVE, AN ARC LENGTH OF 93.58 FEET, THROUGH AN ANGLE OF 34°01'07" TO A POINT OF NON-TANGENCY ON THE EAST LINE OF SAID EXISTING TAX LOT PARCEL;
THENCE ALONG SAID EAST LINE, SOUTH 03°32'19" EAST A DISTANCE OF 22.12 FEET TO A NON TANGENT CURVE TO THE LEFT, CONCAVE TO THE SOUTHWEST, WITH RADIUS OF 34.50 FEET, THE RADIUS POINT OF WHICH BEARS SOUTH 50°01'44" WEST (SAID RADIUS POINT ALSO BEARS SOUTH 01°58'19" WEST A DISTANCE OF 83.00 FEET FROM HES 27+57.71 ON SAID SOUTH LINE SURVEY);
THENCE NORTHWESTERLY AND WESTERLY ALONG SAID CURVE OF RADIUS 34.50 FEET, AN ARC LENGTH OF 28.94 FEET, THROUGH AN ANGLE OF 48°03' 25" TO A POINT OF REVERSE CURVE AND THE TRUE POINT OF BEGINNING

PARCEL B:
A NON-EXCLUSIVE EASEMENT RIGHTS FOR INGRESS AND EGRESS, PARKING AS SET FORTH IN INSTRUMENT RECORDED UNDER RECORDING NUMBER 7607020799 AS MODIFIED BY AMENDMENT RECORDED UNDER RECORDING NUMBER 9407251496.

R/W No.	Owner/Contact	Parcel #	Address
EL241	CITY OF BELLEVUE	3225059005	555 116TH AVE NE BELLEVUE, WA 98004

PARCEL I:
THAT PORTION OF THE FOLLOWING DESCRIBED TRACT OF LAND LYING EASTERLY OF THE EASTERLY LINE OF PRIMARY STATE HIGHWAY NO. 1, MID LAKES TO KIRKLAND, DESCRIBED AS FOLLOWS:
THAT PORTION OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 32, TOWNSHIP 25 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE EAST LINE OF SAID SECTION 660.60 FEET SOUTH OF THE NORTHEAST CORNER OF SAID NORTHEAST QUARTER OF THE NORTHEAST QUARTER;
THENCE WEST 988.92 FEET;
THENCE SOUTH 220.37 FEET;
THENCE EAST 988.56 FEET;
THENCE NORTH 220.37 FEET TO THE POINT OF BEGINNING;

EXCEPT THAT PORTION THEREOF LYING WITHIN 116TH AVENUE N.E.

PARCEL II:
THAT PORTION OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 32, TOWNSHIP 25 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE EAST LINE OF SAID SECTION 880.97 FEET SOUTH OF THE NORTHEAST CORNER THEREOF;
THENCE SOUTH ON THE EAST LINE 220.45 FEET, MORE OR LESS, TO THE NORTH LINE OF A TRACT OF LAND CONVEYED TO CHARLES ROON AND WIFE, TO WILLIAM JOSEPH AND WIFE BY DEED RECORDED IN VOLUME 645 OF DEEDS, PAGE 251, UNDER RECORDING NO. 553489, RECORDS OF KING COUNTY;
THENCE WEST ALONG SAID NORTH TRACT LINE A DISTANCE OF 988.19 FEET;
THENCE NORTH 00° 06' 06" WEST PARALLEL WITH SAID EAST SECTION LINE TO A POINT WEST OF THE POINT OF BEGINNING;
THENCE EAST 988.56 FEET TO THE POINT OF BEGINNING;

EXCEPT THAT PORTION THEREOF LYING WITHIN 116TH AVENUE N.E.;

AND EXCEPT THE EAST 300 FEET OF THE NORTH 190 FEET OF SAID PROPERTY; AND EXCEPT THAT PORTION LYING WESTERLY OF THE EAST LINE OF PRIMARY STATE HIGHWAY NO. 1;
AND EXCEPT THAT PORTION OF THE ABOVE DESCRIBED PARCELS I AND II LYING SOUTHWESTERLY AND WESTERLY OF A LINE BEGINNING AT POINT OPPOSITE HIGHWAY ENGINEER'S STATION (HEREINAFTER REFERRED TO AS HES) N.E. 4TH 18+35.97 ON THE N.E. 4TH STREET SURVEY LINE OF SR 405 BELLEVUE: N.E. 4TH STREET INTERCHANGE, AND 60 FEET NORTHEASTERLY THEREFROM;
THENCE NORTHWESTERLY TO A POINT OPPOSITE HES 326+60.69 ON THE SR 405 SURVEY LINE OF SAID HIGHWAY AND 182.3 FEET EASTERLY THEREFROM;
THENCE NORTHWESTERLY TO A POINT OPPOSITE HES 327+50 ON SAID SR 405 SURVEY LINE AND 140 FEET EASTERLY THEREFROM;
THENCE NORTHERLY PARALLEL WITH SAID SR 405 SURVEY LINE TO A POINT OPPOSITE HES 330+05.4 ON SAID SR 405 SURVEY LINE;
THENCE NORTHEASTERLY ALONG THE ARC OF A CURVE TO THE RIGHT HAVING A RADIUS OF 403.47 FEET A DISTANCE OF 97.92 FEET TO A POINT OPPOSITE HES R3 2+50 ON THE R3 LINE (R/W) SURVEY OF SAID HIGHWAY AND 74 FEET SOUTHEASTERLY THEREFROM, AND THE END OF THIS LINE DESCRIPTION;
AND EXCEPT ANY PORTIONS CONDEMNED IN U.S. DISTRICT COURT JUDGMENT NO. 4795 AND IN KING COUNTY SUPERIOR COURT CAUSE NO. 86-2-01518-3 NOT EXCEPTED ABOVE.
AND EXCEPT THAT PORTION OF THE ABOVE DESCRIBED PARCELS I AND II AS DESCRIBED IN STIPULATED CONSENT DECREE OF APPROPRIATION ENTERED JULY 18, 2003 UNDER KING COUNTY SUPERIOR COURT CAUSE NO. 02-2-31213-6 SEA AND RECORDED UNDER RECORDING NUMBER 20030722002069, AND DESCRIBED AS FOLLOWS:
THAT PORTION OF PARCELS I AND II LYING WESTERLY OF A LINE BEGINNING AT A POINT OPPOSITE HIGHWAY ENGINEER'S STATION (HEREINAFTER REFERRED TO AS HES) 327+24.52 ON THE SR 405 LINE SURVEY OF "SR 405, N.E. 2ND ST. VICINITY TO N.E. 8TH ST." AND BEARING AN APPROVAL DATE OF OCTOBER 16, 2002, REVISED DECEMBER 3, 2002, ON FILE IN THE OFFICE OF THE SECRETARY OF TRANSPORTATION AT OLYMPIA, WASHINGTON AND 152.01 FEET EASTERLY THEREFROM, SAID POINT BEING ON THE SOUTHWESTERLY BOUNDARY LINE OF SAID PARCELS;
THENCE NORTHERLY TO A POINT OPPOSITE HES 328+19.07 ON SAID SR 405 LINE SURVEY AND 147 FEET EASTERLY THEREFROM;
THENCE NORTHERLY TO A POINT OPPOSITE HES R3 12+19.51 ON THE R3 LINE SURVEY OF SAID HIGHWAY AND 74 FEET SOUTHEASTERLY THEREFROM, SAID POINT BEING ON THE NORTHWESTERLY BOUNDARY LINE OF SAID PARCELS AND THE END OF THIS LINE.

R/W No.	Owner/Contact	Parcel #	Address
EL243	FAZENDA, LLC	3325059124	600 116TH AVE NE BELLEVUE, WA 98004

THE SOUTH 156 FEET OF THAT PORTION OF THE NORTH 733 FEET OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 33, TOWNSHIP 25 NORTH, RANGE 5 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, LYING WEST OF THE NORTHERN PACIFIC RAILWAY RIGHT OF WAY;
EXCEPT THE WEST 50 FEET THEREOF LYING WITHIN SECONDARY STATE HIGHWAY 1-A.

R/W No.	Owner/Contact	Parcel #	Address
EL244	BETA-BELLEVUE AUTO CENTER, LLC	3325059036	614 116TH AVE NE BELLEVUE, WA 98004

THAT PORTION OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 33, TOWNSHIP 25 NORTH, RANGE 5 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:
COMMENCING AT THE NORTHWEST CORNER OF SAID SUBDIVISION;
THENCE SOUTH 00°17'17" WEST ALONG THE WEST LINE OF SAID SUBDIVISION 305.00 FEET;
THENCE SOUTH 89°26'52" EAST PARALLEL WITH THE NORTH LINE OF SAID SECTION 50.00 FEET TO THE EASTERLY RIGHT OF WAY MARGIN OF 116TH AVENUE NORTHEAST AND THE TRUE POINT OF BEGINNING;
THENCE CONTINUING SOUTH 89°26'52" EAST ALONG SAID PARALLEL LINE 143.60 FEET;
THENCE NORTH 00°17'17" EAST, PARALLEL WITH THE WEST LINE OF SAID SUBDIVISION 126.50 FEET TO AN INTERSECTION WITH THE NORTH LINE OF THAT CERTAIN PROPERTY CONVEYED TO GEORGE S. MOORE BY DEED RECORDED UNDER RECORDING NUMBER 8403290766, SAID LINE BEING 178.50 FEET SOUTHERLY, AS MEASURED AT RIGHT ANGLES, FROM THE NORTH LINE OF SAID SUBDIVISION;
THENCE SOUTH 89°26'52" EAST ALONG THE NORTH LINE OF SAID DEED AND PARALLEL WITH THE NORTH LINE OF SAID SUBDIVISION 70.00 FEET TO THE EAST LINE OF THE WEST 263.60 FEET OF SAID SUBDIVISION;
THENCE SOUTH 00°17'17" WEST PARALLEL WITH THE WEST LINE OF SAID SUBDIVISION 0.80 FEET TO AN INTERSECTION WITH THE LINE DESCRIBED IN THAT CERTAIN BOUNDARY AGREEMENT BETWEEN A. W. ROBERTSON, MARGARET IRENE ROBERTSON (HIS WIFE), GEORGE S. MOORE AND RUSSELL H. WHALEY, AS RECORDED UNDER RECORDING NUMBER 8406250475, SAID POINT BEING 179.30 FEET SOUTHERLY, AS MEASURED AT RIGHT ANGLES, FROM THE NORTH LINE OF SAID SUBDIVISION;
THENCE SOUTH 89°43'57" EAST ALONG SAID BOUNDARY LINE 192.4 FEET, MORE OR LESS, TO THE WESTERLY MARGIN OF THE NORTHERN PACIFIC RAILROAD RIGHT OF WAY;
THENCE SOUTHERLY ALONG SAID WESTERLY RIGHT OF WAY MARGIN TO AN INTERSECTION WITH A LINE WHICH BEARS SOUTH 89°26'52" EAST FROM A POINT ON THE EASTERLY RIGHT OF WAY MARGIN OF 116TH AVENUE NORTHEAST WHICH IS 272.00 FEET SOUTHERLY AS MEASURED ALONG SAID RIGHT OF WAY MARGIN FROM THE TRUE POINT OF BEGINNING;
THENCE NORTH 89°26'52" WEST PARALLEL WITH THE NORTH LINE OF SAID SUBDIVISION 401.2 FEET, MORE OR LESS, TO SAID EASTERLY MARGIN OF 116TH AVENUE NORTHEAST;
THENCE NORTH 00°17'17" EAST ALONG SAID MARGIN 272.00 FEET TO THE TRUE POINT OF BEGINNING.

R/W No.	Owner/Contact	Parcel #	Address
EL250	TRF CAPITAL, LLC	3325059209	11XX NE 8TH ST BELLEVUE, WA 98004

THE EASTERLY 30.0 FEET OF THE BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY'S (FORMERLY NORTHERN PACIFIC RAILWAY COMPANY) 100.0 FOOT WIDE SEATTLE BELT LINE BRANCH LINE RIGHT OF WAY, BEING 50.0 FEET WIDE ON EACH SIDE OF SAID RAILWAY COMPANY'S MAIN TRACK CENTERLINE, AS LOCATED AND CONSTRUCTED ON 6-8-01, UPON, OVER AND ACROSS THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 33, TOWNSHIP 25 NORTH, RANGE 5 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, LYING BETWEEN TWO LINES DRAWN CONCENTRIC WITH AND DISTANT, RESPECTIVELY, 20.0 FEET AND 50.0 FEET EASTERLY, AS MEASURED RADIALLY FROM SAID MAIN TRACK CENTERLINE, BOUNDED ON THE NORTH BY

THE SOUTH LINE OF NORTHEAST 8TH STREET IN BELLEVUE, WASHINGTON, AND BOUNDED ON THE SOUTH BY A LINE DRAWN RADIALLY TO SAID MAIN TRACK CENTERLINE, AT A POINT DISTANT 300.00 FEET SOUTHERLY OF THE NORTH LINE OF SAID SECTION 33, AS MEASURED ALONG SAID MAIN TRACK CENTERLINE.

R/W No.	Owner/Contact	Parcel #	Address
EL252	MIDLAKES, LLC	3325059210	11643 NE 8TH ST BELLEVUE, WA 98004

THE WESTERLY 31 FEET OF THE BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY'S 100-FOOT-WIDE SEATTLE BELT LINE BRANCH LINE RIGHT-OF-WAY, BEING 50 FEET WIDE ON EACH SIDE OF SAID RAILWAY COMPANY'S MAIN TRACK CENTERLINE, AS LOCATED FEBRUARY 24, 1998 UPON, OVER AND ACROSS THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 33, TOWNSHIP 25 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON, LYING BETWEEN TWO LINES DRAWN CONCENTRIC WITH AND DISTANT, RESPECTIVELY, 19 AND 50 FEET WESTERLY, AS MEASURED RADIALLY FROM SAID MAIN TRACK CENTERLINE, BOUNDED ON THE NORTH BY THE SOUTH LINE OF NORTHEAST 8TH STREET, IN BELLEVUE, WASHINGTON, AND BOUNDED ON THE SOUTH BY A LINE DRAWN RADIALLY TO SAID MAIN TRACK CENTERLINE, AT A POINT DISTANT 210 FEET SOUTHERLY OF THE NORTH LINE OF SAID SECTION 33, AS MEASURED ALONG SAID MAIN TRACK CENTERLINE.

R/W No.	Owner/Contact	Parcel #	Address
EL253	THOMAS H CODWIN JR ET AL (7 OWNERS TOTAL)	1099100496	11660 NE 8TH ST BELLEVUE, WA 98005

THAT PORTION OF VACATED GRIFFIN AVENUE IN BRIERWOOD PARK, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 17 OF PLATS, PAGE(S) 18, IN KING COUNTY, WASHINGTON, LYING BETWEEN THE WESTERLY PRODUCTION OF THE SOUTH LINE OF TRACT 90 OF SAID PLAT AND A LINE PARALLEL WITH AND 120.00 FEET NORTHERLY OF, MEASURED AT RIGHT ANGLES TO, THE WESTERLY PRODUCTION OF THE SOUTH LINE OF SAID TRACT 90;

EXCEPT THAT PORTION THEREOF CONVEYED TO THE CITY OF BELLEVUE BY STATUTORY WARRANTY DEED RECORDED UNDER RECORDING NUMBER 6556707.

R/W No.	Owner/Contact	Parcel #	Address
EL253.1	ROBERT D GRIFFITH AND DANIELLE GRIFFITH	1099100480	11802 NE 8TH ST BELLEVUE, WA 98005

THAT PORTION OF LOTS 89 AND 90, BRIERWOOD PARK, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 17 OF PLATS, PAGE 18, IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:
BEGINNING AT THE INTERSECTION OF THE SOUTH LINE OF SAID LOT 90 AND EASTERLY LINE OF COUNTY ROAD, AS SAME WAS DEEDED TO KING COUNTY BY DEED RECORDED APRIL 21, 1931 UNDER RECORDING NO. 2667775;
THENCE EAST ALONG THE SOUTH LINE OF SAID LOTS 89 AND 90, 60.86 FEET;
THENCE NORTH PARALLEL WITH THE WEST LINE OF SAID LOT 89, 167.00 FEET;
THENCE WEST PARALLEL WITH THE SOUTH LINE OF SAID LOTS 89 AND 90, 60 FEET, MORE OR LESS, TO THE EASTERLY LINE OF SAID COUNTY ROAD;

THENCE SOUTHERLY ALONG SAID EASTERLY LINE 167 FEET, MORE OR LESS, TO THE POINT OF BEGINNING.
EXCEPT THE SOUTH 10 FEET THEREOF CONVEYED TO THE CITY OF BELLEVUE BY DEED RECORDED JUNE 27, 1969 UNDER RECORDING NO. 6530937, IN KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Address
EL255	RBJK VENTURES, LLC	1099100490	808 118TH AVE NE BELLEVUE, WA 98005

PARCEL A:
THAT PORTION OF VACATED GRIFFIN AVENUE OF BRIERWOOD PARK, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 17 OF PLATS, PAGE 18, IN KING COUNTY, WASHINGTON, IN THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 28, TOWNSHIP 25 NORTH, RANGE 5 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, LYING BETWEEN LINES PARALLEL WITH AND DISTANT RESPECTIVELY 150 FEET AND 350 FEET NORTHERLY (MEASURED AT RIGHT ANGLES) FROM THE SOUTH LINE OF SAID SECTION 28 AND BETWEEN LINES PARALLEL WITH AND DISTANT RESPECTIVELY 50 AND 110 FEET EASTERLY (MEASURED AT RIGHT ANGLES) FROM THE CENTERLINE OF THE NORTHERN PACIFIC RAILWAY COMPANY'S MAIN TRACK FOR ITS LAKE WASHINGTON BELT LINE AS AT PRESENT LOCATED AND CONSTRUCTED.

PARCEL B:
THE EASTERLY 30 FEET OF THE BURLINGTON NORTHERN AND SANTA FE RAILWAY COMPANY'S (FORMERLY NORTHERN PACIFIC RAILWAY COMPANY) 100 FOOT WIDE SEATTLE BELT LINE BRANCH LINE RIGHT OF WAY, BEING 50 FEET WIDE ON EACH SIDE OF SAID RAILWAY COMPANY'S MAIN TRACK CENTERLINE, AS NOW LOCATED AND CONSTRUCTED UPON, OVER AND ACROSS THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 28, TOWNSHIP 25 NORTH, RANGE 5 EAST, WILLAMETTE MERIDIAN, IN KING COUNTY, WASHINGTON, LYING BETWEEN TWO LINES DRAWN CONCENTRIC WITH AND DISTANT, RESPECTIVELY, 20 FEET AND 50 FEET EASTERLY, AS MEASURED RADIALLY FROM SAID MAIN TRACK CENTERLINE, BOUNDED ON THE SOUTH BY THE NORTH LINE OF NORTHEAST 8TH STREET IN BELLEVUE, WASHINGTON, AND BOUNDED ON THE NORTH BY A LINE DRAWN RADIALLY TO SAID MAIN TRACK CENTERLINE AT A POINT DISTANT 350 FEET NORTHERLY OF THE SOUTH LINE OF SAID SECTION 28, AS MEASURED ALONG SAID MAIN TRACK CENTERLINE.

R/W No.	Owner/Contact	Parcel #	Address
EL256	ROSEN BUILDING SUPPLY, LLC	2825059083	888 116th AVE NE BELLEVUE, WA 98004

PARCEL C-1:
THAT PORTION OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 28, TOWNSHIP 25 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:
BEGINNING AT THE INTERSECTION OF THE EASTERLY LINE OF 116TH AVENUE NORTHEAST WITH THE NORTHERLY LINE OF NORTHEAST 8TH STREET, WHICH POINT IS 30.00 FEET NORTH AND NORTH 89°42'00" EAST 30.00 FEET FROM THE SOUTHWEST CORNER OF SAID SUBDIVISION;
THENCE NORTHERLY ALONG SAID EASTERLY LINE OF 116TH AVENUE NORTHEAST 191.90 FEET;
THENCE NORTH 89°42'00" EAST 218.46 FEET TO THE TRUE POINT OF BEGINNING OF THE TRACT HEREIN DESCRIBED;

THENCE CONTINUING NORTH 0°58'30" EAST 246.00 FEET;
THENCE NORTH 89°42'00" EAST 60.26 FEET;
THENCE 0°49'30" EAST 168.80 FEET;
THENCE SOUTH 89°10'30" EAST 112 FEET TO THE WESTERLY LINE OF THE RIGHT OF WAY OF THE NORTHERN PACIFIC RAILWAY;
THENCE SOUTHERLY, ALONG SAID RIGHT OF WAY, 347.00 FEET TO AN ANGLE POINT IN SAID WESTERLY LINE;
THENCE WEST, ALONG THE BOUNDARY OF SAID RIGHT OF WAY, 30.00 FEET TO THE WESTERLY LINE THEREOF;
THENCE SOUTHERLY ALONG THE WESTERLY LINE OF SAID RIGHT OF WAY, TO A POINT FROM WHICH THE TRUE POINT OF BEGINNING BEARS SOUTH 89°42'00" WEST;
THENCE SOUTH 89°42'00" WEST TO THE TRUE POINT OF BEGINNING.

PARCEL C-2:
THAT PORTION OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 28, TOWNSHIP 25 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:
BEGINNING AT THE SOUTHWEST CORNER OF SAID SECTION 26;
THENCE NORTHERLY ALONG THE WESTERLY LINE THEREOF, 221.9 FEET;
THENCE NORTH 89°40'00" EAST, PARALLEL TO THE SOUTHERLY LINE OF SAID SECTION 28, A DISTANCE OF 243.46 FEET;
THENCE NORTH 0°58'30" EAST 246 FEET;
THENCE NORTH 89°42'00" EAST 60.26 FEET;
THENCE NORTH 0°49'30" EAST 158.8 FEET TO THE TRUE POINT OF BEGINNING OF THE TRACT HEREIN DESCRIBED;
THENCE NORTH 0°49'30" EAST 25 FEET;
THENCE SOUTH 89°10'30" EAST TO THE WESTERLY LINE OF THE NORTHERN PACIFIC RAILWAY COMPANY PRESENT RIGHT OF WAY;
THENCE SOUTHERLY ALONG THE WESTERN MARGIN OF THE EAST FROM THE NORTHERN PACIFIC RAILWAY COMPANY RIGHT OF WAY TO A POINT WHICH BEARS SOUTH 88°10'30" EAST FROM THE TRUE POINT OF BEGINNING;
THENCE NORTH 89°10'30" WEST 112 FEET, MORE OR LESS, TO THE TRUE POINT OF BEGINNING.

R/W No.	Owner/Contact	Parcel #	Address
EL258	NINE LAKE BELLEVUE CONDOMINIUM OWNERS OF RECORD	6093500000	9 LAKE BELLEVUE DRIVE BELLEVUE, WA 98005

COMMON AREAS OF NINE LAKE BELLEVUE, A CONDOMINIUM, ACCORDING TO THE DECLARATION THEREOF RECORDED UNDER RECORDING NO. 8202170563, AND ANY AMENDMENTS THERETO, AND SURVEY MAP AND PLANS RECORDED IN VOLUME 58 OF CONDOMINIUMS, PAGE(S) 82 THROUGH 86, RECORDS OF KING COUNTY, WASHINGTON.

R/W No.	Owner/Contact	Parcel #	Address
EL256.2	RCJ PROPERTIES II, LLC	2825059080	888 116th AVE NE BELLEVUE, WA 98004

PARCEL B:
THAT PORTION OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 28, TOWNSHIP 25 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:
BEGINNING AT THE SOUTHWEST CORNER OF SAID SUBDIVISION;
THENCE NORTH ALONG THE WEST LINE THEREOF 221.9 FEET;
THENCE NORTH 89°42'00" EAST 30 FEET TO A POINT ON THE EAST LINE OF 116TH AVENUE NORTHEAST AND THE TRUE POINT OF BEGINNING;
THENCE CONTINUING NORTH 89°42'00" EAST 213.46 FEET;
THENCE NORTH 0°58'30" EAST 246 FEET;
THENCE NORTH 89°42'00" EAST 60.26 FEET;
THENCE NORTHERLY PARALLEL WITH THE WEST LINE OF SAID SOUTHWEST QUARTER 100 FEET;
THENCE WESTERLY PARALLEL WITH THE SOUTH LINE OF SAID SOUTHWEST QUARTER TO THE EAST LINE OF SAID 116TH AVENUE NORTHEAST;
THENCE DUE SOUTH ALONG SAID AVENUE LINE 345.95 FEET TO THE POINT OF BEGINNING.

R/W No.	Owner/Contact	Parcel #	Address
EL257	DESIGN MARKET PROPERTIES, LLC	2825059019	1014 116th AVE NE BELLEVUE, WA 98004

THAT PORTION OF THE SOUTHWEST QUARTER OF SECTION 28, TOWNSHIP 25 NORTH, RANGE 5 EAST, W.M., IN KING COUNTY, WASHINGTON, DESCRIBED AS FOLLOWS:
COMMENCING AT THE SOUTHWEST CORNER OF SAID SUBDIVISION;
THENCE NORTH 0°57'40" WEST ALONG THE WEST LINE THEREOF, 759.25 FEET;
THENCE NORTH 88°38'49" EAST PARALLEL WITH THE SOUTH LINE OF SAID SUBDIVISION, 30.00 FEET TO A POINT BEING ON A CURVE 40 FEET SOUTHEASTERLY OF AND CONCENTRIC WITH THE NORTHWESTERLY MARGIN OF THE RIGHT-OF-WAY DEEDED TO NORTHERN PACIFIC AND PUGET SOUND SHORE RAILROAD COMPANY, BY DEED RECORDED UNDER RECORDING NUMBER 68622, THE CENTER OF WHICH CURVE LIES NORTH 31°7'25" WEST 1,422.69 FEET;
THENCE NORTHEASTERLY ALONG SAID CURVE TO THE LEFT THROUGH A CENTRAL ANGLE OF 31°4'20" AN ARC DISTANCE OF 771.54 FEET TO THE TRUE POINT OF BEGINNING;
THENCE NORTH 88°38'49" EAST 23.67 FEET TO THE WESTERLY MARGIN OF THE BURLINGTON NORTHERN RAILROAD COMPANY'S RIGHT-OF-WAY (NORTHERN PACIFIC RAILROAD COMPANY'S BELT LINE RIGHT-OF-WAY) AS NOW CONSTRUCTED AND MAINTAINED, 100 FEET IN WIDTH, AS CONVEYED BY DEED RECORDED UNDER RECORDING NUMBER 267077;
THENCE SOUTH 13°26'19" WEST ALONG SAID RIGHT-OF-WAY MARGIN 661.07 FEET TO THE SOUTHEAST CORNER OF A TRACT OF LAND CONVEYED TO ELMO M. CHASE AND JOHN H. CONNER BY DEED RECORDED UNDER RECORDING NUMBER 5721732;
THENCE SOUTH 88°38'49" WEST 117.85 FEET;
THENCE SOUTH 0°57'40" EAST 93.80 FEET;
THENCE SOUTH 88°38'49" WEST 273.72 FEET TO THE EAST MARGIN OF 116TH AVENUE NORTHEAST;
THENCE NORTH 0°57'40" WEST ALONG SAID EAST MARGIN 595.08 FEET;

THENCE NORTH 88°38’49" EAST 445.57 FEET TO A POINT ON SAID CONCENTRIC LINE 40 FEET SOUTHEASTERLY OF THE NORTHWESTERLY MARGIN OF SAID NORTHERN PACIFIC AND PUGET SOUND SHORE RAILROAD;
THENCE NORTHEASTERLY ALONG SAID CURVE TO THE TRUE POINT OF BEGINNING;

EXCEPT THAT PORTION CONVEYED TO THE CITY OF BELLEVUE BY DEED RECORDED UNDER RECORDING NUMBER 8607151344.

ATTACHMENT L

COMPREHENSIVE PLAN AND LIGHT RAIL BEST PRACTICES ANALYSIS

Attachment L

Design & Mitigation Permit Application for East Link Light Rail Project
120th Station and Spring District
Comprehensive Plan and Light Rail Best Practices Analysis

As discussed in Section 2 of this Design and Mitigation Permit (DMP) Application, the review criterion applicable to RLRT Facilities requires consistency with Bellevue's Comprehensive Plan as well as the Light Rail Best Practices adopted by the City in June of 2008. See LUC 20.25M.030.C.3.b and LUC 20.25M.010.B.7. This attachment discusses the Project's consistency with these documents. The relevant provisions of each document are shown in **bold text** in the following sections, followed by a discussion of each item.

A. BELLEVUE COMPREHENSIVE PLAN

LU-9 - Maintain compatible use and design with the surrounding built environment when considering new development or redevelopment within an already developed area.

Sound Transit Discussion: The Project will be located near 112th Avenue NE, which is a major transportation corridor within the City. The 120th Station has been carefully designed to ensure compatibility with the surrounding areas. See*, e.g.,* **Attachment N**. The Facilities proposed in this DMP Application are within a BR-OR-1 zoning designation, which is defined as Office Residential (see **Figure 1).** The guideway is designed to be compatible with the surrounding built environment as the original natural environment no longer exists within this section of the guideway alignment. The natural environment in this area has been replaced with urban elements, including commercial and industrial buildings with associated ornamental landscaping. Future potential uses include a mix of office, housing, and retail, with office as the predominant use. These elements combine to create a heavily urbanized setting. The concrete guideway, the concrete, steel, and glass within the station, and the public transport infrastructure complement this heavily urbanized portion of the East Link light rail line. The Facilities have been designed for compatibility with existing development in the Spring District, and developed private properties in the area through the use of setbacks between the Facilities and these properties, construction of associated walls/structures, and ornamental vegetative buffering. The proposed alignment itself, along with these design features, make the facilities compatible with the existing uses and built environment of the area.

The Light Rail Overlay District Ordinance (Overlay) incorporated specific development standards to ensure the Facilities' consistency with this existing development. As discussed in Section 4.0 of the DMP Application, these specific requirements have been satisfied. In addition, the iterative process described in the Collaborative Design Process (CDP) Management Plan (**Attachment C**), ensures that the use and design reflected in this Application are compatible with the surrounding built environment.

Sound Transit developed the design of the 120th Station in close coordination with the City and the public through multiple public outreach efforts. The design elements of the proposed Stations, which are shown in the renderings in **Attachment N**, contain design features that are compatible with the surrounding built environment.

120th Station Context and Landscaping

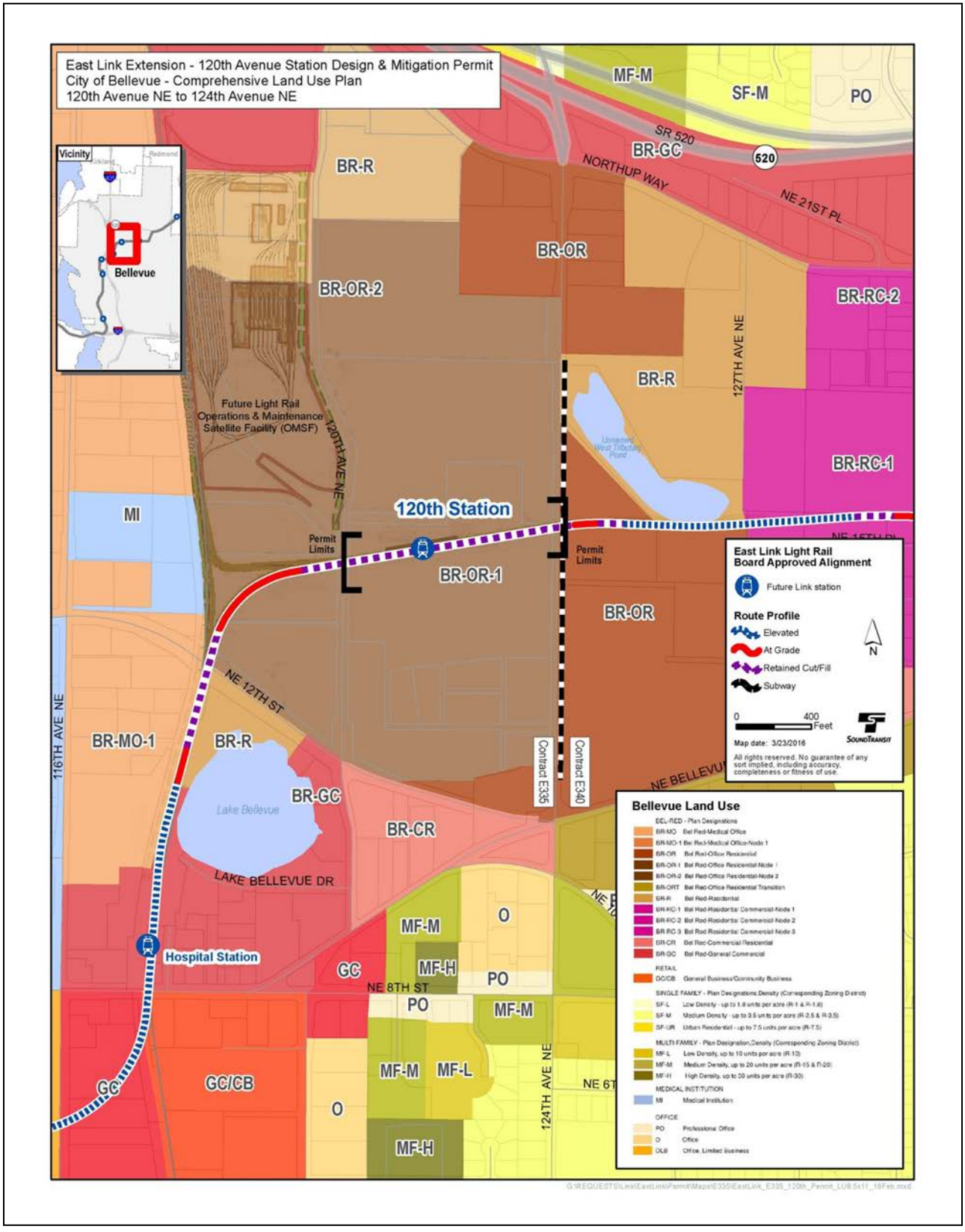
As mentioned previously, this DMP application contains the 120th Station, which has been designed to fit within the context, use, built environment, neighborhood character, or expected future context. The architectural design of this station features an inverted-hip roof above the entries that provides weather protection while presenting a highly visible element to identify the station in its future urban context. The elevator structures are clad in glazed concrete masonry units of a variegated green color. The bicycle cage and miscellaneous station screens and guardrails are made of stainless-steel woven wire mesh. The station has been designed to fit into and complement the anticipated Spring District development, and to create an iconic piece of civic architecture as part of the East Link segment. The station is located in the northeast quadrant of the intersection of 120th Avenue NE and the future extension of NE 15th Street in the Bel-Red district of Bellevue. The plaza is designed in a simple pattern to limit any potential conflicts with circulation and intuitive way-finding from 120th Avenue into the station area. A minimum 10' wide walkway is provided per discussions with ST along the length of the station area to allow emergency egress from the stairs located at each end of the station. A ramp entrance off of 120th Avenue is proposed at a 4% grade, with no provision for stairs in order to maximize the width of the pedestrian zone at the entrance to the station.

The urban design of the 120th Avenue NE Station is being developed to allow the greatest level of flexibility for future redevelopment of the adjacent properties as possible while still providing a clear and safe entrance into the station area. The location of the bike cage, lockers and other pedestrian amenities has also been adjusted to accommodate a change in the proposed trail system adjacent to the site.

These specific context-appropriate elements at the 120th station are complemented by the following elements listed below. This commonality provides riders with a sense of satisfaction knowing they have found a Link Light Rail Station which will deliver them to their destination in a safe, secure, and timely fashion.

a) Internal walkways with convenient connections to public sidewalks.
b) Sound Transit's art program*, STart,* will be implemented to enhance the aesthetics of the Station when viewed from within the Station site or from the surrounding properties. Information on the STart program is available at http://www.soundtransit.org/Rider-Community/Public-art.
c) Urban design features, including pathways, open spaces, buffers, screens, and hardscape elements will be provided in and around the Station to ensure their compatibility with their surroundings. The landscaping design for the Station portion of the Project will be completed by adjacent development efforts. Sound Transit has maximized the pedestrian plaza areas, bike accommodations, vehicle access for drop-off at this Station due to an anticipated high public use.

Figure 1. City of Bellevue Comprehensive Plan Map –120th Ave NE to 124th Ave NE



d) The visual appearance of each Station was designed incorporating architectural treatments to fit the context of each area.
e) The Stations are designed to maximize convenience and use and minimize the environmental impacts.

Guideway

The alignment shown in this DMP Application includes sections that are proposed to be constructed in retained cut and fill. As noted above, the criteria used for selecting the alignment type included compatibility with surrounding areas.

The area covered by this DMP Application is from 120th Avenue NE to 124th Avenue NE. This alignment is shown in **Figure 1**. The E335 Package is to the west of this segment and the E340 Package is to the east of this segment.

The following design features were included in the guideway design to ensure its compatibility with the surrounding built environment:

a) Integration is provided by having the guideway below grade near the 120th Avenue NE Station and by use of decorative fencing and architectural design features to decrease the size and scale of the stations and other portions of the guideway.
b) The guideway has been integrated into the overall architectural design of the 120th Station to provide a context sensitive identity.
c) The design of the guideway uses durable materials selected to fit within the context of the neighborhoods where the 120th Station is located while having fewer maintenance needs, based on past successful use on other Sound Transit stations. The materials are listed in the E335/E330 Contract Specifications and their use is specifically noted on the architectural plan sheets. Renderings and examples of these materials are shown in **Attachment N**.
d) Typical cross section showing retained/trenched sections of the track guideway are provided in **Attachment M.**

As further described in Sections 4 and 6 of this DMP Application, one of the primary goals in the design of the Project was compatibility with its surroundings, and numerous design features were included to advance this goal. These measures and the quality design that resulted from their incorporation into the Project result in the Facilities' consistency with Comprehensive Plan Policy LU-9, which generally encourages a project's use and design to be compatible with the surrounding built environment.

LU-22 - Protect residential areas from the impacts of non-residential uses of a scale not appropriate to the neighborhood.

Sound Transit Discussion: Sound Transit has designed the RLRT Facilities to be consistent with the context sensitive design considerations and Subarea Plan guidelines provided in LUC 20.25M.050 and the Comprehensive Plan; as well as the applicable provisions of the underlying zones (except where these provisions are modified administratively or by the light rail overlay regulations), including LUC 20.10.180, LUC 20.10.200, LUC 20.10.220, and LUC 20.10.260, all of which directly or indirectly limit the

scale of a proposal. The DAVE meetings, as well as workshops and public meetings regarding the Project, have provided a format for addressing the scale as well as the design of the Project. Design features that limit the actual and apparent scale of the Project include limitations on the height of the facilities, undergrounding the facilities, and providing for partially below-grade facilities. To the extent feasible, buffering occurs through the layout surrounding the facilities, colors that fit the context of the neighborhood, and creative use of open space. Each of these design measures has resulted in a Project scale that is appropriate for the neighborhoods in which the Facilities are located, and mitigation of potential impacts related to the Project.

LU-24 - Encourage adequate pedestrian connections with nearby neighborhood and transit facilities in all residential site development.

Sound Transit Discussion: While this policy directive does not directly apply to this proposal, which does not propose a residential site development, all of the Facilities proposed in this DMP Application are designed to ensure convenience of pedestrian access from public sidewalks. A typical sidewalk configuration is shown in **Attachment N**. All the Station sites accommodate bicycle parking and pedestrian walkways for safe non-motorized access to the Stations. See, *e.g.,* the Project renderings in **Attachment N**. A Site Access Study for each Station is shown in the Station renderings in **Attachment N.**

UT-39 - Require the undergrounding of all new electrical distribution and communication lines except that interim installation of new aerial facilities may be allowed if accompanied by a program to underground through coordination with the City and other Utilities.

***Sound Transit Discussion*:** All new electrical and communication lines will be placed underground consistent with this policy. The utility work proposed in connection with this DMP Application is consistent with the directive of Policy UT-39 because no new aerial facilities are proposed.

TR-75.1 - Develop a light rail system in collaboration with the regional transit provider that advocates the City's long-term transportation and land use objectives, minimizes environmental and neighborhood impacts, and balances regional system performance.

Sound Transit Discussion: The creation of the CDP under the MOU provides a mechanism for the City and Sound Transit to jointly satisfy this policy. The work of the CDP and the City Council's approval of the alignment, profile, and station locations ensure that the Project design is consistent with the City's long-term transportation and land use objectives, minimizes impacts, and achieves an appropriate balance between those impacts and the performance of the light rail system. The Project will support the City's land use goals for the Central Bellevue and Bel-Red areas where the project is proposed by providing increased ridership and ease of transportation to the area. The City's close involvement in the CDP carried out for the Project ensures regional system performance and appropriate mitigation of environmental impacts—including multiple measures to avoid or minimize potential impacts of the Project. For example, a park including trails, boardwalks, recreational features, and environmental mitigation elements is being proposed near the 120th Station just west of the intersection of the guideway and 124th Ave NE. These areas will provide a respite from the hustle and bustle of the

downtown area where they are located. Renderings can be seen in **Attachment N** and mitigation measures relating to the ROD commitments can be seen in **Attachment F.**

TR-75.2 - Use the Light Rail Best Practices Report, including City expectations of Sound Transit, to guide City actions and advocacy in pursuit of the best community outcomes for developing and operating light rail transit in Bellevue.

Sound Transit Discussion: The applicable provisions of the Best Practices Report, including the specific expectations identified for Sound Transit, are discussed in detail in Section B, Light Rail Best Practices. The CDP and the Project's consistency with the best practices have resulted in a superior community outcome for the development and operation of the Project.

TR-75.5 - Work with the Regional Transit provider to provide reliable, high-performance, attractive alternatives to single-occupant vehicle travel by providing service to the City's major employment centers and residential areas. A light rail system should add new travel capacity within its own right-of-way, rather than replace existing travel lane capacity, in order to maximize speed and reliability for light rail while minimizing impacts to other modes.

Sound Transit Discussion: The City has worked with Sound Transit to select an alignment that will provide attractive alternatives to single-occupant vehicle travel and provide service to the City's major employment centers as well as residential areas. See the 2006 East Link FEIS where the impacts and benefits of alternatives are discussed, and see the ROD where the preferred alignment was selected based on several factors including maximum access (http://www.soundtransit.org/Projects-and-Plans/East-Link-Extension/East-Link-Extension-document-archive/East-Link-Final-EIS-document-collection). The Project's operations in Bellevue will be similar to Link Light Rail operational successes in other locations, where there is a track record of high performance and reliability, and where the system attracts riders who are accustomed to other means of transport. Ridership projections are expected to meet Sound Transit's 2020 goals. The Project will operate within its own right-of-way consistent with this policy.

TR-75.7 - Advocate for light rail service that is consistent with local land use and transportation plans. Light rail planning should further the achievement of the City's land use and transportation vision.

Sound Transit Discussion: As discussed above, the City has taken a number of steps, including an alignment decision and enacting the Light Rail Overlay Ordinance, to ensure the Project's consistency with the City's land use and transportation plans. In addition to requiring the Project to be consistent with the specific land use and transportation policies discussed in this attachment, the City developed a light rail-specific document -- the Light Rail Best Practices Report -- to set expectations for the development of Sound Transit's Facilities in the City.

In addition, the CDP was created to ensure that the Project will continue to satisfy local area goals and achieve the City's vision. The City and Sound Transit meet regularly in the DAVE group in support of this process, and there will be continued coordination between the two agencies, as well as opportunities for public participation and input on the final design of the Facilities. These efforts satisfy this policy goal of City advocacy for light rail service that is consistent with the City's land use and transportation policies.

TR-75.8 - Advocate for an alignment for downtown Bellevue that advances the adopted land use vision for an urban downtown by:

1. Optimizing ridership, system performance, and user convenience;

Sound Transit Discussion: As noted previously, the Bellevue City Council approved the Project alignment in Resolution 8576. This action along with other design measures ensured consistency of the Facilities with the City's land use vision for these areas. The alignment approved by the City Council was selected to maximize ridership as well as public access to the Stations consistent with this Policy. The 120th Station will provide an opportunity for the public to access local and regional elements, such as the Microsoft campus, downtown Bellevue, downtown Seattle, and SeaTac airport.

2. Locating stations in proximity (within a 10 minute walk) to existing and planned employment and residential concentrations in the downtown subarea;

Sound Transit Discussion: The 120th Station is near the newly planned Spring District Development, which is anticipated to have several mixed use businesses and residential developments.

3. Addressing aesthetic concerns and promoting superior urban design integration, within the established urban context;

Sound Transit Discussion: The 120th Station is designed to fit within the highly urbanized context of the future Spring District Transit Oriented Development.

4. Minimizing impacts on businesses and residents during construction; and

Sound Transit Discussion: In addition to the extensive mitigation provided in connection with the Project, potential impacts to businesses and residents during construction have and will continue to be minimized by implementation of ST's project management plan and construction outreach plans, both of which are described in greater detail below.

5. Minimizing overall impacts of a light rail system on the operation of the downtown street network.

Sound Transit Discussion: As discussed above, and in Sections 4 and 6 of this DMP Application, the design and layout of the Project were developed with compatibility and mitigation of impacts on surrounding neighborhoods as a primary goal. The alignment as well as the layout of the Facilities was selected to minimize the overall impacts of the RLRT Facilities. For example, the portions of the Project that will be constructed in an elevated configuration, at-grade, in retained cut or fill, or in the tunnel were selected specifically to reduce or eliminate impacts to traffic and pedestrian movement on major arterials. Further, each station is either located within a block, is elevated, or is below or depressed below grade so as to not interrupt the significant single occupant vehicle traffic within the city. The above measures, as further describe in this Application and shown in various plan sheets in **Attachment M**, have satisfied this Comprehensive Plan policy**.**

TR-75.9 - Advocate for an alignment south of downtown Bellevue that advances the adopted land use vision by: 1. Protecting the character and livability of existing neighborhoods, including adequate ingress and egress to the neighborhood; 2. Minimizing impacts to wetland and other natural

resources; 3. Providing local access to the system for Bellevue neighborhoods; and 4. Optimizing ridership and user convenience.

Sound Transit Discussion: This Comprehensive Plan policy does not apply to this DMP Application, as the Facilities proposed here are not south of downtown Bellevue.

TR-75.12 - Partner with the regional transit provider to design transit stations and facilities incorporating neighborhood objectives and context sensitive design to better integrate facilities into the community. This includes but is not limited to the following: 1. Incorporating superior urban design, contemporary building materials, and public art; and 2. Providing substantial landscaping at stations and along the alignment, including retained significant trees and transplanted trees that are at a minimum saplings.

Sound Transit Discussion: Sound Transit's design of this portion of the East Link Project was developed in close coordination with the City and the public through several open houses and public comment opportunities (**Attachment D**). Sound Transit's collaborative efforts have resulted in context-sensitive designs that integrate the Central Bellevue stations and the guideway into the surrounding areas and the community. In addition to the context-sensitive design features described in this attachment, the 120th station will be included in Sound Transit's STart art program, which will ensure the presence of public art. The final design of the station is thus consistent with Subpart 1 of this policy by providing superior urban design, contemporary building materials, and public art. The Station renderings showing these design treatments are attached to this DMP Application as **Attachment N**.

As set forth in the DMP Application, landscaping will be provided for the Facilities consistent with the requirements of Chapter 20.25M LUC. Extensive tree planting is planned for other portions of the Project within mitigation sites in the Mercer Slough complex (Sweyolocken Mitigation site), along Bellevue Way SE and 112th Avenue SE (Mercer Slough Buffer Creation and Enhancement), within the northern section of the West Tributary to Kelsey Creek, and at the lower reaches of Coal Creek. Restoration areas within wetlands, streams, and buffers that are adjacent to the guideway will also have some trees planted. In addition to the tree retention and restoration described above, the landscaping that is planned adjacent to the Stations and the retained trees near 124th Avenue NE comply with Subpart 2 of this policy. However, the landscape development for the Facilities proposed in this DMP Application will be completed in conjunction with adjacent development efforts and not included within the design of this segment.

All of the above efforts and design refinements are consistent with this policy goal of the City to partner with Sound Transit to design transit Facilities that are sensitive to their surroundings, City neighborhood objectives, and the community.

Additional Tree-Related Policies: The following Comprehensive Plan policies, which also relate to urban design, trees, and vegetation, are discussed here for reference:

POLICY EN-67. Preserve a proportion of the significant trees throughout the city in order to sustain fish and wildlife habitat.

Sound Transit Discussion: Careful consideration and avoidance/minimization efforts for preserving trees were implemented throughout the project, including the area within this DMP. Preserving native vegetation, especially significant trees, was an integral part of the design process. Preservation of native vegetation sustains habitat for fish and other wildlife and in some cases, exiting native vegetation was supplemented with additional native species to provide an ecological boost. Removing noxious weeds and replacing them with native species was also involved in the ecosystem restoration design process. ST has made every effort to minimize tree impacts. The current design included as part of this DMP preserves more than half of the total trees surveyed within the Project limits. There are a total of eleven trees within the Project limits, with a majority of them located near 124th Avenue NE. More than likely, four of the trees will be impacted by construction activities.

POLICY LU-15. Encourage dedication of open space and preservation and restoration of trees and vegetation to perpetuate Bellevue's park-like setting and enhance the city's natural environment.

Sound Transit Discussion: Trees and vegetation will be preserved, and/or planted in the Project vicinity consistent with this policy. Park areas adjacent to the East Link Project which have been identified by the City of Bellevue for open space preservation and restoration include the Mercer Slough Nature Park, Surrey Downs Park, the Winters House, and the South Portal Lid Park above the south tunnel portal, beginning at SE 1st Place. Site design includes dense tree and shrub plantings to provide screening between the RLRT Facilities and the adjacent residential land uses. The NE 2nd Street Pocket Parks and the Mid-Tunnel Access Shaft facility will provide additional open spaces in the Downtown Bellevue area. The closest open space park area that includes preservation and restoration of trees and vegetation near this DMP section is just east of the intersection of 124th Ave NE and the proposed alignment.

POLICY UD-18. Preserve significant trees and mature vegetation, with special consideration given to the protection of groups of trees and associated undergrowth, specimen trees, and evergreen trees.

Trees will be preserved by following applicable City Codes and the City's Clear and Grade Best Management Practices. The area within this DMP has eleven surveyed trees and seven of them are currently shown as being preserved. The northwest corner of the 124th Avenue NE intersection has a grouping of seven trees and all of them will be preserved.

POLICY UD-19. Preserve trees as a component of the skyline to retain the image of a "City in a Park."

Sound Transit Discussion: As noted above, trees have been a major design consideration of the Facilities covered by this DMP Application, as many areas have been identified for retention. The surveyed trees in this DMP area range from a 3" to a 7" caliper trunk. None of them are currently significant, but the preserved trees could eventually impact the skyline and/or enhance the "City in a Park" theme.

POLICY UD-51. Encourage dense plantings, hedges, or large, fast-growing trees to act as visual screens at locations where existing views of or from freeways are unappealing.

Sound Transit Discussion: The landscaping plans associated with the proposed Facilities will provide visual screens in several locations in the Project vicinity. Urban design drawings are still being developed and will be submitted within **Attachment M** at the final design stage. The planting design will be located outside of the Project limits and completed by adjacent developers separate from this Project.

POLICY UD-75. Use urban design features to soften the public right-of-way and sidewalk environment as appropriate. These features include, but are not limited to, street trees, landscaping, water features, raised planter boxes, potted plantings, pedestrian-scaled lighting, street furniture, paving treatments, medians, and the separation of pedestrians from traffic.

Sound Transit Discussion: As shown in the drawings attached to this DMP Application, urban design features, including lighting for pedestrians, hardscape/paving treatments, decorative walls/fences, and traffic/pedestrian separation were all incorporated into the Design of the Facilities proposed in this DMP Application consistent with this policy.

POLICY UD-79. Identify vista points and landmarks such as major trees, buildings and landforms to preserve as Bellevue develops.

Sound Transit Discussion: In connection with the overall East Link Project, vista points will be provided at strategic locations along the project corridor. Located just west of the intersection of the 124th Avenue NE and the guideway, the design within the West Tributary Mitigation Site will allow for a public overlook areas from the future park area west of the mitigation site.

TR-75.15 - Formulate standards and guidelines that can be applied by the regional transit provider to create stations that are a valued place in the community by providing the following: 1. Access the linkages to the surrounding community; 2. A comfortable place to be not just pass through; 3. A place that works for both large and small numbers of people; and 4. Design that encourages social interaction among people.

Sound Transit Discussion: The City has satisfied this Comprehensive Plan policy through a number of actions, including (1) approval of the alignment for the overall Project in the City, (2) adoption of the Light Rail Overlay, setting specific requirements for the design and construction of the RLRT Facilities in the City, and (3) adoption and incorporation of the Light Rail Best Practices Report into the City's requirements for the Project, including specific "Expectations of Sound Transit" to be used in evaluating the Facilities' compliance with these specific City requirements.

Each of the four Subparts of this policy is addressed in the discussion below, and by Sound Transit's Design Criteria Manual. The station proposed in this DMP application has context-specific entrances and exits. They will serve as orientation points for transit system passengers and as an orientation point specific to the neighborhood, including maps to significant destinations. Connections to pedestrian pathways, bikeways, and other transit connections will be provided at the Station. Subpart 1 of this policy has been further satisfied by the various sidewalk configurations and pedestrian links discussed above in reference to LU-24, and the design of the access ways to the Station, as further discussed in reference to the "Connecting People to Light Rail" topic of the Light Rail Best Practices. See drawings in **Attachment N** for circulation patterns.

Subparts 2 and 4 are addressed in the Land Use topic of the Light Rail Best Practices regarding the directive to design stations to be "a place, not a project."

Regarding Subparts 3 and 4, while each Station was designed to have ample capacity for projected ridership, the spaces were designed with a human scale so that they are comfortable for riders and other visitors at non-peak times as well. Informal gathering places at station benches and wind breaks provide opportunities for interaction among passengers.

Each of these measures, in addition to the other design elements shown in the renderings attached as **Attachment N**, has ensured the Project's consistency with this policy.

TR-75.17 - Protect Bellevue's residential and commercial areas from the negative effects of light rail by promoting actions of the regional transit provider that minimize environmental, traffic, and noise impacts.

Sound Transit Discussion: Mitigation measures have been incorporated into the Project based on the environmental review under SEPA and NEPA, the ongoing CDP review process and compliance with Chapter 20.25M LUC. A discussion of noise impacts within the Central Bellevue area is provided in the DMP Application Section 5.

The alignment passes through residential, commercial, and office zones. Potential negative impacts to these areas have been minimized. In addition, the City has recognized the significant benefits to light rail as exemplified by the Transit Oriented Development (TOD) being planned for in the new Spring District. As part of Sound Transit's construction outreach plan, a residential and business mitigation program will be implemented during construction. To minimize impacts on businesses during construction, Sound Transit will dedicate staff to work specifically with affected businesses to develop construction outreach plans that address the needs of businesses during construction. A full summary of the mitigation measures for the facilities included in this DMP Application is provided in **Attachment F**.

In addition to the extensive measures carried out to minimize construction and traffic impacts of the Project, noise mitigation is provided. Section 5 of this DMP Application discusses noise studies and mitigation measures to minimize noise impacts from ongoing light rail operations.

The City and Sound Transit together are acting consistently with this policy to minimize potential adverse environmental impacts.

TR-75.18 - Protect residential neighborhoods adjacent to light rail facilities from spillover impacts, including parking and cut through traffic resulting from system construction and/or operation with techniques such as residential parking zone programs, parking patrols, and traffic calming measures. Monitor the outcomes of these efforts and make adjustments as needed to ensure continued effectiveness.

Sound Transit Discussion: The 120th Station is not directly adjacent to a residential land use. It was, however, designed to accommodate and support the existing and future land uses in the area.

Sound Transit has developed proposed haul route plans for City approval to route traffic throughout the construction areas without significantly impacting the traffic flow within any of the adjacent neighborhoods, residential or otherwise, and the approved haul route plans are included in the Contract Documents. Haul routes will be restricted to designated Truck Routes as determined by the City. City Right-of-Way Use Permits will include conditions and requirements for the Contractor regarding haul routes, hours, street sweeping, etc. For street closures, for the work sites within the Project area, See construction staging plans and street closure plans in **Attachment M**; and Specification Sections 01 55 00 (Staging, Vehicular Access, and Parking) and 01 55 26 (Traffic Control). ST will diligently monitor for spillover effects and make running changes during construction as needed to minimize spillover effects.

Once the Facilities are operational, a number of measures will help protect nearby neighborhoods from "spillover impacts" related to the Facilities. See East Corridor Best Practices Research and Assessment of Station Areas (PSRC, February 2013). Through the measures detailed in this Best Practices Assessment, and the measures described above, the City and Sound Transit are acting consistently with this policy to protect adjacent residential neighborhoods from spillover impacts.

TR-75.20-Maintain and enhance the safety of Bellevue's streets when incorporating light rail through the use of street design features, materials, street signage and lane markings that provide clear, unambiguous direction to drivers, pedestrians, and bicyclists.

Sound Transit Discussion: The City and Sound Transit are acting consistently with this policy to maintain and enhance traffic safety through the use of numerous design features, including many of those specifically referenced in this policy. See **Attachment M** for related design drawings. The right-of-way and intersection design features proposed in this DMP Application include, for example:

a) Design features that include pavement markings and City of Bellevue traffic signage during construction and operations to provide clear, unambiguous direction to all users of the rights-of-way. A traffic phasing plan will be implemented prior to construction to maintain traffic and local access. In addition, the contractor will prepare detailed construction sequencing and traffic control plans.
b) Traffic signalization to direct motorist, cyclist and pedestrians will be installed to maintain transportation flow. Use of varying materials as well as lane marking to distinguish travel lanes, "safe zones," and other clear direction to users, including Pedestrian Signal Heads, Vehicle Signal Heads, and LRT Traffic Operational Signage. .
c) Street signage is shown at affected intersections. See **Attachment M** for specifics on how the City's crosswalk standards are used.
d) In addition to the above design treatments, all City streets will be designed consistent with applicable City codes in order to safely incorporate the RLRT Facilities into the City street layout.

TR-75.22-Encourage quality design and construction in the light rail system by 1) Including durable materials in design and construction to ensure facilities retain appearance, functionality, and community value, and 2) Incorporating art, public spaces, and other features as community assets.

Sound Transit Discussion: Sound Transit will use quality materials throughout the Project which will be incorporated consistently with Subpart 1 of this Comprehensive Plan policy. The materials selected for

the Project were specifically chosen for their aesthetic appeal as well as their durability, and their consistency with Sound Transit's Design Criteria Manual. Sound Transit has reviewed the selection and use of materials and refined its choices through the CAC review of the Project design, as well as the iterative, collaborative design process for the Facilities. The quality and durability of the materials selected will ensure the Facilities' retention of their appearance, functionality, and community value in years to come. Sound Transit has employed a select palette of flooring, canopy, and coating materials throughout the Link System intended to provide durable, long lasting, and vandal resistant surfaces at stations. Many of these materials can be seen throughout the existing Central Link light rail stations.

As discussed above, Sound Transit's STart art program will be implemented in the stations. Sound Transit will incorporate the strategic involvement of community to enhance the aesthetics of the RLRT Facilities when viewed from within the station site or from the surrounding properties. STart enhances transit connections by helping create a sense of place in the communities where it builds and operates.

As it has done for its other facilities, Sound Transit will set aside a portion of construction dollars for art in order to keep temporary construction sites attractive and make the Stations feel inviting, safe and memorable. See, e.g., Specification Section 12 10 00 (Art Coordination and Installation). This, in addition to the unique and tasteful public spaces and features within the Facilities, addresses Subpart 2 of this policy.

TR-75.23-Coordinate with the regional transit provider to employ crime prevention principles in the design of light rail stations and use available technologies to deter crime, examples include the following: 1. Visibility of station platform from adjacent streets and parking; 2. Video surveillance on station platforms and trains; and 3. Establishing and enforcing a fare paid zone for station platforms.

Sound Transit Discussion: Sound Transit has developed a crime prevention program based on its many years of experience as a transit provider and will execute this program through various measures including the following:

The design of the 120th Station incorporates Crime Prevention through Environmental Design (CPTED) design principles. These design guidelines call for open, spacious, and well-lit rail stations that promote safety for all users. Attention is given to clear sight lines and visibility along with eliminating or minimizing dark or hidden areas and station structures that block visibility. Public waiting areas, including station platforms, will be easily visible to other patrons and to police and Sound Transit security personnel. CPTED design measures minimize impacts by directing passenger movements with specified traffic flow patterns; creating areas that can be easily viewed by closed-circuit television (CCTV) cameras or persons, including transparent exterior walls and good lighting; using vandal proof surfaces and lighting; and using easily maintained materials. Other measures to minimize crime include equipment (e.g., CCTV, sealed fare boxes on ticket vending machines, and automatically sealed exits), anticrime programs (such as anti-graffiti programs), and Sound Transit police, City police, and Sound Transit security personnel patrolling the stations and the trains.

The 120th Station will include ample lighting to deter crime. It will also be visible from surrounding areas, including adjacent streets and parking lots, as shown in the Project renderings in **Attachment N**

where Station platforms, entrances, plaza areas, and landscaping have been designed to minimize opportunities for anyone to be hidden from view.

The design of each Station includes graffiti-resistant materials, and Sound Transit's maintenance programs ensure prompt removal of any graffiti. The use of available technologies to deter crime includes 24 hour video surveillance on station platforms and trains. Cameras are located for full view of station platforms, ticket vending machines, elevators and bike parking areas. Cameras are shown as CCTV on the architectural plan sheets. The Stations will utilize CCTV cameras and security guards instead of gated paid fare zones.

Emergency phones will be located in each Station so riders in need of assistance can contact Sound Transit's security personnel or 911 services, 24 hours a day. Passenger emergency phones are located at Station entrances by ticket vending machines, on the platforms, in the Station elevators, and in the bike cages.

Sound Transit security personnel will be frequently present at the Station and on trains. Security personnel schedules will be determined one year prior to opening and will be adjusted based on the particular issues at each Station.

Washington State requires its cities to have the primary responsibility for safety within their boundaries. Thus, the Bellevue Police Department (PD) will be the primary law enforcement agency for the Stations and surrounding properties, and will be generally responsible for the protection of public health, safety and welfare. In addition, Sound Transit has established both the Sound Transit Security and Sound Transit Police in order to enhance the safety on its services and facilities. Sound Transit Security and Sound Transit Police will support Bellevue PD in ensuring a safe and secure environment in the Station and its vicinity pursuant to safety and security protocols to be developed jointly by these agencies.

Sound Transit Security and Police will also establish a Memorandum of Understanding with the Bellevue PD on light rail vehicle accident response protocols. Every incident will be offered to the Bellevue PD as the primary jurisdiction. In the event Bellevue PD declines an incident, Sound Transit Public Safety (either Security or the Police) will address the incident based on availability of resources and the type of incident. Sound Transit Security/Law Enforcement personnel are enhancements to public safety and will continue to be allocated based on risk and trends. The City and Sound Transit are acting consistently with this Comprehensive Plan policy regarding crime prevention principles.

TR-75.27-Provide reliable access to the system for Bellevue residents, in cooperation with local and regional transit providers, by ensuring that adequate existing and new park and ride lot capacity, neighborhood bus connections and local and regional express bus services are available.

Sound Transit Discussion: Sound Transit has and will continue to coordinate with other transit providers to ensure reliable and convenient access to riders who use multiple forms of transit. Local and regional express bus service will be accessible from the 120th Station through convenient pedestrian connections. The 120th Station does not have park and ride lots. However, nearby regional bus routes, automobile drop off areas, and pedestrian and bike access areas will be available. See **Attachment N**.

TR-75.28-Facilitate intermodal transfers and increased access to transit stations through partnerships with public and private providers of transit and shuttle services. Encourage transit to transit, transit to pedestrian, transit to bicycle and transit to pick up/drop off transfers with an emphasis on safety for people transferring between the station platform and the various modes.

Sound Transit Discussion: In order to facilitate intermodal transfers and access to the Facilities by members of the public, Sound Transit and the City are already coordinating service with other providers of transit and shuttle services. Bus service, including the locations of bus stops and frequency of service at these stops, will be updated once the build out occurs and the Facilities are operational. The RLRT Facilities proposed in this DMP Application were designed to maximize convenience and safety for riders entering, using, and exiting the Stations. The following design and operational features have been included in the Project in order to encourage intermodal transfers, and to ensure the safety of Sound Transit's riders:

a) The 120th station will provide pedestrian connections between existing and proposed sidewalks and safe access for "transit to transit" travelers, such as bus riders who transfer to and from Sound Transit's trains.
b) "Transit to pedestrian" travelers will enjoy multiple access points to the station, which is shown in **Attachment N**.
c) A number of amenities will be available for "transit to bicycle" travelers, including bike lockers, cages, and racks. An example of bike storage areas is shown in **Attachment M**
d) The 120th Station includes an off-street drop-off location connecting to a pedestrian access area, ensuring safe, convenient access for transit to car and "transit to pick up/drop off" riders.

Through all of these measures, as well as the Station layout that was expressly designed to accommodate access by bicycle, foot, and car, the City and Sound Transit are acting consistently with this policy in favor of facilitating and encouraging safe, convenient, intermodal transfers at each Station.

TR-75.32-Collaborate with the regional transit provider to create a Construction Management Plan for all new major transit investments. The Construction Plan should include a Construction Phasing Plan that minimizes the corridor length disrupted at one time and minimizes the time period of disruption.

Sound Transit Discussion: Sound Transit will provide the contractor with flexibility to prepare construction work plans consistent with this policy that will be submitted for each permit for construction of the Facilities, *e.g*. in the traffic control plans and specs. Sound Transit will prepare a Project Management Plan to document and optimize construction sequencing and phasing.

Construction of all the Facilities will be sequenced with consideration to vehicular and pedestrian access, as well as other potential impacts of construction. See, for example, E335 Contract Special Conditions and Specification Section 01 55 26 (Traffic Control). In reference to Comprehensive Plan policy TR-75.18, the traffic control plans for the Project have been developed specifically to minimize disruption to traffic flows, and to prevent "spillover" into surrounding neighborhoods. In addition, the contractor will prepare detailed construction sequencing and traffic control plans.

Noise mitigation measures will be implemented for each construction phase, as well. See, for example, Specification Section 01 57 15 (Temporary Construction Noise and Vibration Control).

The corridor length affected by each stage of the Project has been minimized by having the construction of the Facilities sequenced with consideration for vehicular and pedestrian access, as well as other potential impacts of construction showing a sequence of work to minimize disruption of traffic. See, for example, E335 Contract Special Conditions and Specification Section 01 55 26 (Traffic Control).

The City and Sound Transit, by implementing each of these measures (all of which will be monitored and reevaluated during Project construction), are acting consistently with this policy to create a Construction Management Plan for this Project.

TR-75.33-Place a priority on the use of noise avoidance or absorption techniques over noise deflection for residential uses when developing mitigation measures with the regional transit provider. Monitor the outcomes of these efforts and pursue adjustments with the regional transit provider to ensure continued effectiveness.

Sound Transit Discussion: See Section 5 of this DMP Application and the accompanying noise study for a discussion of steps taken to address noise impacts of the Project.

TR-75.34-Develop and implement an early and ongoing program with the regional transit provider to provide assistance to residents and businesses affected by construction.

Sound Transit Discussion: Sound Transit is committed to engaging the public on the East Link Project in a robust way by providing ample opportunity for meaningful public involvement throughout the lifetime of the Project. Sound Transit will continue to work with the City and other partner jurisdictions in reaching local and regional members of the public by hosting public meetings and workshops, speaking at open forums, attending community events and fairs/festivals, providing briefings, and being available to discuss the Project with businesses, neighborhood, stakeholders, interested individuals and transportation interest groups.

To make information about the Project as widely available as possible, Sound Transit continually provides updates on the Project through a variety of communication tools and materials, including a website, fact sheets, e-newsletter, press releases, and graphic displays.

Through the CDP, Sound Transit has worked with City staff in developing and implementing a plan and schedule for outreach activities to the public and project stakeholders. While this work has focused on designing and executing meaningful public engagement during final design, it is anticipated that the work will continue into the construction phase of the Project.

Sound Transit has developed a construction outreach plan that identifies goals, objectives, key messages, risks and challenges, key audiences, and strategies for completion of the entire Project. Sound Transit will continue to seek involvement from the City and other partner jurisdictions in refining and implementing the outreach plan at various stages throughout construction.

Throughout preliminary design of the Project and leading up to this DMP Application, Sound Transit has continually informed individuals living and working in the affected areas of any field work planned in their area. Sound Transit, in coordination with the City, will continue its public outreach program to develop and implement a business mitigation plan to address construction activities that can be

disruptive to local businesses. Sound Transit's business mitigation plan helps local businesses continue to attract customers while construction goes on nearby. Sound Transit provides mitigation for the direct impacts of construction, and works with local businesses to address the indirect impacts of construction by developing a program that promotes the neighborhood and attracts customers.

Through these cooperative efforts, Sound Transit is acting consistently with this policy in favor of an ongoing program to assist residents and businesses affected by the construction of the Facilities.

TR-75.35- Minimize disruption and inconvenience of construction staging areas to adjacent land uses in collaboration with the regional transit provider through actions such as site selection design and operational management plans. Construction staging areas should not be located in residential neighborhoods except where no practicable alternative exists.

Sound Transit Discussion: Multiple staging areas for the Facilities are proposed in this DMP Application. ST will use the areas shown in **Attachment M** for construction staging. Sound Transit and the City selected these construction staging areas to minimize disruption and inconvenience as well as to help decrease costs and decrease the time it takes to construct the light rail line and associated stations and infrastructure. Sound Transit will continue to work with the City through the DAVE technical working group to develop detailed construction staging plans in areas which will include measures to minimize disruption and inconvenience to adjacent land uses.

The staging area locations were chosen to ensure an orderly flow of traffic on City streets and to minimize any impacts to the local areas. The use of larger staging areas will decrease total construction time, as well. Any impacts associated with major closures will be limited to the shortest time possible. Further, no construction staging is proposed in any residential neighborhood in the area covered by this DMP Application.

Considering these measures, the City is acting consistently with this Comprehensive Plan policy by collaborating with Sound Transit to "minimize disruption and inconvenience of staging areas to adjacent land uses."

TR-118-Mitigate air quality, noise, light/glare and other significant adverse environmental impacts of the proposed transportation projects on adjacent neighborhoods.

Sound Transit Discussion: The comprehensive environmental review process conducted for the Project analyzed and included appropriate mitigation for all probable significant adverse environmental impacts of the Project on adjacent neighborhoods in accordance with State and Federal law. As noted above, these measures included mitigation for both temporary (e.g., construction-related) and potential ongoing impacts of the Project, and are summarized in this DMP Application in **Attachment F**. Considering these mitigation measures, the City has gone well beyond this policy to "mitigate . . . significant adverse environmental impacts" on adjacent neighborhoods: The development process has ensured a comprehensive, robust mitigation package to avoid and/or mitigate each of the potential adverse environmental impacts of the proposal.

ED-3-Develop and maintain regulations that allow for continued economic growth while respecting the environment and quality of life of city neighborhoods.

Sound Transit Discussion: The Project will provide a critical transit link to many of the City's employment centers and major residential areas, which will benefit the short- and long-term economic well-being of the City and its communities. The Project preserves and enhances the quality of life in the adjacent City neighborhoods by providing additional transit options to its residents while ensuring the Project's consistency with the LUC and the City's long-range planning policies. The City has developed regulations that furthers each of these Comprehensive Plan policies, including Chapter 20.25M of the LUC, which sets forth comprehensive development standards and other requirements for the City's review and approval of the RLRT system, including the Facilities proposed in this DMP Application.

Southwest Subarea Policy S-SW-26 Buffer the pedestrian and/or bicyclist from vehicular traffic on heavily traveled arterials such as Bellevue Way, 112th Avenue S.E., and Main Street.

Sound Transit Discussion: The pedestrian facilities along 120th Avenue NE and 124th Avenue NE are enhanced with landscaped buffers between vehicular and non-motorized traffic consistent with this Policy.

Downtown Subarea Policy S-DT-132. Explore ways of providing the most effective transportation services and marketing programs for trips between major retail, office, and transit facilities Downtown, as well as activity areas on the edge of Downtown such as Overlake Hospital.

Sound Transit Discussion: The Facilities proposed in this DMP Application are consistent with this policy, as their design is the result of years of public process and collaborative design work to ensure the most effective transportation services are being provided by the East Link Project. The Project will advance this policy directive by providing a direct connection between Downtown Bellevue and areas on the edge of Downtown such as the Bel-Red area.

B. LIGHT RAIL BEST PRACTICES

As noted above, the Bellevue Comprehensive Plan and the decision criteria for the Light Rail Overlay District incorporate the Light Rail Best Practices Report. See LUC 20.25M.030.C.3.b.

Like many broad planning and policy-level statements, the Light Rail Best Practices Report contains a general discussion of goals, stating both Guiding Principles as well as a number of "Best Practices" under various topics addressed in the Report. The Report defines Best Practices as "processes, methods, and activities that will be most effective at delivering the desired outcome for Bellevue." The Report further identifies five categories of more specific, detailed "actions" for the City and Sound Transit to take in order to ensure the Project's consistency with these Best Practices. In the years since their adoption, the Light Rail Best Practices have guided the City's actions with respect to the East Link Project.

The Report includes an action category of "Expectations of Sound Transit" which will be considered as part of the City's review of the individual DMP Applications for each segment of the Project. The following sections discuss each of the topics identified in the Light Rail Best Practices, as well as the specific "Expectations" identified for Sound Transit's compliance with the Best Practices. As with the discussion of the relevant Comprehensive Plan provisions above, the relevant portions of the Light Rail

Best Practices are reproduced verbatim below in **bold text**, followed by responses demonstrating Sound Transit's compliance with each objective.

1. COMMUNITY & NEIGHBORHOODS

This topic of the Report focuses on developing an efficient light rail transit system designed to be well integrated into the neighborhoods through which it travels. The Best Practices for this topic are as follows:

A. Establish a clear vision and confirm the community goals for the light rail system.
B. Design light rail facilities to be an extension of the community.
C. Use the investment in light rail as the foundation for other community enhancements.
D. Be proactive in addressing potential operational impacts to adjacent neighborhoods.

The "Expectations of Sound Transit" in the Community & Neighborhoods topic appear below using the same numbering as in the Light Rail Best Practices Report:

15. Sound Transit station design should reflect the character of the community through context-sensitive design and use of building materials and landscaping, including retained significant trees and transplanted sapling trees.

16. Sound Transit stations should be designed to be a "place, not a project" and should include high quality furnishings and public art.

17. In collaboration with the City, Sound Transit should undertake a station area design and planning effort that engages the community about specific issues for each station once the sites are selected.

18. Sound Transit should conduct frequent community involvement during the design and construction of the project to keep the community informed of project developments, upcoming events, and opportunities to participate in developing the system.

19. Sound Transit should, in collaboration with the City, create a management plan for safety and security, maintenance and operations, and (where appropriate) marketing and economic activities in stations and public spaces.

20. Sound Transit should use computer visualizations to demonstrate and analyze the visual impacts of the various profiles and in designing stations. This technique is a useful tool for engaging the public in a dialogue about mitigation and design issues.

Sound Transit Discussion: This DMP Application is consistent with the Communities and Neighborhoods Best Practices because the stations and guideway design meets each of the above Expectations of Sound Transit. As discussed with reference to Comprehensive Plan Policies LU-9, LU-24, TR 75.12, and TR 75.23 above, through the CDP, the design of the stations and guideways proposed in this DMP Application has resulted in a superior design proposal. The process fully engaged the community with respect to

specific issues in the layout and design of each station, and frequent opportunities for community involvement were included in the public planning process outlined in Section 1 of the DMP Application.

The community will remain engaged in station design and the design of other Facilities through the CAC's review of the Project. Further, Sound Transit has and will continue to provide ongoing opportunities for community involvement through its business mitigation plan. The continuation of this public process will ensure ample opportunities for the community to participate in developing the Project. See http://www.soundtransit.org/Projects-and-Plans/East-Link-Extension/East-Link-Extension-document-archive for a comprehensive list of the public involvement opportunities.

Among the many planning and design tools used during the public design process, Sound Transit has and will continue to use computer visualizations to convey the design, layout, and overall "feel" of the Project to the CAC and other members of the public participating in the design process. For example, in refining the design of the stations, Sound Transit typically creates renderings for comment, and has included the latest version of these renderings in **Attachment N** in support of the final design proposed for each Station. Sound Transit also created a computer generated animation of a visual "fly-over" of the alignment to further describe its appearance and integration into the environment. Through this process of public involvement, as well as the context- and site-sensitive design features included in the Project, the design of the stations responds to the character of the community.

Significant trees will be retained throughout the Project consistent with the LUC. Consistent with Expectation No. 15, the final E330/E335 plans will include a comprehensive tree survey and identification of the trees to be retained or removed.

The artistic design, as well as public art that will be installed under Sound Transit's "STart" program, will reinforce the high-quality design of each Station, and distinguish them as a "place, not a project." Furnishings proposed for each Station are shown in the renderings in **Attachment N**.

Sound Transit's management plans for safety, security, maintenance and operations have been developed through years of experience gained at Sound Transit's other operating facilities in the region. Please refer to the Sound Transit Construction and Safety Manual and the Sound Transit Design Criteria Manual, Chapter 29, for further discussion on the management plans provided.

2. COMMUNITY INVOLVEMENT

This topic of the Report focuses on the importance of engaging the public through meaningful community involvement efforts. The Best Practices for this topic are as follows:

A. **Create a sense of ownership by engaging the community in the planning, design, construction, and operation of the system.**
B. **Form a citizen advisory committee for the East Link Project.**

The Expectations of Sound Transit are as follows:

7. **In collaboration with the City, jointly appoint a citizen advisory committee for early and ongoing involvement in the project. The committee could be charged with a variety of tasks, including reviewing major project technical and policy issues and providing advice to Sound Transit and the City.**

8. **Conduct frequent public forums and use web-based communication throughout the duration of the project to broaden the reach of public involvement efforts.**

9. **In collaboration with the City and stakeholders, develop a construction management program that includes participation by and assistance to affected residents and business owners.**

10. **Coordinate with City staff dedicated to manage the project and resolve issues on the City's behalf.**

11. **Use computer visualization to demonstrate and analyze the visual impacts of the various profiles and in designing stations. This technique is a useful tool for engaging the public in a dialogue about mitigation and design issues.**

12. **Involve the contractor in meetings with the public to share information and respond to questions and concerns about construction.**

Sound Transit Discussion: This DMP Application is consistent with the Community Involvement Best Practices based on the public process that is being followed for the planning and design of the Project. The City has appointed the East Link Project Citizen Advisory Committee (CAC), and the CAC has conducted public meetings to review the Facilities proposed in this DMP Application. Sound Transit and City staff provided the CAC with an orientation to Sound Transit's existing light rail system, including a tour of existing facilities in the City of Seattle. Frequent public forums have been held and will continue throughout design and construction of the Project. Sound Transit has been responsive to CAC input by providing follow up sessions on topics of specific interest to the CAC, and incorporating its context sensitivity report into the design of the Facilities.

Bellevue residents, businesses, and other citizens have two primary means to provide input on design and construction of the Project: 1) through Sound Transit's final design public involvement process described in Section 1 of this Application, and 2) through the CAC review process. There have been and will continue to be other multiple opportunities to provide input on Project elements such as station design, art, safety, and landscaping. See **Attachment D** for a summary of public outreach activities completed to date. Sound Transit also provides opportunities to stay informed through the Project website, www.soundtransit.org/eastlink, and subscription to the East Link listserv. Sound Transit Community Outreach staff is also available by contacting eastlink@soundtransit.org or 206-398-5470.

A series of open houses have been held, and additional open houses are planned in locations along the Project alignment. The 120th Station design incorporated feedback from the public as well as additional technical information provided during this process. A list of public outreach events can be found in **Attachment D.**

Construction issues will be specifically discussed at future public meetings**.** As the Project timeline progresses and the construction management and contractor team is selected for construction of the Facilities, additional opportunities for public involvement will be provided. Expectations No. 9 and 12 will be addressed through these efforts.

Expectation No. 10 is satisfied through the creation and implementation of the CDP. The DAVE technical working group has been successful in resolving issues and ensuring the Project's consistency with City codes applicable to this DMP Application.

Sound Transit has used computer visualizations to communicate Project design and layout to the public consistently with Expectation No. 11. Project renderings in **Attachment N** show the Facilities proposed to be built under this DMP Application.

3. CONNECTING PEOPLE TO LIGHT RAIL

This topic of the Report focuses on developing an efficient and accessible light rail system by effectively coordinating light rail with pedestrian and bicycle facilities, transit and parking. The Best Practices for this topic are as follows:

A. **Provide connections to the station that are safe, secure, and convenient for pedestrians and bicycle riders**
B. **Provide transit feeder service to light rail.**
C. **Design stations to be accessible and identifiable to all transit riders irrespective of their language, age, or ability.**
D. **Park and ride facilities should be located where they can provide convenient access to light rail for Bellevue neighborhoods not directly serviced by light rail, and they should be integrated contextually with the surrounding environment.**

The Expectations of Sound Transit are as follows:

11. Station design that incorporates:

- **An emphasis on transit patron safety that utilizes techniques such as "Z" crossings;**
- **Entrances that minimize conflicts between bicyclists, pedestrians, automobiles, and buses;**
- **Bicycle parking in convenient, well-lighted, and secure locations;**
- **Maps showing pedestrian and bicycle routes connecting stations and local destinations; and**
- **Physical features that promote use of alternatives to single-occupant vehicle (SOV), such as:**

- **preferential parking for non-SOVs relative to demand at each location;**
- **clearly marked and visible loading and unloading areas for drop-offs and taxis; and**
- **convenient bus stops and comfortable waiting areas.**

12. **Pedestrian connections to bus facilities should minimize walking distances and, where possible, avoid street and driveway crossings.**

13. **Coordinate with other transit and shuttle providers to provide feeder bus service for patrons living more than one-half mile from the station.**

14. **Universal design principles should be used in the design of stations and platforms to facilitate access to high capacity transit by all riders.**

15. **Real-time arrival information should be provided at stations and nearby major activity centers (*e.g.*, Meydenbauer Center and Bellevue Square) for light rail and regional transit services.**

16. **Include pedestrian and bicycle infrastructure in station planning and construction to facilitate use by these rider groups.**

17. **Evaluate demand for additional park and ride facilities as part of the East Link Project. Consider how the development of new or expansion of existing park and ride facilities would serve local communities, support ridership, and impact the surrounding environment.**
    Design park and ride lots to be consistent with the land use vision and community context of each unique location.

Sound Transit Discussion: This DMP Application is consistent with the Connecting People to Light Rail topic because it has incorporated each of the design principles raised in the Expectations of Sound Transit.

With respect to Sound Transit Expectation No. 11 under this topic, a number of transit rider safety measures have been incorporated into the station design, including those listed in the discussion of Comprehensive Plan Policy TR-75.20, above. Channelization pavement markings and signage at each Station guide pedestrians and passenger vehicles to light rail transit facilities. Entrances have been developed in order to provide a wide and convenient pathway to the separate access points that are provided for automobiles, bicyclists, pedestrians, and those riders transferring from other buses.

Attachment N shows the passenger drop-off areas in the front of the 120th Station. The station entrance can be accessed by motor vehicles, buses, pedestrians, and bicycles, and bicycle parking is provided. Ample size of the station's facilities allows for pedestrian flows between the station and the public right of way and allows for pedestrians and bicycles to remain separated from the vehicles in the station drop off areas, thus minimizing potential conflicts between bicycles, pedestrians, automobiles and bus traffic. A variety of bicycle storage facilities are provided, including lockers, secured covered

bike parking, and bike racks. The station area and associated plazas will be well-lit and have an urban design layout that allows for high visibility from the surrounding streets.

Ample room has been provided for access by people arriving by each of these means of transport, and bicycle racks and lockers are included at the 120th Station. These are separate from the drop-off area in order to reduce any conflict between bicycle traffic and other travelers. Bicycle parking is located close to the entrance in convenient, well-lighted, secure locations, as shown on the station renderings in **Attachment N**. Maps will be provided at the station to assist in navigating through the available public transit opportunities.

A drop-off area will be designed for safety in coordination with the City Transportation Department. The station will have designated signed passenger drop-off areas. The vehicle turnout will be clearly marked with signs and by other means as drop-off areas so that taxis and other users can easily locate them. As noted in the discussion of Comprehensive Plan policies TR-75.27 and TR-75.28, bus stops will be located near the Station, and the waiting areas within the station will include furniture, vendor areas, public art, an open space, and other features designed to ensure riders' comfort. Also see the discussion of station design elements in the "Community and Neighborhoods" topic above.

With respect to Sound Transit Expectation No. 12, the ample pedestrian connections within the Station has been designed to minimize walking distances, and to provide the most direct route possible between each point of access and the station entrances. See **Attachment N**.

Regarding Expectation No. 13, Sound Transit and the City are coordinating with other service providers to ensure the availability of connections to other transit options. See discussion of Comprehensive Plan policy TR-75.27 and TR-75.28. Part of this coordination effort is a proposed "feeder bus" program for riders residing over one half mile from the station. Sound Transit will work with other transit providers (King County Metro) and the City of Bellevue to establish changes to bus routes. Service hours will be redistributed to best fit the needs of the surrounding community. It is common for one or more transit "feeder" programs to be established. Sound Transit's Service Planning Department will develop and implement this plan.

While the elements of the station design are discussed in greater detail above (see*, e.g.,* discussion under Comprehensive Plan Policy LU-9), universal design principles were included in the design per Expectation No. 14, allowing access to the site by all people. In addition to facilitating access to high capacity transit for riders coming from multiple modes of transport (as discussed under Comprehensive Plan policies TR-75.27 and 75.28, above), the facilities are ADA compliant and designed to be convenient and accessible for all riders. Sound Transit's criterion for accessibility goes beyond code minimums such that all public areas and public pathways are accessible, as opposed to just one designated route. Sound Transit provides standard tactile way finding elements to assist the vision impaired to locate the boarding locations on the station platforms as well as system signage (braille) and passenger emergency telephones.

Within each Station, real-time arrival information will be provided on the platform entry with electronic variable message signs (VMS) as suggested in Expectation No. 15. These signs will display data regarding estimated arrival times for trains as well as emergency communications. Similar VMS features can be viewed at existing stations along the Central Link light rail corridor.

Regarding Expectation No. 16, a number of bicycle amenities will be available at the station, including bike lockers, cages, and racks. See **Attachment N** and **Attachment M**. Sound Transit will track and evaluate demand for additional park and ride facilities as part of its East Link Project, as it does for its stations in other locations, as suggested by Expectation No. 17. Decisions regarding the expansion of park and ride facilities, or the addition of new lots, will depend on demand, and the extent to which additional facilities would increase Sound Transit's ridership. Sound Transit's System Access Policy establishes a framework for Sound Transit's support and management of, and investment in, infrastructure and facilities to provide customer access to its transit services. Sound Transit will seek to provide and facilitate equitable improvements in access to transit services in cooperation with public and private entities as allowed by applicable laws, regulations, plans and policies. When designing transit facilities and services, Sound Transit will work with partner agencies, jurisdictions, and other interested third parties to maximize pedestrian, bike and transit access and to provide parking capacity within available resources. As with the development of RLRT Facilities in Seattle, Tukwila and SeaTac, environmental impacts of any new facilities will be considered, and any additional facilities will be designed to be consistent with the City's land use policies and the other provisions of the Overlay. See also discussion of Comprehensive Plan Policy LU-9.

Based on each of the above measures, this DMP Application is consistent with Sound Transit's Expectations regarding Connecting People to Light Rail Best Practices.

4. LAND USE

This topic of the Report focuses on light rail planning and other actions that support the Comprehensive Plan land use vision. The Best Practices for this topic are as follows:

- **A. Support the land use vision in Bellevue's Comprehensive Plan for each neighborhood adjacent to light rail.**
- **B. Where consistent with the City's land use vision, encourage the development of projects adjacent to light rail that exhibit the following characteristics: An emphasis on being "a place, not a project"; Includes housing as well as other uses; Higher urban scale densities; Pedestrian oriented; Density tapers down to adjacent lower density communities; and Integrated into the station and/or the neighborhood.**
- **C. Invest in infrastructure to make stations and adjacent development successful.**
- **D. Develop station area plans once the locations are known and before design and development of the stations.**

The Expectations of Sound Transit are as follows:

9. Provide adequate resources for pedestrian connections, art, and other amenities that will complement adjacent development and enhance the community.

10. Cooperate with Bellevue on station area plans for each of the sites ultimately selected.

Sound Transit Discussion: This DMP Application is consistent with the Expectations for the Land Use topic. Sound Transit has gone beyond the policy of Expectation No. 9 to "provide adequate resources" for the amenities specified. As detailed above, the station design includes numerous amenities that will serve riders and other visitors to the station alike. Public art will be installed under Sound Transit's "STart" program and the high-quality furnishings, open areas, and public spaces within the Station (which include bicycle and pedestrian amenities as well as vendor areas) will distinguish the station as a "place, not a project." See **Attachment N**. Each of these amenities is designed to be consistent with the context-sensitive, site-specific design of the station which is subject to review and input by both the CAC and other members of the public, in addition to collaborative efforts between the City and Sound Transit.

With respect to Expectation No. 10, Sound Transit has worked with the City to select the location, layout, and design of the station included in this DMP Application. The station location was thoroughly analyzed and vetted prior to their approval by the Sound Transit Board and the City. Each station has been designed with context-sensitivity and consistency with its surroundings. See discussion of Comprehensive Plan policies LU-9 and TR-75.12, above. Although the City has elected not to conduct station area planning for the 120th Station, Sound Transit will work with the City on such planning efforts if the City decides to do so.

5. STREET DESIGN AND OPERATIONS

This topic of the Report focuses on design and operation practices that create a safe and efficient street environment. The Best Practices for this topic are as follows:

- **A. Minimize confusion and maximize predictability for all street users.**
- **B. Increase visibility at transit stops, intersections, and railroad crossings.**
- **C. Employ design features at stations to enhance pedestrian and bicyclist safety.**
- **D. Design the light rail stations and line, and any street modifications, to avoid and minimize potential impacts.**
- **E. Apply principles of universal design in the design of streets and sidewalks adjacent to light rail stations.**
- **F. Employ transit signal priority to optimize transit operation, balanced with pedestrian bicycle, and other vehicle movements.**

The Expectations of Sound Transit are as follows:

12. Design light rail stations and intersections to direct pedestrians to safe, direct street crossings.

13. Use distinctive, paved (i.e., no tie and ballast) treatment of trackway when located in street right- of-way for pedestrian-oriented residential and commercial areas.

14. **Require quality design and materials in system facilities (for example, stations, tracks, supports, access areas, and power substations) that mitigate impacts related to safety and aesthetics and enhance the public regard for the system.**

15. **Minimize line-of-sight obstructions for light rail transit drivers.**

16. **Reduce people's ability to rush across the tracks.**

17. **Make safety devices accessible to the visually impaired.**

18. **Provide audible and visible warnings.**

19. **Apply traffic control devices uniformly and consistently throughout light rail system.**

20. **Provide light rail signals that are clearly distinguishable from traffic signals.**

Sound Transit Discussion: The Facilities proposed in this DMP Application are consistent with the Street Design and Operations Light Rail topic because they have incorporated each of the design and operations elements raised in the Expectations of Sound Transit above.

With respect to Expectation No. 12 in the Street Design and Operations topic, pedestrian thoroughfares in and surrounding the 120th Station will connect directly to safe, direct street crossings. The station will connect to crosswalks across 120th Avenue NE. Sidewalks are also provided at the station, which can be seen in **Attachment M.** In addition, a track crossing sign will alert pedestrians to the presence of train vehicles.

Consistent with Expectation No.13, only areas that have no vehicle or pedestrian use include ballasted track sections.

With respect to Expectation No. 14, an in-depth discussion of the aesthetic quality of the design and materials used in the Facilities, including guideways, supports, access areas, substations and related facilities, is included in the discussion of Comprehensive Plan policies LU-9 and TR-75.22. The design of each of these elements was formulated based upon best practices for light rail design with input from Sound Transit's Safety and Security personnel. In addition to the safety features discussed above, these include egress stairs, emergency phones, safety signage and fire alarms. Sound Transit has incorporated each of these features into the design of the Facilities in a tasteful manner, which will preserve the aesthetics of the Facilities and enhance the public regard for the system. Guideway supports have the same design to create common and linked themes for this portion of the Facilities. See **Attachment N.**

The alignment of the system addresses, among other concerns, operators' line of sight when operating Sound Transit's trains consistent with Expectation No. 15. For example, each turn along the Facilities' guideway was designed to be gradual and ensure good visibility. All sight distances for the Facilities meet standard engineering requirements for road speed, grades, and lane numbers.

Among the safety-specific features included in the design of the Facilities are fences, walls, and other barriers to reduce individuals' ability to cross the tracks, which were incorporated into the design of the Facilities consistent with Expectation No. 16. Consistent with Expectation No. 17, Sound Transit will provide safety devices to accommodate its visually impaired customers. The Station utilizes tactile way finding provisions to assist people with disabilities, who are blind, or who have vision impairments. These include platform edges with detectable warning surfaces which meet ADA Accessibility Guidelines, tactile paths ("braid" design) to guide users through Stations, and tactile train waiting areas identifying the location of the set of center-most doors of a two-car train based on the vehicles' stopping location. These provisions begin at ticketing and continue the length of the platform.

In addition to prominent safety signage, audible alarm systems will be used at the station and along the guideway to reduce the chances of anyone crossing the guideway in inappropriate or unsafe locations and to prevent accidents in case someone ends up in harm's way in any place within the Facilities. The RLRT System includes three types of audible safety warning devices which fall under this category, each of which is designed to minimize sound levels while maintaining their effectiveness for safety purposes. Train-mounted bells will generally be sounded twice as a train approaches and passes through an at-grade crossing, and also when the trains enter and exit the station. Audible and visual announcements of arrivals and departures will be made at the station, as well. Finally, a louder horn is available to train operators for use in emergency situations. Sound Transit has met Expectation No. 18 by incorporating each of these elements into its design and the operation of the station.

Traffic control devices for trains and the traffic that will be sharing the roads in and near the facilities have been designed to preserve their uniformity throughout the City consistent with Expectation No. 19. In addition to crosswalk lights and traffic lights, other control devices will be used in various locations throughout the Facilities consistent with standard railroad and roadway requirements. Motorists, pedestrians, and cyclists are accustomed to seeing these devices, which include standard traffic signals, railway flashing lights/arms, pedestrian signals and signs. Consistent with Expectation No. 20, light rail signals will be clearly distinguishable from traffic signals. These signal types were selected because they look very different from traffic signals in the area—which will reduce the risk of driver confusion. The Facilities proposed in this DMP Application do not include non-grade separated pedestrian crossways.

Because the Facilities included in this DMP Application incorporate each of the above design and operational measures, Sound Transit has met each of the Expectations under the Street Design and Operations Light Rail Best Practices.

6. ELEVATED, AT-GRADE, AND TUNNEL

This topic of the Report focuses on balancing the objectives of both the transportation system and the community for the selected alignment profiles. The Best Practices for this topic are as follows:

A. **Connect "somewhere to somewhere."**
B. **Build it right the first time.**
C. **The alignment profile should support the land use plan for each of the area it travels through.**

D. **The alignment profile should minimize impacts on street operations.**
E. **The alignment profile should optimize ridership.**
F. **Employ urban design features to enhance safety and community integration.**

The Expectations of Sound Transit are as follows:

9. **Public art for the project should be coordinated with the Bellevue Arts Commission and consistent with city policies on public art.**
10. **Use urban design features to enhance safety and community integration, including but not limited to:**

    - **Integrated public art, design, and finishes at stations to improve aesthetics;**
    - **Use of sapling or larger trees and other landscaping along the trackway to visually screen the catenary system.**

11. **At-grade systems should feature:**

    - **Distinctive trackway treatment (i.e., no tie and ballast) and landscaping as a design element;**
    - **Landscaping, low bollards, chains, or ornamental fencing or art projects to define pedestrian areas;**
    - **Integrated public art, design, and finishes at stations to improve aesthetics;**
    - **Design techniques such as "Z-crossings" in locations other than intersections to increase pedestrian awareness and safety;**
    - **Design and maintenance techniques that mitigate operational noise on adjacent properties**
    - **Designs that prevent train headlights from blinding oncoming motorists or creating a nuisance for nearby land uses; and**
    - **Trackway finishes that complement community objectives.**

12. **Elevated systems should feature:**

    - **Integrated public art, design, and finishes at stations and on support structures to improve aesthetics;**
    - **Design and maintenance techniques that mitigate operational noise on adjacent properties;**
    - **Placement of supports to accommodate motorist sight lines and avoid creation of visual and pedestrian barriers;**
    - **Placement and design of aerial and support structures that address shadow effects; and**

- **Designs that prevent train headlights from creating a nuisance for adjacent land uses.**

13. Tunnel systems should feature:

- **Integrated public art, design, and finishes at stations to improve aesthetics;**
- **Portals and associated facilities integrated into the surrounding area;**
- **Portal design that prevents unauthorized vehicles and pedestrians from entering tunnel;**
- **Station entrances that create a recognizable visual signal that transit service is "available here";**
- **Design and maintenance techniques that mitigate operational noise for riders waiting on station platforms;**
- **Underground station entrances that provide easy access for all patrons and avoid impeding pedestrian movements; and**
- **Underground stations that use high ceilings, natural light and air, or other design techniques to create bright, open, and safe feeling platforms.**

Sound Transit Discussion: This DMP Application is consistent with the applicable portions of the "Elevated, At-Grade, and Tunnel" topic of the Light Rail Best Practices because it has incorporated each of the design and operations elements provided in the above Expectations.

With respect to Expectation No. 9, public art for the Facilities, including art installed under Sound Transit's "STart" program, will be coordinated with the Bellevue Arts Commission and will be consistent with City's policies on public art.

As discussed in greater detail in the discussion relating to Comprehensive Plan policies LU-9 and TR-75.12, sound urban design principles have been employed in the station design to enhance aesthetics—including the planting of sapling or larger trees and retaining significant trees throughout the alignment where possible. The safety benefits of the design proposed in this DMP Application are enumerated under the Street Design and Operations topic and the discussion of Comprehensive Plan policy 75.23. As discussed above, public art, design, and the finishes selected provide a superior aesthetic for the 120th Station consistent with this policy. The potential aesthetic impacts of the catenary system (poles and wires) were addressed in several ways, in addition to the alignment, design, and layout considerations described in detail above. The catenary system included in the Facilities is shorter and much less visually intrusive than the current utility poles and wires that exist in some portions of the alignment the alignment today. On a Project-wide basis, trees planted along the guideway will provide some screening of the Facilities, though it may take several years for this screening to be apparent from a ground-level perspective. As noted in this DMP Application, future tree and landscape planting will be done in conjunction with adjacent development efforts. Systems facilities such as signal bungalows and TPSS structures exposed to public view will be screened. Sound Transit's incorporation of these elements into the design of the Facilities proposed in this DMP Application satisfies Expectation No. 10.

The at-grade Facilities proposed in this DMP Application, which include Facilities constructed in retained cut/fill conditions, will satisfy Expectation No. 11. Pedestrian and guideway areas use design features such as low bollards, chains, ornamental fencing and other design techniques to increase pedestrian awareness and safety. See, e.g., **Attachment N,** Renderings. As noted above, distinctive track treatments are included in the design of the Facilities, ballasted track is confined to areas with no vehicular or pedestrian access and the at-grade portions of the Project include no ballasted track. Public art will be integrated into the stations and other Facilities, as discussed above in reference to Comprehensive Plan policy LU-9 and others. Design features to mitigate operational noise on adjacent properties have been included, as discussed in Section 5 of this DMP Application. The Facilities have been designed to prevent train lights from blinding motorists or adversely affecting nearby land uses. The trains' lights will be directed to the tracked sections of the Facilities, and Sound Transit does not anticipate interference with pedestrian or motorist use of adjacent properties. As noted above in reference to Comprehensive Plan policy LU-9, the context-sensitive guideway finishes included in the Project are shown best in the renderings of Attachment N.

Based on Sound Transit's incorporation of the above design features in at-grade portions of the Facilities, the RLRT Facilities proposed in this DMP Application are consistent with the at Grade Light Rail Best Practices.

There are no elevated or tunnel Facilities covered by this DMP Application, so Expectations No. 12 and 13 are not applicable.

7. PROPERTY VALUES

This topic of the Report focuses on the best practices that could help protect properties from factors that could decrease property values as well as maximize values where more urban development or redevelopment is desired. The Best Practices for this topic are as follows:

A. **Design and maintain high quality stations that are an asset to the community.**
B. **Develop a comprehensive strategy for limiting and mitigating negative impacts from light rail construction and operations.**

The Expectations of Sound Transit are as follows:

6. **Coordinate with City of Bellevue on traffic-calming and diversion techniques to mitigate for cut-through traffic in residential areas.**

7. **Coordinate infrastructure improvements with City of Bellevue to minimize disruptions and identify efficiencies in construction timing.**

8. **Provide a high level of maintenance at stations and along tracks in order to meet community standards and protect property values.**

9. Collaborate with Bellevue on developing a comprehensive mitigation strategy to assign responsibility for a full range of potential impacts including noise, vibration, traffic, safety, and security.

Sound Transit Discussion: This DMP Application is consistent with the Property Values Light Rail Best Practices because Sound Transit has met each of the above Expectations. As the Best Practices Report notes under this topic, "designing and maintaining a quality system are the best practices that can be applied to protect the value of properties along the light rail line and around stations." As discussed in detail in the discussion of Comprehensive Plan policy LU-9, the City and Sound Transit have prioritized quality in the design and operations of the proposed RLRT Facilities.

With regards to Expectation No. 6, the Facilities proposed in this DMP Application are located in the Bel-Red subarea, which is zoned for the development of multifamily homes, offices/ office towers, and hotels. Sound Transit and the City will continue to coordinate detour and haul routes to minimize impacts to these existing and future uses. Minimal potential for cut-through traffic has been identified for any of these areas. In any event, the City and Sound Transit have satisfied this Expectation by incorporating traffic-calming and detour techniques in the final right-of-way configuration for the Project. This is in addition to the measures described in the discussion of Comprehensive Plan Policy TR-75.18, which will be implemented and monitored to address the impacts of the Facilities' ongoing operations on surrounding neighborhoods. Traffic staging plans for the construction of the Facilities covered by this Application are located in **Attachment M**.

Expectation No. 7 will be addressed through Sound Transit's project management plan developed and implemented in coordination with its contractor and the City.

Sound Transit has developed detailed protocols for upkeep, maintenance, and cleanliness of its facilities as described in the future East Link Maintenance Plan, which will be modeled from the Central Link Maintenance Plan. Expansion of the maintenance program to the Facilities in this DMP Application will satisfy Expectation No. 8's policy regarding "a high level of maintenance" for the proposed Facilities in order to protect property values.

Sound Transit has satisfied Expectation No. 9 by coordinating with the City and other government agencies to identify and implement a mitigation package for the overall Project. The mitigation measures are summarized in **Attachment F**, and include mitigation for the full range of potential impacts, including those specifically cited in this Expectation.

Based on Sound Transit's implementation of the above measures, the Facilities proposed in this DMP Application fully satisfy the policy of the Property Values Light Rail Best Practices.

8. STATION SECURITY

This topic of the Report focuses on developing proactive approaches to station design and operating practices that can help deter criminal activity. The Best Practices for this topic are as follows:

A. Employ design techniques that deter crime.

B. Foster a sense of ownership by users and neighbors of stations.

C. Establish a fare paid zone at stations and program an active presence of transit and law enforcement personnel on the train and on platforms.

D. Employ effective technologies to protect the safety of station users and neighbors.

The Expectations of Sound Transit are as follows:

8. All stations and related facilities should incorporate CPTED design principles.

9. All trains should be monitored with video surveillance equipment during operating hours. All stations should be monitored with video surveillance equipment at all times.

10. All stations should be equipped with emergency phones connected directly to 911 or security personnel.

11. Sound Transit, in coordination with the City, should initiate a crime prevention program that includes public awareness campaigns and outreach to neighborhoods on crime prevention techniques in and around stations.

12. Sound Transit should establish a fare paid zone at stations and provide for the regular and frequent presence of enforcement and security personnel on the platforms and trains.

13. Sound Transit should ensure that all facilities are maintained in good condition. Damage to furnishings should be repaired promptly. Graffiti should be removed promptly.

Sound Transit Discussion: Sound Transit has satisfied the policies for station Security by incorporating a number of safety-related design features in the Facilities proposed in this DMP Application, as well as a number of safety measures in its ongoing operation of the Facilities. As noted above in the discussion regarding Comprehensive Plan policy TR-75.23, the station design includes a number of features that will ensure station security consistent with these Best Practices. Specifically, the design proposed in this DMP Application, and Sound Transit's ongoing operations of the proposed Facilities, incorporate the following:

a) The Stations have been designed in accordance with CPTED design principles. See discussion of Comprehensive Plan policy TR-75.23 above.

b) The Facilities outside the Stations implement a number of CPTED design principles. The associated plazas and secure bike parking areas are designed to enhance patron security by providing maximum visibility and clear lines of sight, adequate illumination and ease of access for surveillance. The landscape design of the Stations allow for maximum visibility and clear lines of sight by not permitting foliage in a range between 36" and 84" to prevent vegetation from hindering fields of vision. Lighting of Stations is designed to prevent the creation of dark areas during non-daylight hours. Passenger emergency telephones are also provided and there are secured bike parking areas. CCTV cameras provide surveillance of all public areas on Sound Transit property outside the station proper plazas and associated bike parking areas).

c) All trains will be monitored with video surveillance equipment during operating hours, and stations will be monitored with video surveillance at all times. See Sound Transit Design Criteria Manual, Chapter 29.
d) Emergency phones to contact 911 and Sound Transit security personnel will be provided.
e) Sound Transit and the City will initiate and develop a crime prevention program to implement public awareness and outreach campaigns to educate the public about safety issues and assistance with crime prevention techniques in and around the stations. See Sound Transit Design Criteria Manual, Chapter 29.
f) Instead of gated fare paid zones, Sound Transit security personnel will be frequently present on the Station platforms and on trains. This has proven to be just as effective as gated fare paid zones in prior ST operations.
g) Through its comprehensive maintenance program detailed in the discussion of Expectation No. 8, Sound Transit will carry out regularly scheduled maintenance to keep all of its Facilities in good condition. Per the requirements of Sound Transit's program for station and Facilities maintenance, any damage to furnishings will be promptly repaired, and graffiti will be removed within 1-2 days after it is discovered.

9. CONSTRUCTION IMPACTS AND MITIGATION

This topic of the Report focuses on thoughtful planning and design practices to minimize the scope and intensity of light rail construction impacts to businesses and residences. The Best Practices for this topic are as follows:

A. Develop a Construction Management Plan.
B. Site and design construction staging areas to minimize disruption and inconvenience to adjacent land uses.
C. Plan for and address the impacts of construction by providing adequate alternative access and mitigating negative impacts such as noise and vibration.
D. Engage the business community in developing plans to provide support to businesses before, during, and after construction.
E. Engage the residential community in developing approaches to minimize impacts and provide support during construction.
F. Develop a broad public engagement program and provide regular communications to the public about construction project activities and impacts.

The Expectations of Sound Transit are as follows:

7. In collaboration with the City, develop a Construction Management Plan. At a minimum, the plan should address mitigation techniques and timeline, parking and access, public involvement, and contractor responsibilities. The plan should establish a process for monitoring, reviewing, handling complaints, and adjusting techniques as necessary to ensure effectiveness of the mitigation techniques.

8. **In collaboration with the City, develop a public involvement program that defines the type and extent of communications with the public. The goal should be to ensure extensive communication about construction schedules, impacts, responsiveness, and effectiveness of or changes to mitigation measures so that residents and businesses are provided with predictability about project events and have a regular and convenient means of conducting a dialogue with Sound Transit.**

9. **Minimize duration of construction in any given area through techniques such as:**

   - **Divide construction into "reaches" or shorter segments and limit activity in one segment until completion in another;**
   - **Break construction into phases, which could coincide with the "reaches" guideline above;**
   - **Detail and validate pre-planning for sensitive areas; and**
   - **Allow a specified time for completion of work in each "reach."**

10. **Minimize disruption and provide support to businesses by:**

    - **Establishing a construction mitigation fund;**
    - **Establishing a loan program;**
    - **Providing a local marketing campaign during construction;**
    - **Providing management and technical assistance;**
    - **Maintaining at least one vehicle and pedestrian access path during business hours;**
    - **Maintaining nearby parking;**
    - **Providing additional signage during construction.**

11. **When selecting and negotiating agreements with contractors:**

    - **Allow for selection of the contractor who is most capable of delivering the project in a timely, professional, expedient manner while minimizing impacts and being responsive to community interests (this may not be the lowest bidding contractor);**
    - **Provide opportunities for qualified businesses who may not typically be able to compete on large projects;**
    - **Structure contractor payment to provide incentives for mitigating negative temporary effects and to encourage responsiveness to complaints;**
    - **Structure construction phases and contracting arrangements to provide for timely repair of individual owners' properties, for example, by using separate contractors to perform mitigation work.**

12. **Address impacts on Historic and Archaeological Resources by:**

- **Conducting pre-construction surveys to identify presence of resources;**
- **Coordinating mitigation measures with the State Department of Archeology and Historic Preservation and local agencies;**
- **Requiring the contractor to halt work if unidentified resources are encountered;**
- **Minimizing fugitive emissions by watering areas of exposed soil, covering open body trucks, and removing soil and other materials from paved streets;**
- **Restricting hours of construction and using sound dampening equipment;**
- **Establishing vibration limits and monitoring vibration and foundation conditions at nearby historic buildings;**
- **Working in phases for demolition, earth-moving, and other ground impacting operations; and**
- **Restoring sites to at least pre-construction condition.**

13. Address impacts on Soil Erosion and Air Quality by:

- **Watering exposed soil to control dust;**
- **Covering open body trucks traveling to and from construction sites;**
- **Using wheel baths or rock aprons to prevent dirt from being carried onto public streets;**
- **Promptly removing accumulated soil and other materials from paved streets; and**
- **Temporarily paving, repaving, and/or revegetating exposed areas during specific phases.**

14. Address Visual and Aesthetic impacts by:

- **Constructing temporary fences and screens to shield staging and construction areas; and**
- **Integrating art (*e.g.*, murals) on temporary fences or walls.**

15. Address Noise impacts by:

- **Completing detailed assessment during final design to identify sensitive noise receptors;**
- **Conducting construction activities according to state and local requirements;**
- **Providing an appropriate waiver process for unique circumstances;**
- **Employing design considerations such as constructing temporary noise barriers, routing trucks away from residential areas, and locating noisy equipment away from residential and environmentally sensitive areas;**
- **Using an operations sequence that avoids nighttime construction in residential areas or altering practices to reduce noise at night;**

- **Using alternative demolition and construction methods (for example, drilled piles instead of pile driving and noise suppressed equipment);**
- **Providing a 24-hour staffed hotline for noise complaints;**
- **Using temporary noise walls (for example, semi- trailer box cars) that can be moved; and**
- **Using hotel vouchers for residents living very close to nighttime work.**

16. Address Vibration impacts by:

- **Inspecting and monitoring nearby foundation conditions;**
- **Establishing vibration limits during construction (historic structures may require special attention);**
- **Requiring contractors to monitor and report vibration levels at nearby buildings throughout excavation and construction while adhering to the City of Bellevue construction standards; and**
- **Working in phases so that demolition, earth- moving, and other ground impacting operations do not overlap.**

17. Address Safety and Security issues by:

- **Using temporary construction fencing and barricades around construction sites;**
- **Controlling access to construction sites; and**
- **Requiring the contractor to provide adequate traffic control.**

18. Address Transportation, Traffic, and Parking impacts by:

- **Conducting off-peak-hour construction;**
- **Relocating utilities simultaneously with or in advance of light rail construction;**
- **Placing mitigation measures in construction contract specifications and plans;**
- **Providing full and controlled pedestrian access to businesses;**
- **Limiting open excavation and trackway construction and coordinating phasing;**
- **Including limitations on construction (for example, during holidays, festivals, and special events) in specifications;**
- **Using dynamic message signs (DMS) to inform the public about upcoming work, road closures, and detours; and**
- **Providing a project budget for transportation demand management activities (for example, transit and vanpool subsidies, and community outreach and education).**

19. Address impacts to Ecological Resources in the following ways:

- **Floodplains and floodways: Design bridge and culvert crossings to minimize backwater conditions and design rail and/or road profiles to minimize overtopping.**
- **Groundwater: Monitor groundwater table depth and contain and manage contaminants.**
- **Surface water: Restrict in-stream construction activities to periods of low-flow or based on needs of local fish populations and require contractors to install filter devices to prevent sediments from discharging directly into stormwater system.**
- **Wetlands: Install fabric filters along the periphery of the wetland (or construction zone), revegetate within temporary construction areas with native plantings, and require wetland replacement per local regulations.**

20. Address Hazardous Materials and Contamination issues by:

- **Requiring a hazardous material spill prevention plan and emergency response procedures prior to construction;**
- **Requiring specialty subcontractors to remove contaminants or hazardous materials, and requiring proper documentation of disposal at approved sites;**
- **Monitoring excavation and dewatering to identify changes in conditions, requiring work to stop with discovery of contaminated or potentially contaminated materials, and having technically qualified personnel available to determine proper course of action;**
- **Stockpiling excavated soils on heavy, waterproof plastic, and segregating and covering contaminated materials;**
- **Using innovative resource management techniques and creating an environmental management plan with responsibilities for monitoring, maintaining, and managing mitigation efforts.**

21. Address Staging Area needs by:

- **Locating construction staging areas outside of residential neighborhoods except where no practicable alternative exists;**
- **Designing staging areas to minimize size and disruption to surrounding areas through early consideration of avoidance and mitigation techniques;**
- **Exploring opportunities to consolidate staging areas;**
- **Providing design of staging areas in advance to evaluate trade-offs before selecting staging areas;**
- **Requiring staging area access and parking plan prior to construction;**
- **Paving, applying water, or applying (nontoxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites;**
- **Sweeping daily (preferably using water sweepers) paved access roads, parking areas, staging areas at construction sites, and adjacent public streets; and**

- **Avoiding staging of construction equipment and idling of equipment within 200 feet of noise- sensitive land uses whenever feasible.**

22. Create a project tree farm using saplings that can mature during construction and provide larger trees for project landscaping.

23. Minimize the effects of hauling activities through measures such as:

- **Operating on routes and/or during hours that do not coincide with peak traffic;**
- **Daily sweeping of haul routes; and**
- **Prompt repair of street damage.**

Sound Transit Discussion: Sound Transit has satisfied, or will satisfy, the Construction Impacts and Mitigation Best Practices by incorporating the measures discussed below.

Management of construction for the Project is principally addressed by the type of contract being used to construct the Projects, with a GCCM contract being used for E335. A general manager and contracting team will ensure all applicable mitigation measures are implemented during construction of the Project. The mitigation measures identified in the NEPA Documents will also be applicable to construction activities as described in those documents. See **Attachment F**.

Sound Transit will identify constraints and requirements that provide the contractor flexibility to prepare its work plans while addressing the items set forth in the Construction Impacts and Mitigation topic of the Light Rail Best Practices. The expectations of Sound Transit listed under this topic are discussed in some detail below, and may be among the measures incorporated into the contract and the contractor's work plan to ensure the Project's consistency with these policies. The rules (constraints and requirements) are included in the plans submitted for permits (e.g. in the traffic control plans and specs). Sound Transit will prepare a Project Management Plan to document and optimize construction sequencing and phasing. A Construction Management Plan will be developed by the contractor once selected consistent with Expectation No. 7.

Consistent with Expectation No. 8, Sound Transit and the City will develop a construction outreach plan. The construction outreach plan will be developed in coordination with the City through its Public Outreach and Government Relations (POGR) program. Sound Transit will continue to work with partner jurisdictions to reach local and regional members of the public by hosting public meetings and workshops, speaking at open forums, attending community events and fairs/festivals, providing briefings, and being available to discuss East Link with businesses, neighborhood, stakeholders, interested individuals and transportation interest groups. As the Project progresses and the contractor is selected by Sound Transit for the segment in this DMP Application, continual opportunities for public involvement will be provided.

The Program will ensure frequent communications to the public regarding construction schedules, traffic and other impacts, and the status of mitigation measures to provide as much predictability as

possible to the public regarding construction of the Project. To make information about East Link as widely available as possible, Sound Transit continually updates a variety of communication tools and materials, including a website, fact sheets, e-newsletter, press releases and graphic displays.

The Project will include phasing as suggested by Expectation No. 9, in order to minimize the duration of construction-related impacts to any given area. As suggested by this item, the Project construction will divide construction into "reaches." Sound Transit will identify constraints and requirements that provide the contractor flexibility to prepare work plans while balancing such plans with public impact. The rules (constraints and requirements) are included in the plans submitted for permits (*e.g*. in the Traffic Control plans and specs). Critical area impacts and mitigation do not apply to this section of the project, but mitigation has been planned for the critical areas that could be affected by the overall Project, and these mitigation measures will be included in Project construction at the earliest stages to ensure their quick and efficient implementation. See the East Link Light Rail Extension Critical Areas Report and Mitigation Plan within the E335 DMP. **Attachment O** shows that there are no critical areas or water resources within this segment. Specification Sections 32 71 00 (Wetland and Stream Mitigation) in the E340 Package and 32 72 00 (Wetland and Stream Restoration) in the E335 Package**.** While the exact dates of Project construction will vary, the general timeframe for completion of each phase of construction is set forth in the Project schedule.

Consistent with Expectation No. 10, Sound Transit will take steps to minimize disruption, and provide support, to businesses, including the following:

- Providing a local marketing campaign during construction.
- Providing management and technical assistance.
- Maintaining at least one vehicle and pedestrian access path during business hours.
- Maintaining nearby parking.
- Providing additional signage during construction.

Project contractors will be selected using the General Contractor/Construction Manager (GCCM) project delivery method, consistent with Expectation No. 11. Under this method, an architectural and engineering firm is selected by Sound Transit. The selected firm has numerous responsibilities including the selection of sub-consultants and construction management. Its primary responsibility is to provide and oversee the design and construction documents for the project. The GCCM is selected prior to the completion of design work. Construction phases and contracting arrangements will be structured to provide for timely repair, if needed, of individual owners' properties.

The Project's potential impacts on historic and archeological resources, and mitigation measures to protect these resources, are addressed in the 2011 East Link Light Rail Transit Project Final Environmental Impact Statement. See **Attachment F** and **Attachment C** for the FTA Record of Decision. Sound Transit has satisfied Expectation No. 12 through the implementation of the following measures in its construction plans for the Project:

- Conducting pre-construction surveys to identify the possible presence of these resources.
- Coordinating mitigation measures with the State Department of Archeology and Historic Preservation and local agencies.
- Requiring the contractor to halt work if unidentified resources are encountered.
- Minimizing fugitive emissions by watering areas of exposed soil, covering open body trucks, and removing soil and other materials from paved streets.
- Restricting hours of construction and using sound dampening equipment.
- Establishing vibration limits and monitoring vibration and foundation conditions at nearby historic buildings.
- Working in phases for demolition, earth-moving, and other ground impacting operations.
- Restoring sites to at least pre-construction condition, where applicable.

The Project's potential impacts on soil and air quality as well as related mitigation measures are addressed in the NEPA Documents in **Attachment F** and **Attachment G.** The ROD is provided at: http://www.soundtransit.org/Projects-and-Plans/East-Link-Extension/East-Link-Extension-document-archive/East-Link-Final-EIS-document-collection. Sound transit has satisfied Expectation No. 13 through the implementation of the following measures in its construction plans for the Project:

- Watering exposed soil to control dust.
- Covering open body trucks traveling to and from construction sites.
- Using wheel baths or rock aprons to prevent dirt from being carried onto public streets.
- Promptly removing accumulated soil and other materials from paved streets.
- Temporarily paving, repaving, and/or revegetating exposed areas during specific phases.

Sound Transit has satisfied Expectation No. 14 by including requirements for shielding of staging and construction areas by using temporary fences, screens, and other measures. In addition, art, such as murals, will be integrated into construction sites by placing them on or near temporary fences or walls. Sound Transit will develop construction outreach plans by mid-2015 that will include visual and aesthetic mitigation techniques.

The Project's potential noise and vibration impacts and related mitigation measures are addressed in Section 5.0 of the DMP Application, Noise and Vibration and in the ROD. Sound Transit has satisfied Expectation No. 15 through the implementation of the mitigation measures in the ROD and in the Noise Impact Analysis Using Bellevue City Code submitted in support of the DMP Application, as reflected in the construction plans for the Project.

Sound Transit has satisfied Expectation No. 16, regarding vibration impacts, through the implementation of the following measures in its construction plans for the Project:

- Conducting pre-construction surveys
- Inspecting and monitoring nearby foundation conditions.

Sound Transit has satisfied Expectation No. 17 regarding safety and security as described in the discussion regarding TR 75.23 above. Detailed site access and traffic control provisions are provided in the plans in **Attachment M** to this Application and Specification Sections 01 55 00 (Staging, Vehicular Access, and Parking) and 01 55 26 (Traffic Control).

Sound Transit will satisfy Expectation No. 18 through the implementation of the following measures in its construction specifications and plans:

- Relocating utilities simultaneously with or in advance of light rail construction.
- Placing mitigation measures in construction contract specifications and plans.
- Providing adequate and controlled pedestrian access to businesses.
- Limiting open excavation and guideway construction, and coordinating phasing.
- Including limitations on construction (for example, during holidays, festivals, and special events) in specifications.
- Using dynamic message signs (DMS) for short periods to inform the public about upcoming work, road closures, and detours. Static signs are used when signage is installed for long periods of time.

Sound Transit has satisfied Expectation No. 19 by identifying potential impacts on ecological resources, as well as related mitigation measures, in the NEPA documents and the critical areas approvals discussed at Section 9 of this DMP Application, including for example the following measures:

- Designing bridge and culvert crossings to minimize backwater conditions and design rail and/or road profiles to minimize overtopping.
- During tunnel construction, monitoring groundwater table depth and containing and managing contaminants.
- Restricting in-stream construction activities to periods of low-flow or based on needs of local fish populations and requiring contractors to install filter devices to prevent sediments from discharging directly into stormwater system.
- Installing filter fabrics or other erosion control elements along the periphery of wetlands or construction zones, revegetating temporary construction areas with native plantings, and requiring wetland replacement per local regulations.

Sound Transit has satisfied Expectation No. 20 in its NEPA documents and through the implementation of the following measures in its construction plans for the Project:

- Adopting a hazardous material spill prevention plan and emergency response procedures.
- Requiring specialty subcontractors to remove contaminants or hazardous materials, and proper documentation of disposal at approved sites will be required.
- Monitoring of excavation and dewatering to identify changes in conditions, requiring work to stop with discovery of contaminated or potentially contaminated materials, and having technically qualified personnel available to determine proper course of action.

- Stockpiling excavated soils on heavy, waterproof plastic, and segregating and covering contaminated materials.
- Using resource management techniques, and monitoring, maintaining, and managing mitigation efforts.

Sound Transit has satisfied Expectation No. 21 through implementation of the following measures:

- No staging areas are proposed in residential neighborhoods for the Facilities covered by this DMP Application, consistent with the policy that staging will only occur in residential neighborhoods where no practicable alternative exists.
- All staging areas have been designed to minimize size and disruption to surrounding areas through early consideration of avoidance and mitigation techniques.
- Staging areas have been consolidated consistently with this Expectation. Most potential staging areas are mainly consolidated on select parcels owned or controlled by ST. Staging areas have been designed and located in advance, to ensure adequate evaluation of trade-offs before selecting staging areas.
- All staging area access and parking plans will be complete prior to construction of the Facilities covered by this DMP Application.
- Paving, applying water, or applying (nontoxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.
- Sweeping daily (preferably using water sweepers) paved access roads, parking areas, staging areas at construction sites, and adjacent public streets.
- No staging of construction equipment or idling of equipment within 200 feet of noise- sensitive land uses is proposed in the construction of the Facilities covered in this DMP Application.

Consistent with Expectation No. 22, Sound Transit's contractor will install tree saplings or containerized trees of equal or larger size within the project limits.

Sound Transit will satisfy Expectation No. 23 by operating its haul routes during hours that do not coincide with peak traffic. In addition, haul routes will be swept daily, and any street damage caused by hauling activities will be promptly repaired.

Considering the above measures and the numerous additional mitigation measures incorporated into the design, construction, and operations plans for the Facilities covered by this DMP Application, this Application is fully consistent with the Construction Impacts and Mitigation topic.

ATTACHMENT M

DESIGN PLAN SHEETS

DESIGN DRAWING INDEX

Drawing No.	Drawing Title	DMP Attachment M Page Number
L86-CXP118	CIVIL – DEMOLITION AND REMOVAL PLAN	M-1
L86-CXP119	CIVIL – DEMOLITION AND REMOVAL PLAN	M-2
L86-CXP120	CIVIL – DEMOLITION AND REMOVAL PLAN	M-3
L86-CXP147	CIVIL – DEMOLITION AND REMOVAL PLAN	M-4
L86-CXP148	CIVIL – DEMOLITION AND REMOVAL PLAN	M-5
L86-CXP149	CIVIL – DEMOLITION AND REMOVAL PLAN	M-6
L86-CXP150	CIVIL – DEMOLITION AND REMOVAL PLAN	M-7
L86-CXP151	CIVIL – DEMOLITION AND REMOVAL PLAN	M-8
L86-CXP152	CIVIL – DEMOLITION AND REMOVAL PLAN	M-9
L86-CRP118	CIVIL – SITE PLAN	M-10
L86-CRP119	CIVIL – SITE PLAN	M-11
L86-CRP120	CIVIL – SITE PLAN	M-12
L86-CRP147	CIVIL – SITE PLAN	M-13
L86-CRP148	CIVIL – SITE PLAN	M-14
L86-CRP149	CIVIL – SITE PLAN	M-15
L86-CRP150	CIVIL – SITE PLAN	M-16
L86-CRP151	CIVIL – SITE PLAN	M-17
L86-CRP152	CIVIL – SITE PLAN	M-18
L86-CGP118	CIVIL – GRADING AND PAVING PLAN	M-19
L86-CGP119	CIVIL – GRADING AND PAVING PLAN	M-20
L86-CGP120	CIVIL – GRADING AND PAVING PLAN	M-21
L86-CGP147	CIVIL – GRADING AND PAVING PLAN	M-22
L86-CGP148	CIVIL – GRADING AND PAVING PLAN	M-23
L86-CGP149	CIVIL – GRADING AND PAVING PLAN	M-24
L86-CGP150	CIVIL – GRADING AND PAVING PLAN	M-25

L86-CGP151	CIVIL – GRADING AND PAVING PLAN	M-26
L86-CGP152	CIVIL – GRADING AND PAVING PLAN	M-27
L86-CDP119	CIVIL – DRAINAGE PLAN	M-28
L86-CDP120	CIVIL – DRAINAGE PLAN	M-29
L86-CDP121	CIVIL – DRAINAGE PLAN	M-30
L86-CPD304	CIVIL – GRADING DETAIL – 120TH STATION EGRESS	M-31
L86-CPD305	CIVIL – GRADING DETAIL – 120TH STATION PLAZA	M-32
L86-CPD306	CIVIL – GRADING DETAIL – 120TH STATION EGRESS	M-33
L86-UCP118	COMPOSITE UTILITY PLAN	M-34
L86-UCP119	COMPOSITE UTILITY PLAN	M-35
L86-UCP120	COMPOSITE UTILITY PLAN	M-36
L86-UCP121	COMPOSITE UTILITY PLAN	M-37
L86-UCP147	COMPOSITE UTILITY PLAN	M-38
L86-UCP148	COMPOSITE UTILITY PLAN	M-39
L86-UCP150	COMPOSITE UTILITY PLAN	M-40
L86-UCP151	COMPOSITE UTILITY PLAN	M-41
L86-UCP152	COMPOSITE UTILITY PLAN	M-42
E21-AZV001	120TH STATION – ARCHITECTURAL INFORMATIONAL – GRID DIMENSIONS AND TRACK STATIONING	M-43
E21-AAP002	120TH STATION – ARCHITECTURAL CODE – MUNICIPAL CODE INFORMATION – SURFACE LEVEL	M-44
E21-AAP003	120TH STATION – ARCHITECTURAL CODE – MUNICIPAL CODE INFORMATION – LONGITUDINAL SECTION	M-45
E21-AAP011	120TH STATION – ARCHITECTURAL CODE – ENERGY CODE INFORMATION – PLATFORM	M-46
E21-AAP012	120TH STATION – ARCHITECTURAL CODE – ENERGY CODE INFORMATION – SURFACE LEVEL	M-47
E21-AAP013	120TH STATION – ARCHITECTURAL CODE – ENERGY CODE INFORMATION – LONGITUDINAL SECTION	M-48
E21-ASP100	120TH STATION – ARCHITECTURAL SITE – SITE PLAN OVERALL	M-49
E21-APP100	120TH STATION – ARCHITECTURAL FLOOR PLANS – PLATFORM LEVEL – FLOOR PLAN - OVERALL	M-50
E21-APP101	120TH STATION – ARCHITECTURAL FLOOR PLANS – PLATFORM LEVEL – FLOOR PLAN - WEST	M-51
E21-APP102	120TH STATION – ARCHITECTURAL FLOOR PLANS – PLATFORM LEVEL – FLOOR PLAN – CENTRAL	M-52
E21-APP103	120TH STATION – ARCHITECTURAL FLOOR PLANS – PLATFORM LEVEL – FLOOR PLAN – EAST	M-53
E21-APP200	120TH STATION – ARCHITECTURAL FLOOR PLANS – SURFACE LEVEL – FLOOR PLAN - OVERALL	M-54

E21-APP201	120TH STATION – ARCHITECTURAL FLOOR PLANS – SURFACE LEVEL – FLOOR PLAN - WEST	M-55
E21-APP202	120TH STATION – ARCHITECTURAL FLOOR PLANS – SURFACE LEVEL – FLOOR PLAN – CENTRAL	M-56
E21-APP203	120TH STATION – ARCHITECTURAL FLOOR PLANS – SURFACE LEVEL – FLOOR PLAN – EAST	M-57
E21-ARP300	120TH STATION – ARCHITECTURAL FLOOR PLANS – ROOF LEVEL – FLOOR PLAN - OVERALL	M-58
E21-ARP301	120TH STATION – ARCHITECTURAL FLOOR PLANS – ROOF LEVEL – FLOOR PLAN - WEST	M-59
E21-ACP102	120TH STATION – ARCHITECTURAL REFLECTED CEILING PLANS – PLATFORM LEVEL – RCP – CENTRAL	M-60
E21-ACP202	120TH STATION – ARCHITECTURAL REFLECTED CEILING PLANS – SURFACE LEVEL – RCP - CENTRAL	M-61
E21-ANP101	120TH STATION – ARCHITECTURAL SIGNAGE – PLATFORM LEVEL – SIGNAGE PLAN - WEST	M-62
E21-ANP102	120TH STATION – ARCHITECTURAL SIGNAGE – PLATFORM LEVEL – SIGNAGE PLAN - CENTRAL	M-63
E21-ANP103	120TH STATION – ARCHITECTURAL SIGNAGE – PLATFORM LEVEL – SIGNAGE PLAN - EAST	M-64
E21-ANP201	120TH STATION – ARCHITECTURAL SIGNAGE – SURFACE LEVEL – SIGNAGE PLAN - WEST	M-65
E21-ANP202	120TH STATION – ARCHITECTURAL SIGNAGE – SURFACE LEVEL – SIGNAGE PLAN - CENTRAL	M-66
E21-ANP203	120TH STATION – ARCHITECTURAL SIGNAGE – SURFACE LEVEL – SIGNAGE PLAN - EAST	M-67
E21-AEE010	120TH STATION – ARCHITECTURAL EXTERIOR ELEVATIONS – NORTH AND SOUTH STATION ENTRANCE	M-68
E21-AEE011	120TH STATION – ARCHITECTURAL EXTERIOR ELEVATIONS – WEST AND EAST STATION ENTRANCE	M-69
E21-AEE012	120TH STATION – ARCHITECTURAL EXTERIOR ELEVATIONS – WEST EGRESS STAIRS	M-70
E21-AEX100	120TH STATION – ARCHITECTURAL BUILDING SECTIONS – LONGITUDINAL SECTION 1 - OVERALL	M-71
E21-AEX101	120TH STATION – ARCHITECTURAL BUILDING SECTIONS – LONGITUDINAL SECTION 1 - WEST	M-72
E21-AEX102	120TH STATION – ARCHITECTURAL BUILDING SECTIONS – LONGITUDINAL SECTION 1 - CENTRAL	M-73
E21-AEX103	120TH STATION – ARCHITECTURAL BUILDING SECTIONS – LONGITUDINAL SECTION 1 - EAST	M-74
E21-ADS001	120TH STATION – ARCHITECTURAL SCHEDULES – DOOR SCHEDULE	M-75
E21-ADS002	120TH STATION – ARCHITECTURAL – MISCELLANEOUS DETAILS	M-76
E21-ATD011	120TH STATION – ARCHITECTURAL – STAIR DETAILS – PUBLIC STAIR 1 (NORTH)	M-77
E21-ATD012	120TH STATION – ARCHITECTURAL – STAIR DETAILS – PUBLIC STAIR 1 (SOUTH)	M-78
E21-ATD031	120TH STATION – ARCHITECTURAL – STAIR DETAILS – EGRESS STAIR 1	M-79
E21-ATD051	120TH STATION – ARCHITECTURAL – STAIR DETAILS – EGRESS STAIR 2	M-80
E21-ATD052	120TH STATION – ARCHITECTURAL – STAIR DETAILS – EGRESS STAIR 3	M-81
E21-AVD011	120TH STATION – ARCHITECTURAL – ELEVATOR DETAILS – ELEVATORS 1 & 2	M-82

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xEL-0831sf
xEL-0831ut
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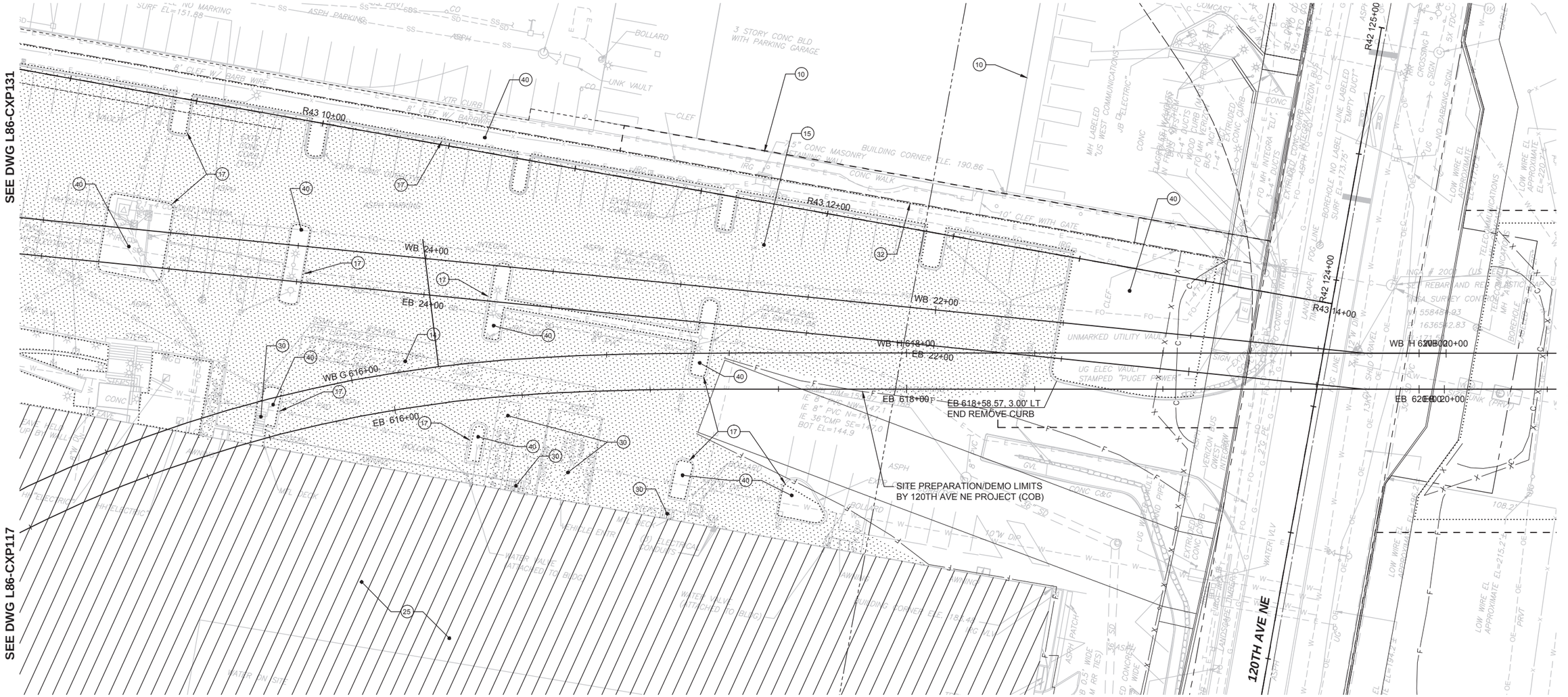

NOTES:

1. SEE COMPOSITE UTILITY DRAWINGS L86-UCP100 THRU L86-UCP152 AND DRAINAGE DRAWINGS L86-CDP100 THRU L86-CDP150 FOR UTILITIES TO BE REMOVED AND THOSE TO REMAIN.
2. SEE ILLUMINATION DRAWINGS L86-CLP100 THRU L86-CLP143 FOR LUMINAIRES TO BE REMOVED AND THOSE TO REMAIN.
3. SEE PAVEMENT MARKING AND SIGNAGE DRAWINGS L86-CMP100 THRU L86-CMP113 FOR SIGN REMOVAL.
4. SEE LEGEND AND ABBREVIATION DRAWINGS G86-GZN001 THRU G86-GZN007 FOR SYMBOLS AND HATCH PATTERNS.
5. SEE DRAWINGS L86-TMP101 THRU L86-TMP209 FOR MAINTENANCE OF TRAFFIC, PEDESTRIAN ROUTES AND WORKZONE LIMITATIONS.

NOTES CONT'D:

6. SEE DRAWINGS L86-CCP001 THRU L86-CCP010 FOR HORIZONTAL CONTROL OF CONSTRUCTION FENCING AND CONTRACTOR STAGING AND LAYDOWN AREAS.
7. SAWCUTS WITHOUT HORIZONTAL CONTROL NOTED ARE FOR UNDERGROUND UTILITIES OR DRAINAGE IMPROVEMENTS. SEE DWG L86-CPD102, DETAIL K FOR SAWCUT LIMITS.
8. SAWCUT, REMOVAL OR PROTECTION OF EXISTING SIDEWALKS SHALL BE FIELD ADJUSTED TO THE NEAREST PANEL JOINT.
9. CONTRACT WORK LIMITS ARE DEFINED BY THE CLEARING AND GRUBBING LIMITS OR TEMPORARY CONSTRUCTION FENCE AS SHOWN IN THE CONTRACT DRAWINGS OR APPROVED STAGING AREA MANAGEMENT PLAN.

NOTES CONT'D:

10. CONTRACTOR TO IDENTIFY, PERMIT AND RE-ESTABLISH MONUMENTS THAT WILL BE DISTURBED OR DESTROYED DURING CONSTRUCTION. SEE DRAWINGS L86-RMP101 THRU L86-RMP102.

CONSTRUCTION NOTES:

(10) PROTECT EXISTING BUILDING.
(14) REMOVE CEMENT CONCRETE PAVEMENT.
(15) REMOVE ASPHALT CONCRETE.
(16) REMOVE CEMENT CONCRETE SIDEWALK OR DRIVEWAY.
(17) REMOVE CURB.
(25) REMOVE BUILDING STRUCTURE AND FOUNDATION.
(30) REMOVE CONCRETE STAIRS/RAMP, LANDING, AND METAL RAILING.
(32) REMOVE CHAIN LINK FENCE, POST AND FOUNDATIONS.
(34) REMOVE ROCKERY
(40) REMOVE TREES, LANDSCAPING AND VEGETATION WITHIN CLEARING AND GRUBBING LIMITS.
(44) REMOVE LANDSCAPE ROCKS.

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01/22/16 | 7:46 AM | CALDWELLJ
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CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: K. IRELAND
APPROVED BY: J. SCHUTT

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

HNTB
SUBMITTED BY:

H J H FINAL DESIGN PARTNERS.
DATE:
REVIEWED BY:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT
DATE:

SCALE: 1" = 20'
FILENAME: E335-L86-CXP118
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
CIVIL
DEMOLITION AND REMOVAL PLAN
EB STA 615+00 TO EB STA 620+00

DRAWING No.: L86-CXP118
LOCATION ID: E20
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M-1

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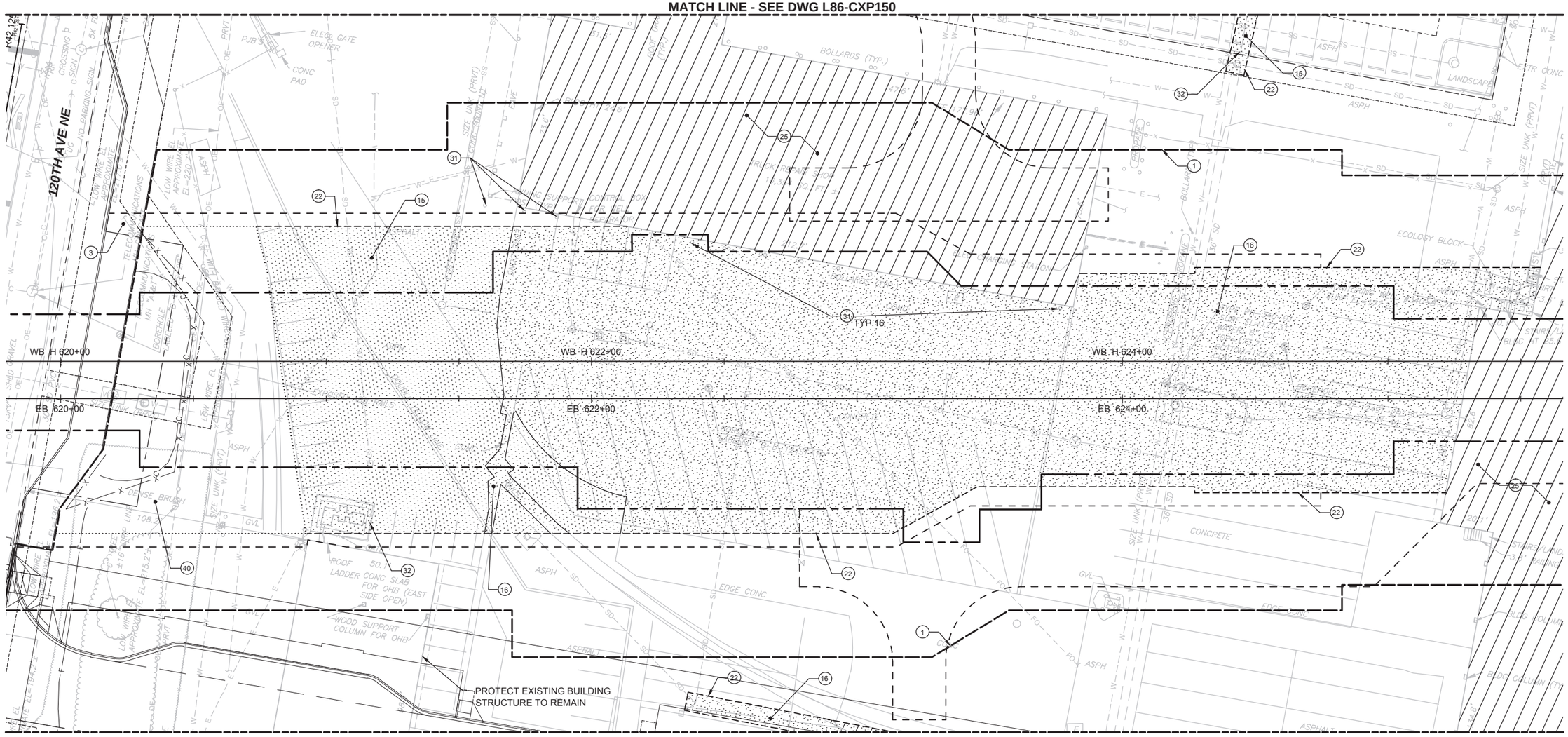

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NOTES:

1. SEE COMPOSITE UTILITY DRAWINGS L86-UCP100 THRU L86-UCP152 AND DRAINAGE DRAWINGS L86-CDP100 THRU L86-CDP150 FOR UTILITIES TO BE REMOVED AND THOSE TO REMAIN.
2. SEE ILLUMINATION DRAWINGS L86-CLP100 THRU L86-CLP143 FOR LUMINAIRES TO BE REMOVED AND THOSE TO REMAIN.
3. SEE PAVEMENT MARKING AND SIGNAGE DRAWINGS L86-CMP100 THRU L86-CMP113 FOR SIGN REMOVAL.
4. SEE LEGEND AND ABBREVIATION DRAWINGS G86-GZN001 THRU G86-GZN007 FOR SYMBOLS AND HATCH PATTERNS.
5. SEE DRAWINGS L86-TMP101 THRU L86-TMP209 FOR MAINTENANCE OF TRAFFIC, PEDESTRIAN ROUTES AND WORKZONE LIMITATIONS.

NOTES CONT'D:

6. SEE DRAWINGS L86-CCP001 THRU L86-CCP005 FOR HORIZONTAL CONTROL OF CONSTRUCTION FENCING AND CONTRACTOR STAGING AND LAYDOWN AREAS.
7. SAWCUTS WITHOUT HORIZONTAL CONTROL NOTED ARE FOR UNDERGROUND UTILITIES OR DRAINAGE IMPROVEMENTS. SEE DWG L86-CPD101, DETAIL G FOR SAWCUT LIMITS.
8. SAWCUT, REMOVAL OR PROTECTION OF EXISTING SIDEWALKS SHALL BE FIELD ADJUSTED TO THE NEAREST PANEL JOINT.
9. CONTRACT WORK LIMITS ARE DEFINED BY THE CLEARING AND GRUBBING LIMITS OR TEMPORARY CONSTRUCTION FENCE AS SHOWN IN THE CONTRACT DRAWINGS OR APPROVED STAGING AREA MANAGEMENT PLAN.

NOTES CONT'D:

10. CONTRACTOR TO IDENTIFY, PERMIT AND RE-ESTABLISH MONUMENTS THAT WILL BE DISTURBED OR DESTROYED DURING CONSTRUCTION. SEE DRAWINGS L86-RMP101 THRU L86-RMP102.

CONSTRUCTION NOTES:

(1) CONTRACTOR WORKING LIMITS
(3) PROTECT EXISTING SIDEWALK TO REMAIN.
(15) REMOVE ASPHALT CONCRETE.
(16) REMOVE CEMENT CONCRETE.
(22) SAWCUT EXISTING PAVEMENT
(25) REMOVE BUILDING STRUCTURE.
(31) REMOVE BOLLARD AND FOUNDATION.
(32) REMOVE CHAIN LINK FENCE, POST AND FOUNDATIONS.
(40) REMOVE TREES, LANDSCAPING AND VEGETATION WITHIN CLEARING AND GRUBBING LIMITS.

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VERIFIED BY: / DATE:

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PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: K. IRELAND
APPROVED BY: J. SCHUTT

STATE OF WASHINGTON · MONICA J. MORRELL · 31003 · REGISTERED PROFESSIONAL ENGINEER

kpff

H J H FINAL DESIGN PARTNERS.

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SUBMITTED BY: | DATE: | REVIEWED BY: | DATE:

SCALE: 1" = 20'
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CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT

CIVIL
DEMOLITION AND REMOVAL PLAN
EB STA 620+00 TO EB STA 625+50

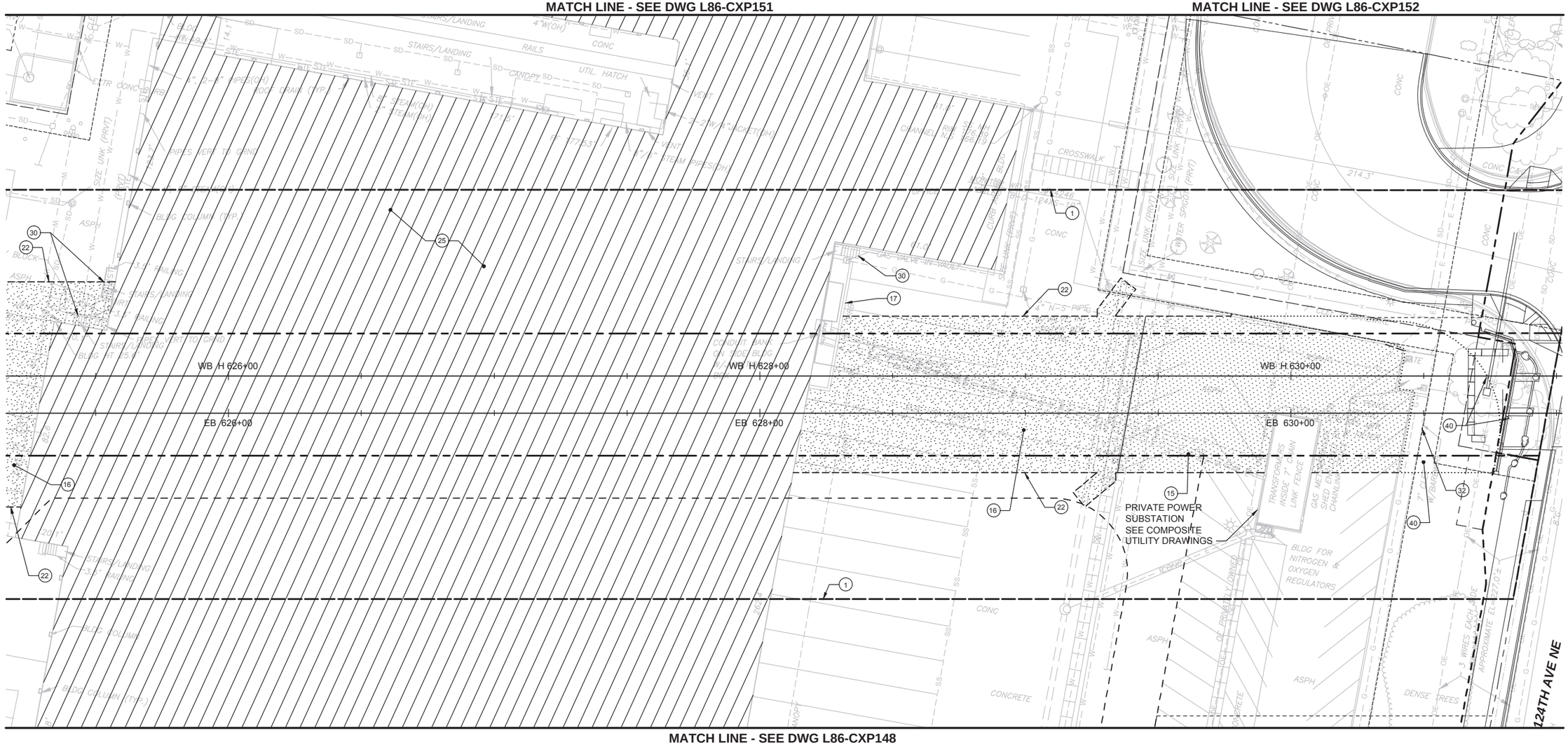
DRAWING No.: L86-CXP119
LOCATION ID: E21
SHEET No.: 5 REV: 0

MATCH LINE - SEE DWG L86-CXP151

MATCH LINE - SEE DWG L86-CXP152

SEE DWG L86-CXP119

SEE DWG L86-CXP121



MATCH LINE - SEE DWG L86-CXP148

NOTES:

1. SEE COMPOSITE UTILITY DRAWINGS L86-UCP100 THRU L86-UCP152 AND DRAINAGE DRAWINGS L86-CDP100 THRU L86-CDP150 FOR UTILITIES TO BE REMOVED AND THOSE TO REMAIN.
2. SEE ILLUMINATION DRAWINGS L86-CLP100 THRU L86-CLP143 FOR LUMINAIRES TO BE REMOVED AND THOSE TO REMAIN.
3. SEE PAVEMENT MARKING AND SIGNAGE DRAWINGS L86-CMP100 THRU L86-CMP113 FOR SIGN REMOVAL.
4. SEE LEGEND AND ABBREVIATION DRAWINGS G86-GZN001 THRU G86-GZN007 FOR SYMBOLS AND HATCH PATTERNS.
5. SEE DRAWINGS L86-TMP101 THRU L86-TMP209 FOR MAINTENANCE OF TRAFFIC, PEDESTRIAN ROUTES AND WORKZONE LIMITATIONS.

NOTES CONT'D:

6. SEE DRAWINGS L86-CCP001 THRU L86-CCP005 FOR HORIZONTAL CONTROL OF CONSTRUCTION FENCING AND CONTRACTOR STAGING AND LAYDOWN AREAS.
7. SAWCUTS WITHOUT HORIZONTAL CONTROL NOTED ARE FOR UNDERGROUND UTILITIES OR DRAINAGE IMPROVEMENTS. SEE DWG L86-CPD101, DETAIL G FOR SAWCUT LIMITS.
8. SAWCUT, REMOVAL OR PROTECTION OF EXISTING SIDEWALKS SHALL BE FIELD ADJUSTED TO THE NEAREST PANEL JOINT.
9. CONTRACT WORK LIMITS ARE DEFINED BY THE CLEARING AND GRUBBING LIMITS OR TEMPORARY CONSTRUCTION FENCE AS SHOWN IN THE CONTRACT DRAWINGS OR APPROVED STAGING AREA MANAGEMENT PLAN.

NOTES CONT'D:

10. CONTRACTOR TO IDENTIFY, PERMIT AND RE-ESTABLISH MONUMENTS THAT WILL BE DISTURBED OR DESTROYED DURING CONSTRUCTION. SEE DRAWINGS L86-RMP101 THRU L86-RMP102.

CONSTRUCTION NOTES:

(1) CONTRACTOR WORKING LIMITS
(15) REMOVE ASPHALT CONCRETE.
(16) REMOVE CEMENT CONCRETE.
(17) REMOVE CURB.
(22) SAWCUT EXISTING PAVEMENT
(25) REMOVE BUILDING STRUCTURE.
(30) REMOVE CONCRETE STAIRS/RAMP, LANDING, AND METAL RAILING.
(32) REMOVE CHAIN LINK FENCE, POST AND FOUNDATIONS.
(40) REMOVE TREES, LANDSCAPING AND VEGETATION WITHIN CLEARING AND GRUBBING LIMITS.

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SCALE IN FEET

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VERIFIED BY: / DATE:

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PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: K. IRELAND
APPROVED BY: J. SCHUTT

STATE OF WASHINGTON · MONICA J. MORRISON · 31003 · REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

kpff

SUBMITTED BY:

H J H FINAL DESIGN PARTNERS.

DATE:

REVIEWED BY:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

DATE:

SCALE: 1" = 20'
FILENAME: E335-L86-CXP120
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
CIVIL
DEMOLITION AND REMOVAL PLAN
EB STA 625+50 TO EB STA 631+00

DRAWING No.: L86-CXP120
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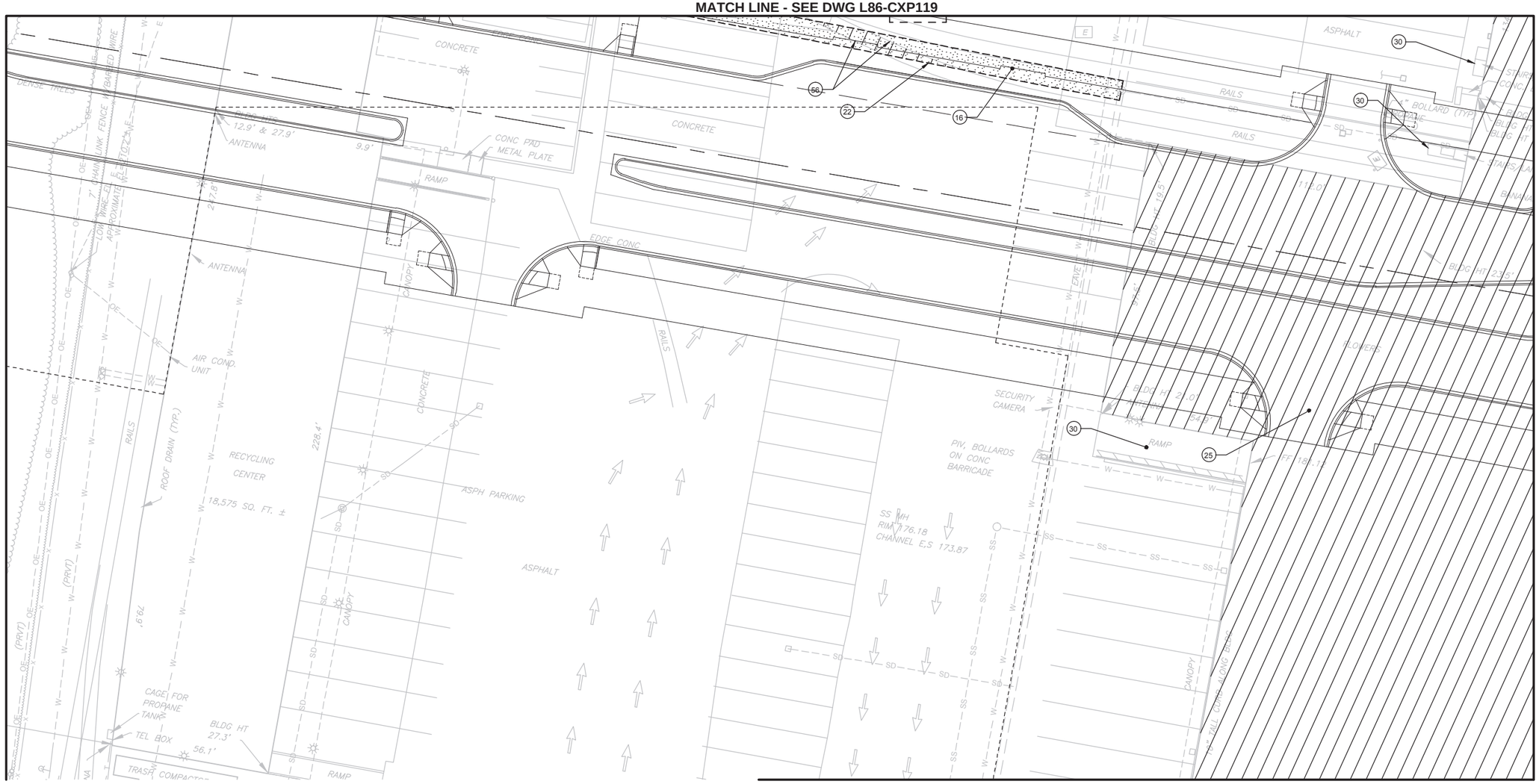

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MATCH LINE - SEE DWG L86-CXP148

MATCH LINE - SEE DWG L86-CXP149

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NOTES:

1. SEE COMPOSITE UTILITY DRAWINGS L86-UCP100 THRU L86-UCP152 AND DRAINAGE DRAWINGS L86-CDP100 THRU L86-CDP150 FOR UTILITIES TO BE REMOVED AND THOSE TO REMAIN.
2. SEE ILLUMINATION DRAWINGS L86-CLP100 THRU L86-CLP143 FOR LUMINAIRES TO BE REMOVED AND THOSE TO REMAIN.
3. SEE PAVEMENT MARKING AND SIGNAGE DRAWINGS L86-CMP100 THRU L86-CMP113 FOR SIGN REMOVAL.
4. SEE LEGEND AND ABBREVIATION DRAWINGS G86-GZN001 THRU G86-GZN007 FOR SYMBOLS AND HATCH PATTERNS.
5. SEE DRAWINGS L86-TMP101 THRU L86-TMP209 FOR MAINTENANCE OF TRAFFIC, PEDESTRIAN ROUTES AND WORKZONE LIMITATIONS.

NOTES CONT'D:

6. SEE DRAWINGS L86-CCP001 THRU L86-CCP005 FOR HORIZONTAL CONTROL OF CONSTRUCTION FENCING AND CONTRACTOR STAGING AND LAYDOWN AREAS.
7. SAWCUTS WITHOUT HORIZONTAL CONTROL NOTED ARE FOR UNDERGROUND UTILITIES OR DRAINAGE IMPROVEMENTS. SEE DWG L86-CPD101, DETAIL G FOR SAWCUT LIMITS.
8. SAWCUT, REMOVAL OR PROTECTION OF EXISTING SIDEWALKS SHALL BE FIELD ADJUSTED TO THE NEAREST PANEL JOINT.
9. CONTRACT WORK LIMITS ARE DEFINED BY THE CLEARING AND GRUBBING LIMITS OR TEMPORARY CONSTRUCTION FENCE AS SHOWN IN THE CONTRACT DRAWINGS OR APPROVED STAGING AREA MANAGEMENT PLAN.

NOTES CONT'D:

10. CONTRACTOR TO IDENTIFY, PERMIT AND RE-ESTABLISH MONUMENTS THAT WILL BE DISTURBED OR DESTROYED DURING CONSTRUCTION. SEE DRAWINGS L86-RMP101 THRU L86-RMP102.

CONSTRUCTION NOTES:

(16) REMOVE CEMENT CONCRETE.
(22) SAWCUT EXISTING PAVEMENT
(25) REMOVE BUILDING STRUCTURE.
(30) REMOVE CONCRETE STAIRS/RAMP, LANDING, AND METAL RAILING.
(56) REMOVE EXISTING EMBEDDED RAILS.

N

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
01/22/16 | 7:48 AM | CALDWELLJ
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CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: K. IRELAND
APPROVED BY: J. SCHUTT

MONICA J. MORRELL — STATE OF WASHINGTON — 31003 — REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

kpff

SUBMITTED BY:

H J H FINAL DESIGN PARTNERS.

DATE:

REVIEWED BY:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

DATE:

SCALE: 1" = 20'
FILENAME: E335-L86-CXP147
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

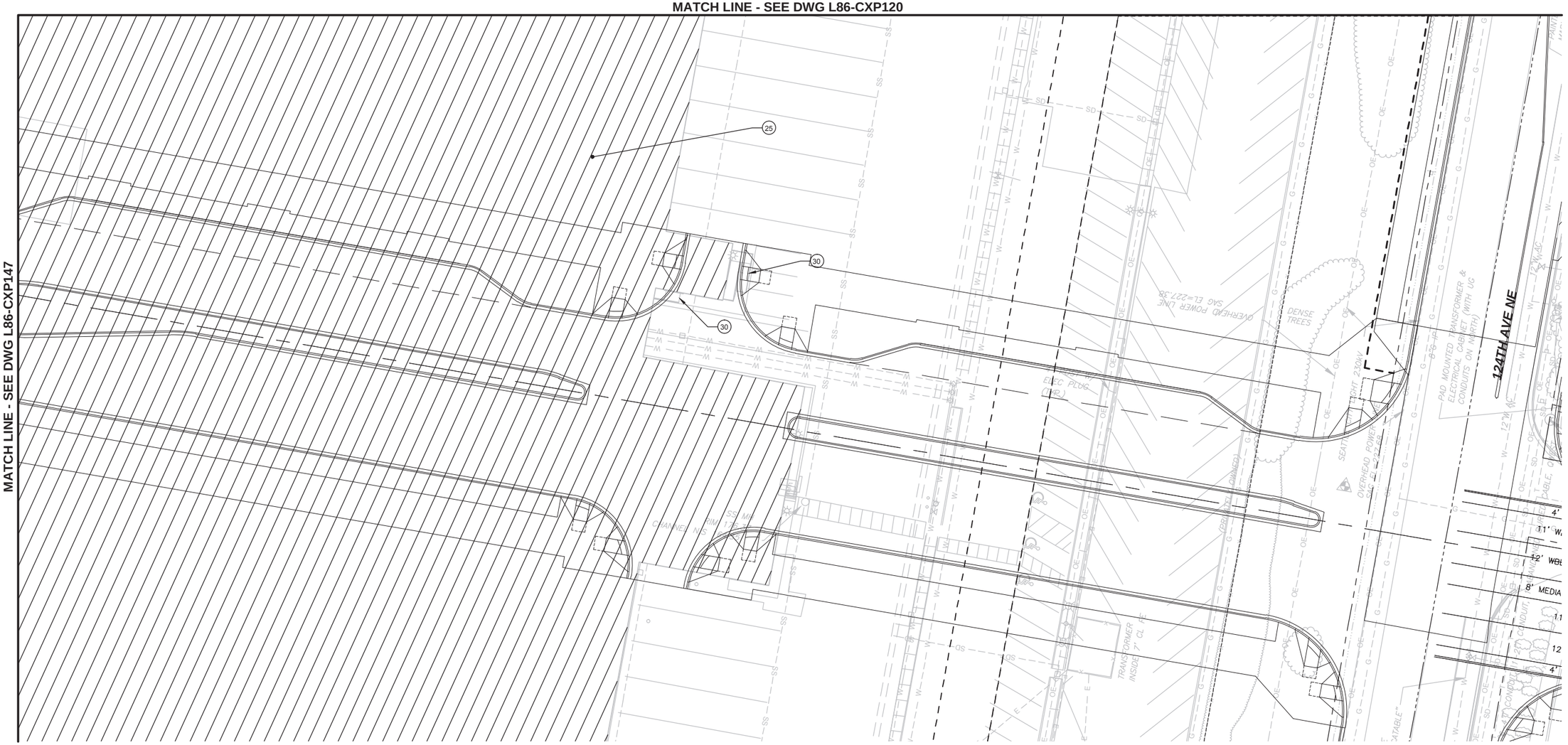
EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
CIVIL
DEMOLITION AND REMOVAL PLAN

DRAWING No.: L86-CXP147
LOCATION ID: E22
SHEET No.: 7
REV: 0

XREF LIST:
xE335-L86-CAP100
xE335-L86-KAP100
xE335-L86-RPP100
xE340-L87-RZV020
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xEL-0831vg
xE335-L86-CXP100
xE335-L86-LTP100
GB-SEAL-MJM31003
xE335_207199_RD_Design
xE335_207323_RD_Design
xE340_192465_RD_Design
xE340_B120S3C-PPLAN

MATCH LINE - SEE DWG L86-CXP120

MATCH LINE - SEE DWG L86-CXP147



MATCH LINE - SEE DWG L86-CXP149

NOTES:

1. SEE COMPOSITE UTILITY DRAWINGS L86-UCP100 THRU L86-UCP152 AND DRAINAGE DRAWINGS L86-CDP100 THRU L86-CDP150 FOR UTILITIES TO BE REMOVED AND THOSE TO REMAIN.
2. SEE ILLUMINATION DRAWINGS L86-CLP100 THRU L86-CLP143 FOR LUMINAIRES TO BE REMOVED AND THOSE TO REMAIN.
3. SEE PAVEMENT MARKING AND SIGNAGE DRAWINGS L86-CMP100 THRU L86-CMP113 FOR SIGN REMOVAL.
4. SEE LEGEND AND ABBREVIATION DRAWINGS G86-GZN001 THRU G86-GZN007 FOR SYMBOLS AND HATCH PATTERNS.
5. SEE DRAWINGS L86-TMP101 THRU L86-TMP209 FOR MAINTENANCE OF TRAFFIC, PEDESTRIAN ROUTES AND WORKZONE LIMITATIONS.

NOTES CONT'D:

6. SEE DRAWINGS L86-CCP001 THRU L86-CCP005 FOR HORIZONTAL CONTROL OF CONSTRUCTION FENCING AND CONTRACTOR STAGING AND LAYDOWN AREAS.
7. SAWCUTS WITHOUT HORIZONTAL CONTROL NOTED ARE FOR UNDERGROUND UTILITIES OR DRAINAGE IMPROVEMENTS. SEE DWG L86-CPD101, DETAIL G FOR SAWCUT LIMITS.
8. SAWCUT, REMOVAL OR PROTECTION OF EXISTING SIDEWALKS SHALL BE FIELD ADJUSTED TO THE NEAREST PANEL JOINT.
9. CONTRACT WORK LIMITS ARE DEFINED BY THE CLEARING AND GRUBBING LIMITS OR TEMPORARY CONSTRUCTION FENCE AS SHOWN IN THE CONTRACT DRAWINGS OR APPROVED STAGING AREA MANAGEMENT PLAN.

NOTES CONT'D:

10. CONTRACTOR TO IDENTIFY, PERMIT AND RE-ESTABLISH MONUMENTS THAT WILL BE DISTURBED OR DESTROYED DURING CONSTRUCTION. SEE DRAWINGS L86-RMP101 THRU L86-RMP102.

CONSTRUCTION NOTES:

(25) REMOVE BUILDING STRUCTURE.

(30) REMOVE CONCRETE STAIRS/RAMP, LANDING, AND METAL RAILING.

N

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
01/22/16 | 7:49 AM | CALDWELLJ
C:\WORK\TEMP-E335-100PCT-DUD\E335-L86-CXP148.DWG

CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: K. IRELAND
APPROVED BY: J. SCHUTT

MONICA J. MORRELL — STATE OF WASHINGTON — 31003 — REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

kpff

SUBMITTED BY:

H J H FINAL DESIGN PARTNERS.

DATE:

REVIEWED BY:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

DATE:

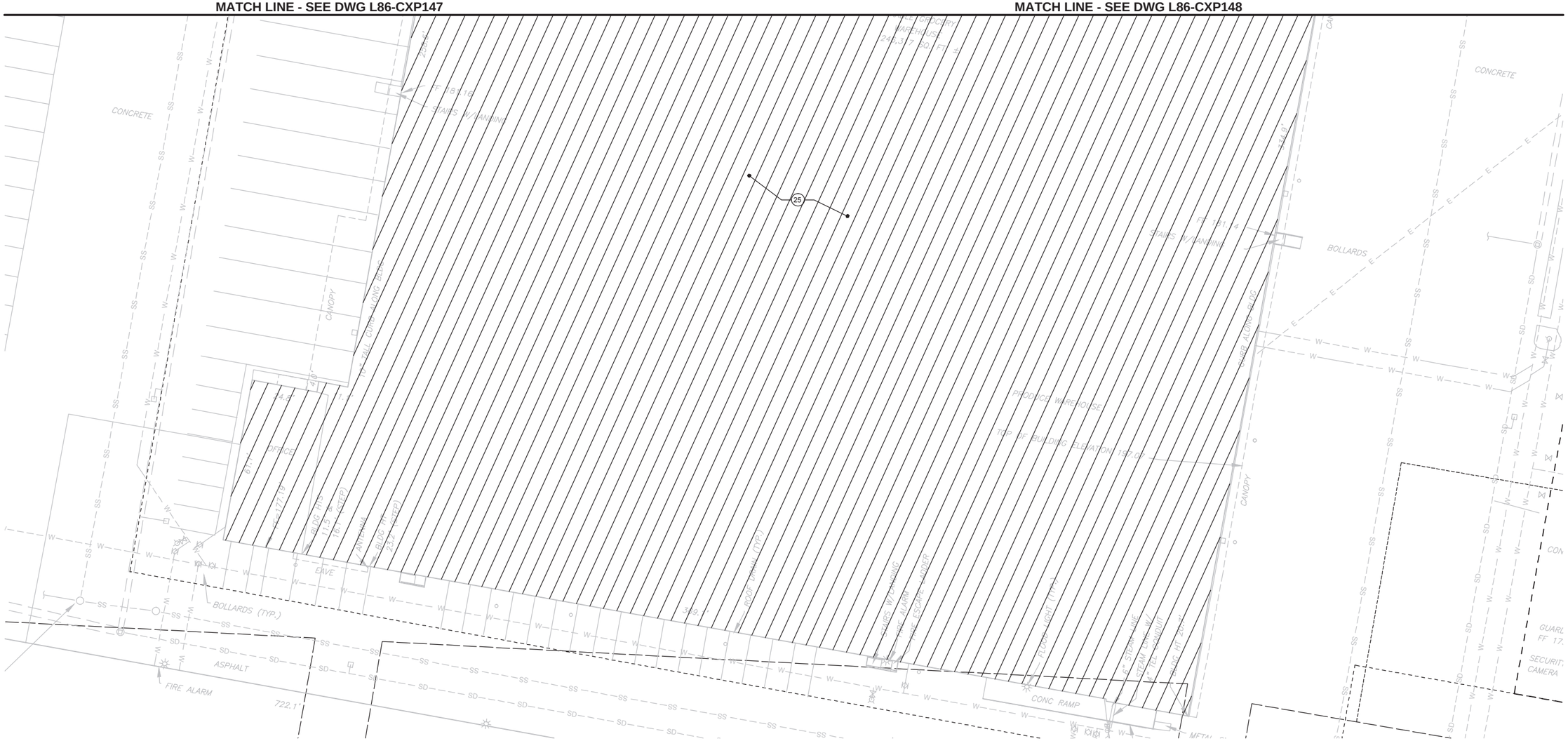
SCALE: 1" = 20'
FILENAME: E335-L86-CXP148
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
CIVIL
DEMOLITION AND REMOVAL PLAN

DRAWING No.: **L86-CXP148**
LOCATION ID: E22
SHEET No.: 8
REV: 0

MATCH LINE - SEE DWG L86-CXP147

MATCH LINE - SEE DWG L86-CXP148



NOTES:

1. SEE COMPOSITE UTILITY DRAWINGS L86-UCP100 THRU L86-UCP152 AND DRAINAGE DRAWINGS L86-CDP100 THRU L86-CDP150 FOR UTILITIES TO BE REMOVED AND THOSE TO REMAIN.
2. SEE ILLUMINATION DRAWINGS L86-CLP100 THRU L86-CLP143 FOR LUMINAIRES TO BE REMOVED AND THOSE TO REMAIN.
3. SEE PAVEMENT MARKING AND SIGNAGE DRAWINGS L86-CMP100 THRU L86-CMP113 FOR SIGN REMOVAL.
4. SEE LEGEND AND ABBREVIATION DRAWINGS G86-GZN001 THRU G86-GZN007 FOR SYMBOLS AND HATCH PATTERNS.
5. SEE DRAWINGS L86-TMP101 THRU L86-TMP209 FOR MAINTENANCE OF TRAFFIC, PEDESTRIAN ROUTES AND WORKZONE LIMITATIONS.

NOTES CONT'D:

6. SEE DRAWINGS L86-CCP001 THRU L86-CCP005 FOR HORIZONTAL CONTROL OF CONSTRUCTION FENCING AND CONTRACTOR STAGING AND LAYDOWN AREAS.
7. SAWCUTS WITHOUT HORIZONTAL CONTROL NOTED ARE FOR UNDERGROUND UTILITIES OR DRAINAGE IMPROVEMENTS. SEE DWG L86-CPD101, DETAIL G FOR SAWCUT LIMITS.
8. SAWCUT, REMOVAL OR PROTECTION OF EXISTING SIDEWALKS SHALL BE FIELD ADJUSTED TO THE NEAREST PANEL JOINT.
9. CONTRACT WORK LIMITS ARE DEFINED BY THE CLEARING AND GRUBBING LIMITS OR TEMPORARY CONSTRUCTION FENCE AS SHOWN IN THE CONTRACT DRAWINGS OR APPROVED STAGING AREA MANAGEMENT PLAN.

NOTES CONT'D:

10. CONTRACTOR TO IDENTIFY, PERMIT AND RE-ESTABLISH MONUMENTS THAT WILL BE DISTURBED OR DESTROYED DURING CONSTRUCTION. SEE DRAWINGS L86-RMP101 THRU L86-RMP102.

CONSTRUCTION NOTES:

(25) REMOVE BUILDING STRUCTURE.

N

20 10 0 20 40

SCALE IN FEET

XREF LIST:
xE335-L86-CAP100
xE335-L86-KAP100
xE335-L86-RPP100
xE340-L87-RZV020
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CXP100
xEL-0831vg
xE335-L86-LTP100
GB-SEAL-MJM31003
xE335_207199_RD_Design
xE335_207323_RD_Design
xE340_192465_RD_Design
xE340_B120S3C-PPLAN

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
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01/22/16 | 7:50 AM | CALDWELLJ
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CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: K. IRELAND
APPROVED BY: J. SCHUTT

STATE OF WASHINGTON MONICA J. MORRIS 31003 REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

kpff

SUBMITTED BY:

HJH FINAL DESIGN PARTNERS.

DATE:

REVIEWED BY:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

DATE:

SCALE: 1" = 20'
FILENAME: E335-L86-CXP149
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
CIVIL
DEMOLITION AND REMOVAL PLAN

DRAWING No.: L86-CXP149
LOCATION ID: E22
SHEET No.: 9 REV: 0

XREF LIST:
xE335-L86-CAP100
xE335-L86-KAP100
xE335-L86-RPP100
xE340-L87-RZV020
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CXP100
xEL-0831vg
xE335-L86-LTP100
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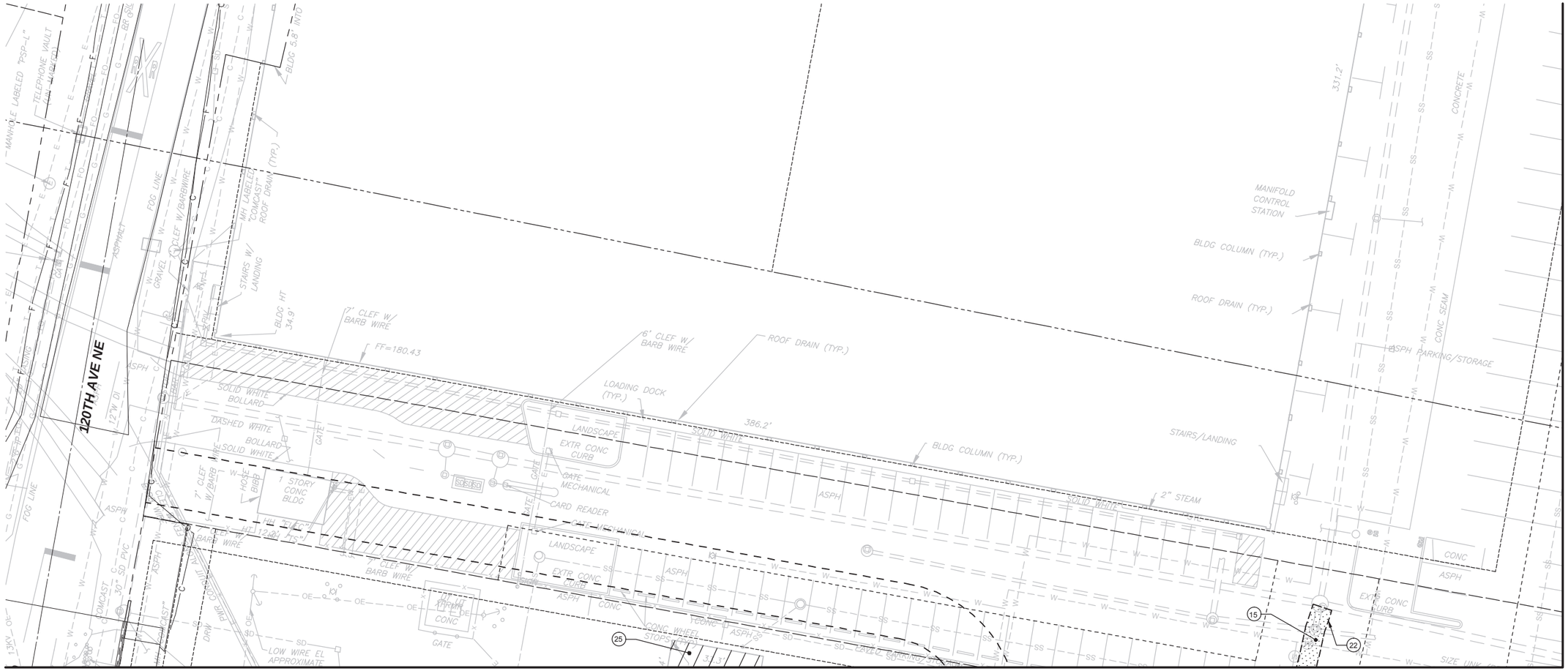
xE340_B120S3C-PPLAN



MATCH LINE - SEE DWG L86-CXP119

MATCH LINE - SEE DWG L86-CXP151

NOTES:

1. SEE COMPOSITE UTILITY DRAWINGS L86-UCP100 THRU L86-UCP152 AND DRAINAGE DRAWINGS L86-CDP100 THRU L86-CDP150 FOR UTILITIES TO BE REMOVED AND THOSE TO REMAIN.
2. SEE ILLUMINATION DRAWINGS L86-CLP100 THRU L86-CLP143 FOR LUMINAIRES TO BE REMOVED AND THOSE TO REMAIN.
3. SEE PAVEMENT MARKING AND SIGNAGE DRAWINGS L86-CMP100 THRU L86-CMP113 FOR SIGN REMOVAL.
4. SEE LEGEND AND ABBREVIATION DRAWINGS G86-GZN001 THRU G86-GZN007 FOR SYMBOLS AND HATCH PATTERNS.
5. SEE DRAWINGS L86-TMP101 THRU L86-TMP209 FOR MAINTENANCE OF TRAFFIC, PEDESTRIAN ROUTES AND WORKZONE LIMITATIONS.

NOTES CONT'D:

6. SEE DRAWINGS L86-CCP001 THRU L86-CCP005 FOR HORIZONTAL CONTROL OF CONSTRUCTION FENCING AND CONTRACTOR STAGING AND LAYDOWN AREAS.
7. SAWCUTS WITHOUT HORIZONTAL CONTROL NOTED ARE FOR UNDERGROUND UTILITIES OR DRAINAGE IMPROVEMENTS. SEE DWG L86-CPD101, DETAIL G FOR SAWCUT LIMITS.
8. SAWCUT, REMOVAL OR PROTECTION OF EXISTING SIDEWALKS SHALL BE FIELD ADJUSTED TO THE NEAREST PANEL JOINT.
9. CONTRACT WORK LIMITS ARE DEFINED BY THE CLEARING AND GRUBBING LIMITS OR TEMPORARY CONSTRUCTION FENCE AS SHOWN IN THE CONTRACT DRAWINGS OR APPROVED STAGING AREA MANAGEMENT PLAN.

NOTES CONT'D:

10. CONTRACTOR TO IDENTIFY, PERMIT AND RE-ESTABLISH MONUMENTS THAT WILL BE DISTURBED OR DESTROYED DURING CONSTRUCTION. SEE DRAWINGS L86-RMP101 THRU L86-RMP102.

CONSTRUCTION NOTES:

(15) REMOVE ASPHALT CONCRETE.
(22) SAWCUT EXISTING PAVEMENT
(25) REMOVE BUILDING STRUCTURE.

N
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SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
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CORRECTED BY: / DATE:
VERIFIED BY: / DATE:
01/22/16 | 7:50 AM | CALDWELLJ
C:\WORK\TEMP-E335-100PCT-DUD\E335-L86-CXP150.DWG

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: K. IRELAND
APPROVED BY: J. SCHUTT

SUBMITTED BY: / DATE: / REVIEWED BY: / DATE:

FINAL DESIGN PARTNERS.

LINE IS 1" AT FULL SCALE

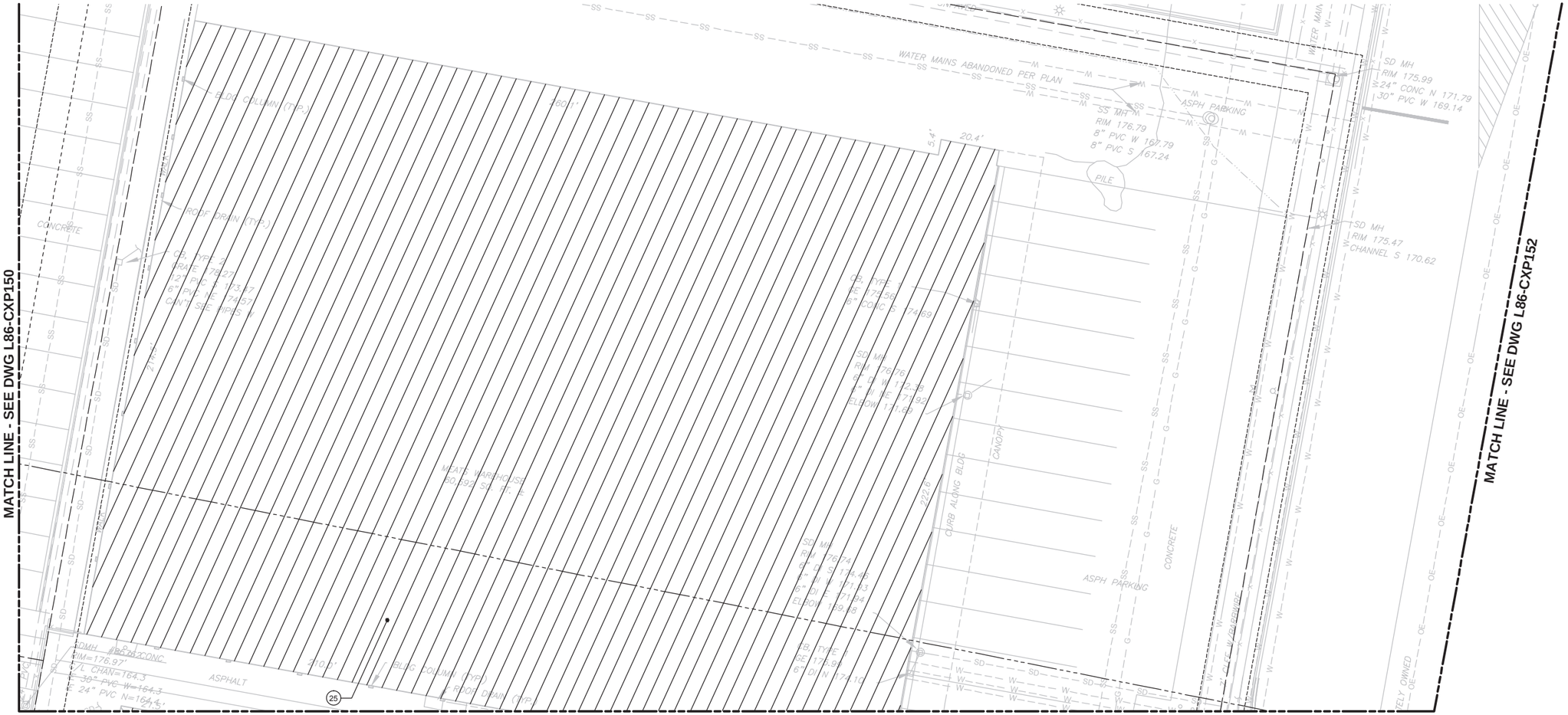
SCALE: 1" = 20'
FILENAME: E335-L86-CXP150
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
CIVIL
DEMOLITION AND REMOVAL PLAN

DRAWING No.: **L86-CXP150**
LOCATION ID: E22
SHEET No.: 10 REV: 0

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

XREF LIST:
xE335-L86-CAP100
xE335-L86-KAP100
xE335-L86-RPP100
xE340-L87-RZV020
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CXP100
xEL-0831vg
xE335-L86-LTP100
GB-SEAL-MJM31003
xE335_207199_RD_Design
xE335_207323_RD_Design
xE340_192465_RD_Design
xE340_B120S3C-PPLAN



NOTES:

1. SEE COMPOSITE UTILITY DRAWINGS L86-UCP100 THRU L86-UCP152 AND DRAINAGE DRAWINGS L86-CDP100 THRU L86-CDP150 FOR UTILITIES TO BE REMOVED AND THOSE TO REMAIN.
2. SEE ILLUMINATION DRAWINGS L86-CLP100 THRU L86-CLP143 FOR LUMINAIRES TO BE REMOVED AND THOSE TO REMAIN.
3. SEE PAVEMENT MARKING AND SIGNAGE DRAWINGS L86-CMP100 THRU L86-CMP113 FOR SIGN REMOVAL.
4. SEE LEGEND AND ABBREVIATION DRAWINGS G86-GZN001 THRU G86-GZN007 FOR SYMBOLS AND HATCH PATTERNS.
5. SEE DRAWINGS L86-TMP101 THRU L86-TMP209 FOR MAINTENANCE OF TRAFFIC, PEDESTRIAN ROUTES AND WORKZONE LIMITATIONS.

NOTES CONT'D:

6. SEE DRAWINGS L86-CCP001 THRU L86-CCP005 FOR HORIZONTAL CONTROL OF CONSTRUCTION FENCING AND CONTRACTOR STAGING AND LAYDOWN AREAS.
7. SAWCUTS WITHOUT HORIZONTAL CONTROL NOTED ARE FOR UNDERGROUND UTILITIES OR DRAINAGE IMPROVEMENTS. SEE DWG L86-CPD101, DETAIL G FOR SAWCUT LIMITS.
8. SAWCUT, REMOVAL OR PROTECTION OF EXISTING SIDEWALKS SHALL BE FIELD ADJUSTED TO THE NEAREST PANEL JOINT.
9. CONTRACT WORK LIMITS ARE DEFINED BY THE CLEARING AND GRUBBING LIMITS OR TEMPORARY CONSTRUCTION FENCE AS SHOWN IN THE CONTRACT DRAWINGS OR APPROVED STAGING AREA MANAGEMENT PLAN.

NOTES CONT'D:

10. CONTRACTOR TO IDENTIFY, PERMIT AND RE-ESTABLISH MONUMENTS THAT WILL BE DISTURBED OR DESTROYED DURING CONSTRUCTION. SEE DRAWINGS L86-RMP101 THRU L86-RMP102.

CONSTRUCTION NOTES:

(25) REMOVE BUILDING STRUCTURE.

N

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SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
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CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: K. IRELAND
APPROVED BY: J. SCHUTT

STATE OF WASHINGTON MONICA J. MORRISETTE 31003 REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

kpff

FINAL DESIGN PARTNERS.

SUBMITTED BY: / DATE: / REVIEWED BY: / DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1" = 20'
FILENAME: E335-L86-CXP151
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

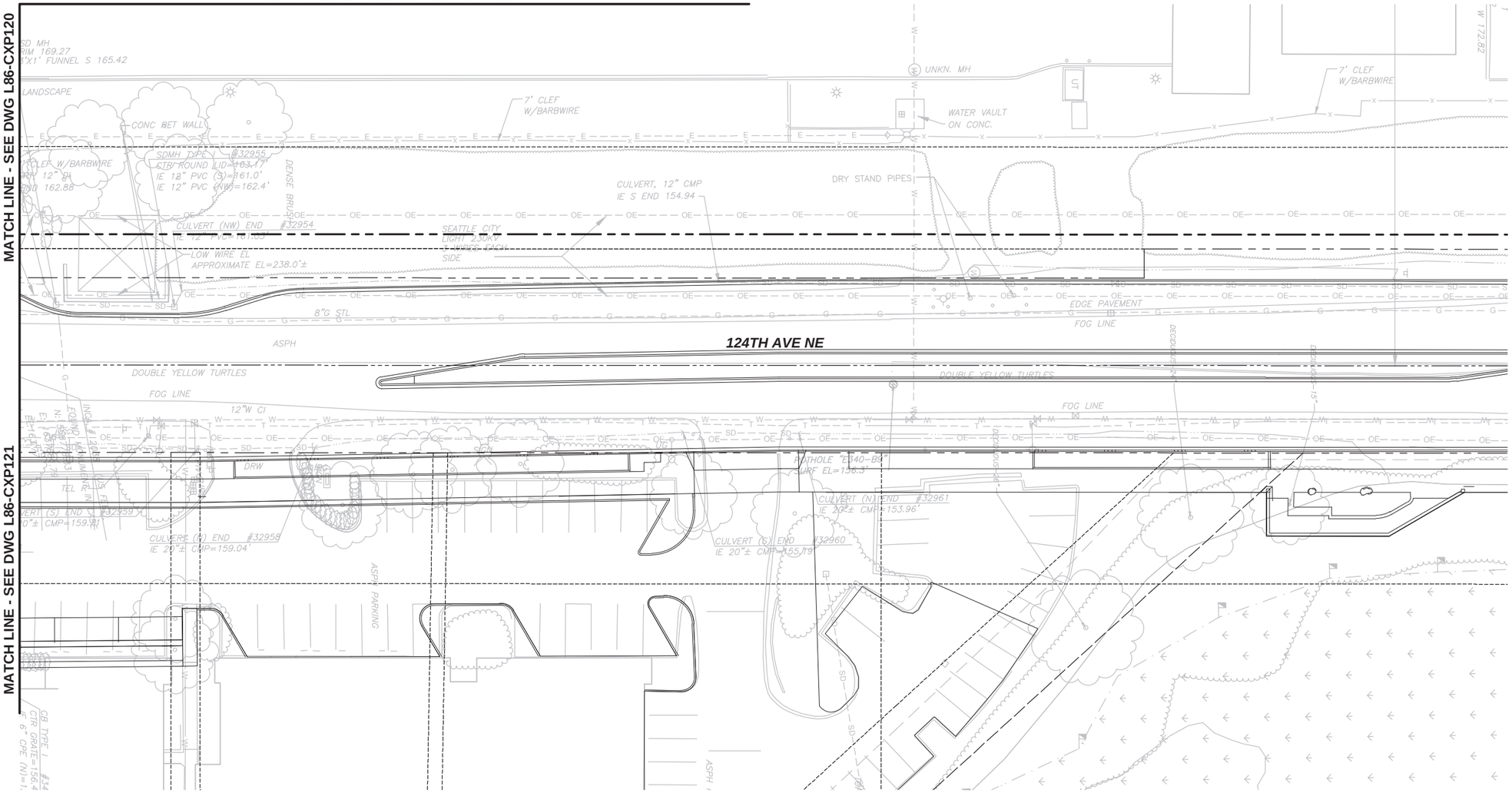
EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
CIVIL
DEMOLITION AND REMOVAL PLAN

DRAWING No.: L86-CXP151
LOCATION ID: E22
SHEET No.: 11
REV: 0

MATCH LINE - SEE DWG L86-CXP151

MATCH LINE - SEE DWG L86-CXP120

MATCH LINE - SEE DWG L86-CXP121



XREF LIST:
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xE335-L86-KAP100
xE335-L86-RPP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xEL-0834rx
xEL-0834sf
xEL-0834ut
xE335-L86-CXP100
xEL-0831vg
xEL-0834vg
xE335-L86-LTP100
GB-SEAL-MJM31003
xE335_207199_RD_Design
xE335_207323_RD_Design
xE340_192465_RD_Design
xE340_B120S3C-PPLAN

NOTES:

1. SEE COMPOSITE UTILITY DRAWINGS L86-UCP100 THRU L86-UCP152 AND DRAINAGE DRAWINGS L86-CDP100 THRU L86-CDP150 FOR UTILITIES TO BE REMOVED AND THOSE TO REMAIN.
2. SEE ILLUMINATION DRAWINGS L86-CLP100 THRU L86-CLP143 FOR LUMINAIRES TO BE REMOVED AND THOSE TO REMAIN.
3. SEE PAVEMENT MARKING AND SIGNAGE DRAWINGS L86-CMP100 THRU L86-CMP113 FOR SIGN REMOVAL.
4. SEE LEGEND AND ABBREVIATION DRAWINGS G86-GZN001 THRU G86-GZN007 FOR SYMBOLS AND HATCH PATTERNS.
5. SEE DRAWINGS L86-TMP101 THRU L86-TMP209 FOR MAINTENANCE OF TRAFFIC, PEDESTRIAN ROUTES AND WORKZONE LIMITATIONS.

NOTES CONT'D:

6. SEE DRAWINGS L86-CCP001 THRU L86-CCP005 FOR HORIZONTAL CONTROL OF CONSTRUCTION FENCING AND CONTRACTOR STAGING AND LAYDOWN AREAS.
7. SAWCUTS WITHOUT HORIZONTAL CONTROL NOTED ARE FOR UNDERGROUND UTILITIES OR DRAINAGE IMPROVEMENTS. SEE DWG L86-CPD101, DETAIL G FOR SAWCUT LIMITS.
8. SAWCUT, REMOVAL OR PROTECTION OF EXISTING SIDEWALKS SHALL BE FIELD ADJUSTED TO THE NEAREST PANEL JOINT.
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NOTES CONT'D:

10. CONTRACTOR TO IDENTIFY, PERMIT AND RE-ESTABLISH MONUMENTS THAT WILL BE DISTURBED OR DESTROYED DURING CONSTRUCTION. SEE DRAWINGS L86-RMP101 THRU L86-RMP102.

N

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
01/22/16 | 7:52 AM | CALDWELLJ
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CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: K. IRELAND
APPROVED BY: J. SCHUTT

MONICA J. MORAVEC — STATE OF WASHINGTON — 21603 — REGISTERED PROFESSIONAL ENGINEER

kpff

H J H FINAL DESIGN PARTNERS.

SUBMITTED BY: / DATE: / REVIEWED BY: / DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1" = 20'
FILENAME: E335-L86-CXP152
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
CIVIL
DEMOLITION AND REMOVAL PLAN

DRAWING No.: **L86-CXP152**
LOCATION ID: E22
SHEET No.: 12
REV: 0

XREF LIST:
xEL-0531rx
xEL-0531sf
xEL-0531ut
xE335-L86-CAP100
xE335-L86-CMP100
xE335-L86-KAP100
xE335-L86-RPP100
xE335-L86-SFP100
xE335-L86-UCP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CRP100
xE335-L86-CDP100
xE335-L86-SWP100
xE335-L86-JEP100
xE335-L86-JOP100
xE340_B120S3C-PPLAN
xE335-L86-KAP101
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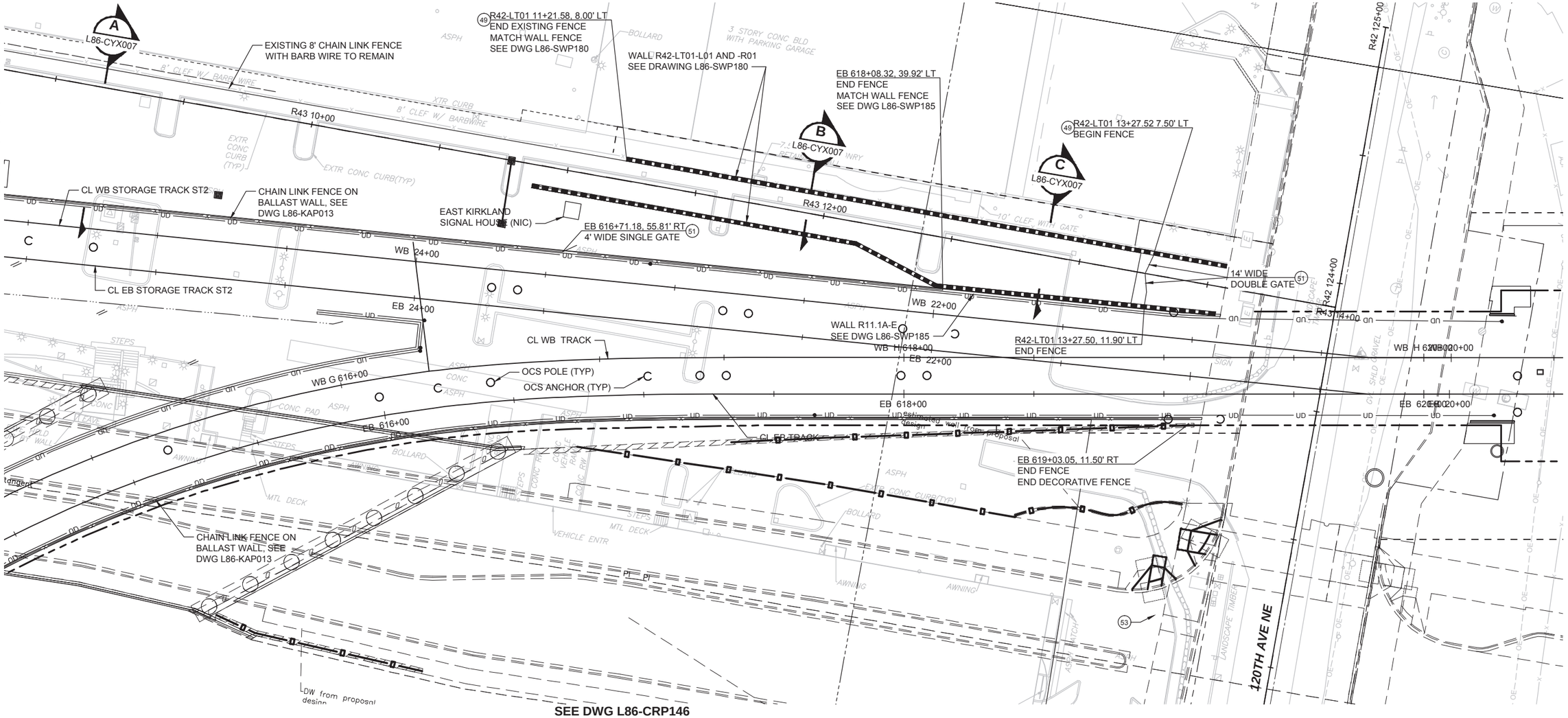
xE335_207199_BR_Design_West
GB-SEAL-GDS48863
xE335_207199_RD_Design
xE335_207323_RD_Design



NOTES:

1. ROADWAY IMPROVEMENTS SHALL COMPLY WITH THE CITY OF BELLEVUE DESIGN MANUAL UNLESS OTHERWISE NOTED.
2. ROADWAY WIDTHS ARE GIVEN TO THE FACE OF CURB, UNLESS NOTED OTHERWISE.
3. CURB HEIGHTS ARE 6 INCHES, UNLESS OTHERWISE NOTED.
4. SEE L86-SWP SERIES FOR WALL CONSTRUCTION.
5. SEE L86-CGP SERIES FOR GRADING AND PAVING CONSTRUCTION.
6. SEE L86-CPD SERIES FOR ADDITIONAL ROADWAY, SIDEWALK AND DRIVEWAY PAVING AND GRADING ENLARGEMENTS.
7. SEE L86-CMP SERIES FOR PAVEMENT MARKINGS AND SIGNAGE.
8. SEE L86-CDP SERIES FOR STORM DRAINAGE CONSTRUCTION.
9. SEE L86-LPP SERIES FOR LANDSCAPING CONSTRUCTION.

NOTES CONT'D:

10. SEE L86-UCP SERIES FOR COMPOSITE UTILITY PLANS.
11. SEE L86-CXP SERIES FOR HORIZONTAL CONTROL OF SAWCUT LINES.

CONSTRUCTION NOTES:

49 INSTALL CHAIN LINK FENCE, SEE STANDARD DRAWING STD-CRD001.
51 INSTALL CHAIN LINK GATE, SEE STANDARD DRAWING STD-CRD002.
53 INSTALL DECORATIVE PICKET FENCE, SEE STANDARD DRAWING STD-SED142.

N
20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
VERIFIED BY: / DATE:
01/22/16 | 7:39 AM | CALDWELLJ
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PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: J. MATTHEWS
APPROVED BY: J. SCHUTT

KEITH D. SCHWANTES — STATE OF WASHINGTON — 19810 — REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

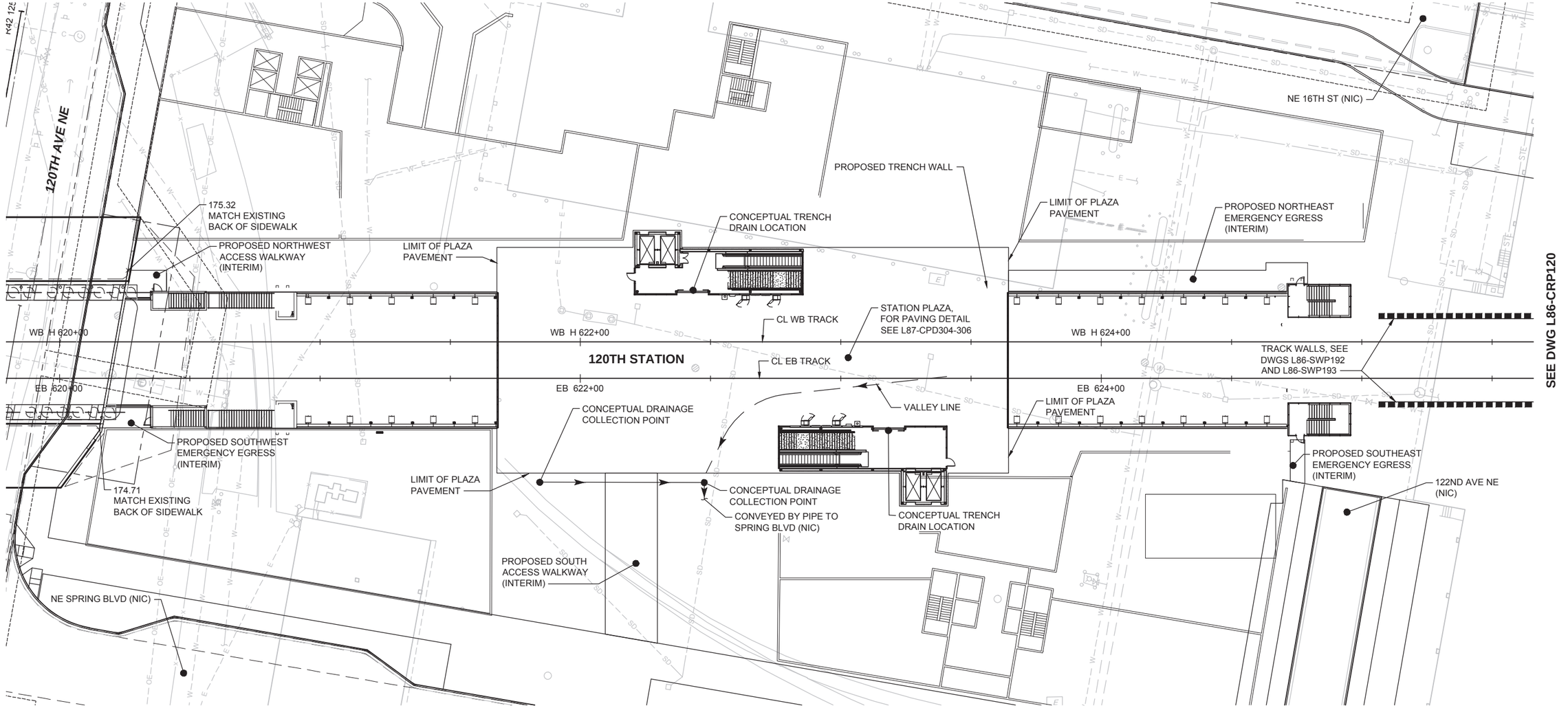
HNTB — SUBMITTED BY: — DATE:
H J H FINAL DESIGN PARTNERS. — REVIEWED BY: — DATE:
SOUNDTRANSIT

LINE IS 1" AT FULL SCALE

SCALE: 1" = 20'
FILENAME: E335-L86-CRP118
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
CIVIL
SITE PLAN
EB STA 615+00 TO EB STA 620+00

DRAWING No.: L86-CRP118
LOCATION ID: E20
SHEET No.: 13
REV: 0



N

20 10 0 20 40

SCALE IN FEET

XREF LIST:
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xE320-L85-KAP100
xE335-L86-CAP100
xE335-L86-CMP100
xE335-L86-KAP100
xE335-L86-RPP100
xE335-L86-SFP100
xE335-L86-UCP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CRP100
xE335-L86-CDP100
xE335-L86-SWP100
xE335-L86-JEP100
xE340-E21-APP200
xE335-L86-JOP100
xE340_B120S3C-PPLAN
xE335-E21-LSP100
GB-SEAL-GDS48863
xE335_207323_RD_Design
xE335_X1500001C-01-OE-Sta-Bldgs
xE335-E21-APP200
xE340_B120S3A-BRIDGE
xE335_X1500001C-01-OE-RD-HS

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

01/22/16 | 7:40 AM | CALDWELLJ
C:\WORK\TEMP-E335-100PCT-DUD\E335-L86-CRP119.DWG

BACKSTOP DESIGN LOCK

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: J. MATTHEWS
APPROVED BY: J. SCHUTT

GLENN D. SCHWANTES — STATE OF WASHINGTON — 48853 — REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

HNTB

SUBMITTED BY:

H J H FINAL DESIGN PARTNERS.

DATE:

REVIEWED BY:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

DATE:

SCALE: 1" = 20'
FILENAME: E335-L86-CRP119
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT

CIVIL
SITE PLAN
EB STA 620+00 TO EB STA 625+50

DRAWING No.: L86-CRP119
LOCATION ID: E21
SHEET No.: 14
REV: 0

XREF LIST:
xE330-L86-KAP100
xE320-L85-KAP100
xE335-L86-CAP100
xE335-L86-CMP100
xE335-L86-KAP100
xE335-L86-RPP100
xE335-L86-SFP100
xE335-L86-UCP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CRP100
xE335-L86-CDP100
xE335-L86-SWP100
xE335-L86-JEP100
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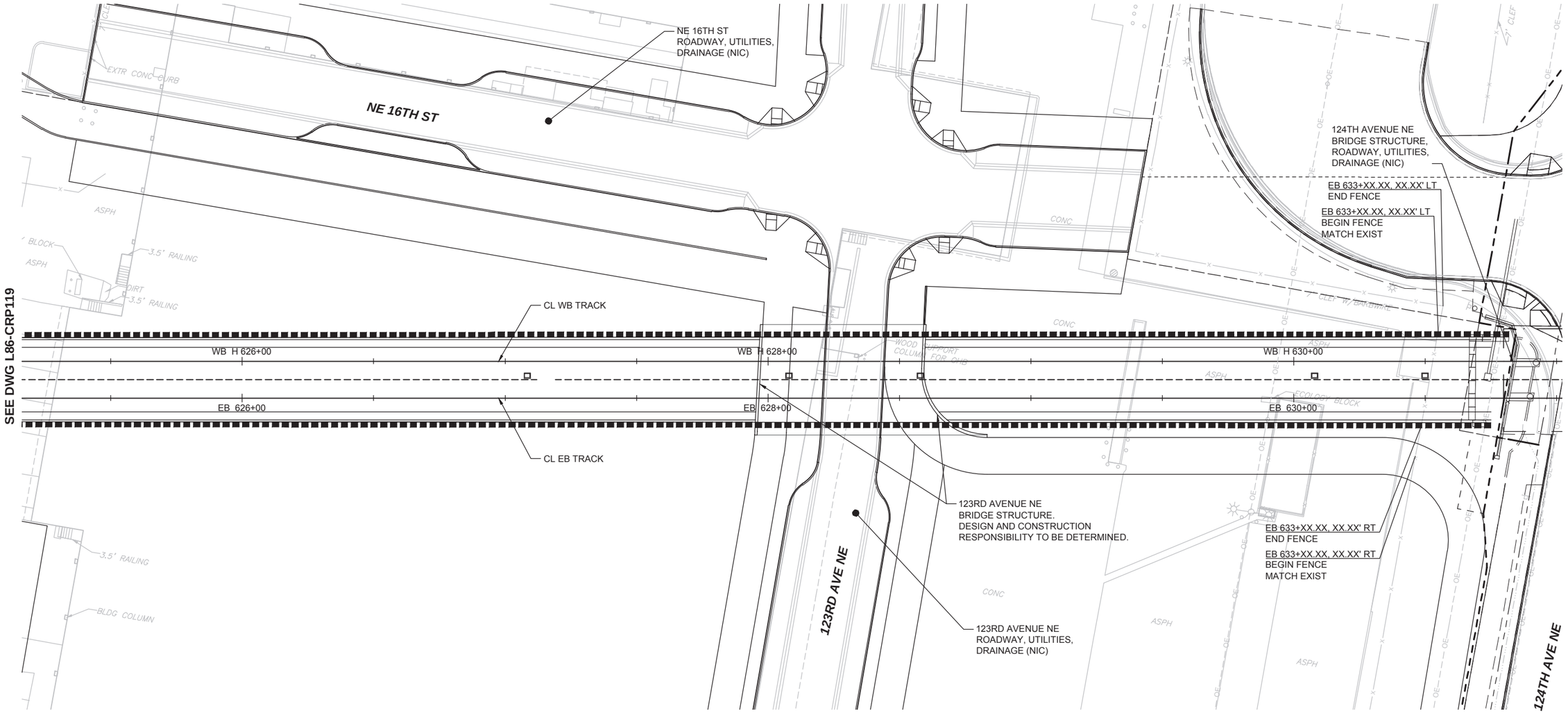
xE335_X1500001C-01-DE-RD-HS



N

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
VERIFIED BY: / DATE:
01/22/16 | 7:41 AM | CALDWELLJ
C:\WORK\TEMP-E335-100PCT-DUDE335-L86-CRP120.DWG

BACKSTOP DESIGN LOCK

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: J. MATTHEWS
APPROVED BY: J. SCHUTT

GUNNAR D. SCHWANTES — STATE OF WASHINGTON — 48863 — REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

HNTB — SUBMITTED BY:

H J H FINAL DESIGN PARTNERS. — DATE: — REVIEWED BY:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT — DATE:

SCALE: 1" = 20'
FILENAME: E335-L86-CRP120
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
CIVIL
SITE PLAN
EB STA 625+50 TO EB STA 631+00

DRAWING No.: L86-CRP120
LOCATION ID: E22
SHEET No.: 15 REV: 0

XREF LIST:
xE335-L86-CAP100
xE335-L86-CMP100
xE335-L86-KAP100
xE335-L86-RPP100
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CRP100
xE335-L86-SWP100
xE335-L86-JOP100
GB-SEAL-MJM31003
xE335_207199_RD_Design
xE335_207323_RD_Design

NOTES:

1. ROADWAY IMPROVEMENTS SHALL COMPLY WITH THE CITY OF BELLEVUE DESIGN MANUAL UNLESS OTHERWISE NOTED.
2. ROADWAY WIDTHS ARE GIVEN TO THE FACE OF CURB, UNLESS NOTED OTHERWISE.
3. CURB HEIGHTS ARE 6 INCHES, UNLESS OTHERWISE NOTED.
4. SEE L86-SWP SERIES FOR WALL CONSTRUCTION.
5. SEE L86-CGP SERIES FOR GRADING AND PAVING CONSTRUCTION.
6. SEE L86-CPD SERIES FOR ADDITIONAL ROADWAY, SIDEWALK AND DRIVEWAY PAVING AND GRADING ENLARGEMENTS.
7. SEE L86-CMP SERIES FOR PAVEMENT MARKINGS AND SIGNAGE.
8. SEE L86-CDP SERIES FOR STORM DRAINAGE CONSTRUCTION.

NOTES CONT'D:

9. SEE L86-LPP SERIES FOR LANDSCAPING CONSTRUCTION.
10. SEE L86-UCP SERIES FOR COMPOSITE UTILITY PLANS.
11. SEE L86-CXP SERIES FOR HORIZONTAL CONTROL OF SAWCUT LINES.

CONSTRUCTION NOTES:

(X) TBD

N

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

01/22/16 | 7:42 AM | CALDWELLJ
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PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: J. MATTHEWS
APPROVED BY: J. SCHUTT

MONICA J. MORRELL — STATE OF WASHINGTON — 31003 — REGISTERED PROFESSIONAL ENGINEER

kpff

SUBMITTED BY:

H J H FINAL DESIGN PARTNERS.

DATE:

REVIEWED BY:

DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

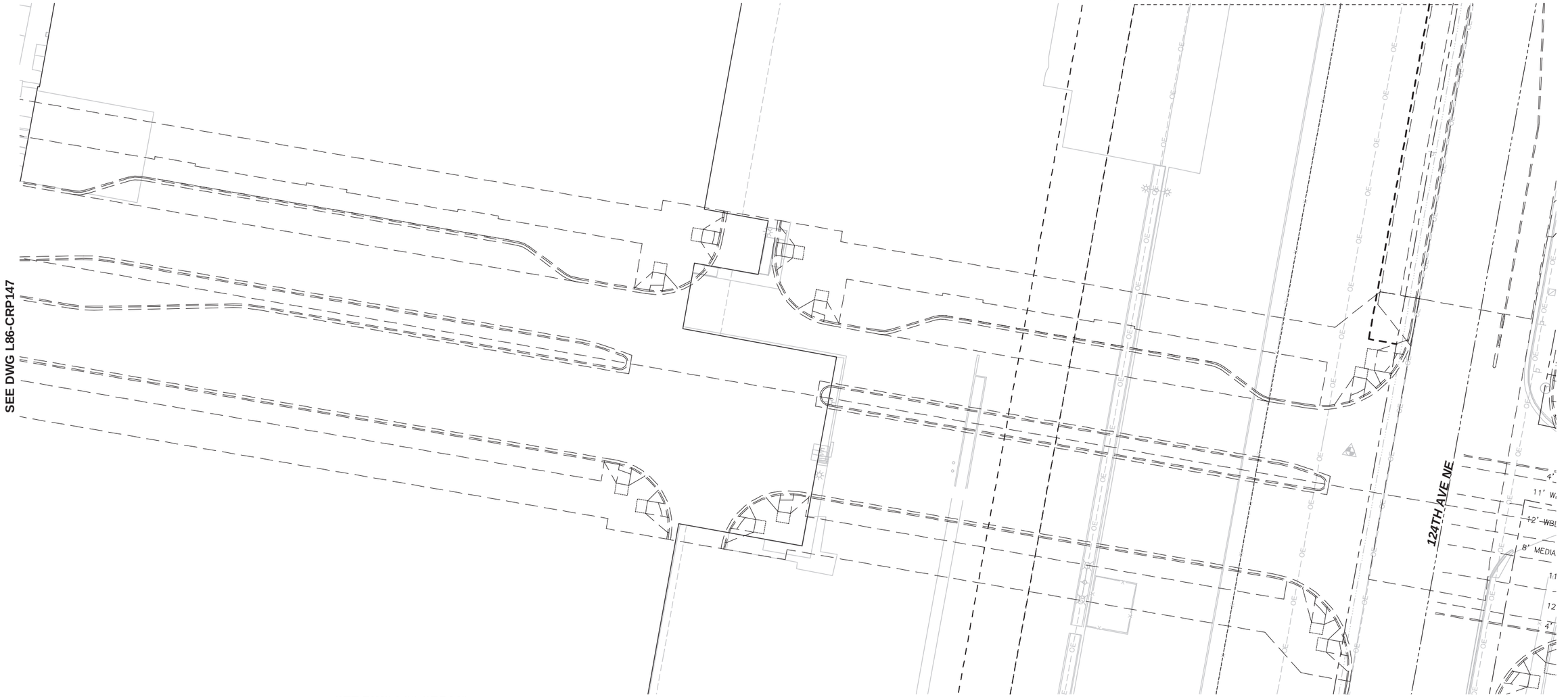
SCALE: 1" = 20'
FILENAME: E335-L86-CRP147
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT

CIVIL
SITE PLAN

DRAWING No.: **L86-CRP147**
LOCATION ID: E22
SHEET No.: 16
REV: 0

XREF LIST:
xE335-L86-CAP100
xE335-L86-CMP100
xE335-L86-KAP100
xE335-L86-RPP100
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831nx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CRP100
xE335-L86-SWP100
xE335-L86-JOP100
GB-SEAL-MJM31003
xE335_207323_RD_Design
xE340_192465_RD_Design



NOTES:

1. ROADWAY IMPROVEMENTS SHALL COMPLY WITH THE CITY OF BELLEVUE DESIGN MANUAL UNLESS OTHERWISE NOTED.
2. ROADWAY WIDTHS ARE GIVEN TO THE FACE OF CURB, UNLESS NOTED OTHERWISE.
3. CURB HEIGHTS ARE 6 INCHES, UNLESS OTHERWISE NOTED.
4. SEE L86-SWP SERIES FOR WALL CONSTRUCTION.
5. SEE L86-CGP SERIES FOR GRADING AND PAVING CONSTRUCTION.
6. SEE L86-CPD SERIES FOR ADDITIONAL ROADWAY, SIDEWALK AND DRIVEWAY PAVING AND GRADING ENLARGEMENTS.
7. SEE L86-CMP SERIES FOR PAVEMENT MARKINGS AND SIGNAGE.
8. SEE L86-CDP SERIES FOR STORM DRAINAGE CONSTRUCTION.
9. SEE L86-LPP SERIES FOR LANDSCAPING CONSTRUCTION.

NOTES CONT'D:

10. SEE L86-UCP SERIES FOR COMPOSITE UTILITY PLANS.
11. SEE L86-CXP SERIES FOR HORIZONTAL CONTROL OF SAWCUT LINES.

CONSTRUCTION NOTES:

Ⓧ TBD

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
VERIFIED BY: / DATE:
01/22/16 | 7:43 AM | CALDWELLJ
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PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: J. MATTHEWS
APPROVED BY: J. SCHUTT

MONICA J. MORRELL — STATE OF WASHINGTON — 31003 — REGISTERED PROFESSIONAL ENGINEER

kpff

SUBMITTED BY:

H J H FINAL DESIGN PARTNERS.

DATE:

REVIEWED BY:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

DATE:

SCALE: 1" = 20'
FILENAME: E335-L86-CRP148
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

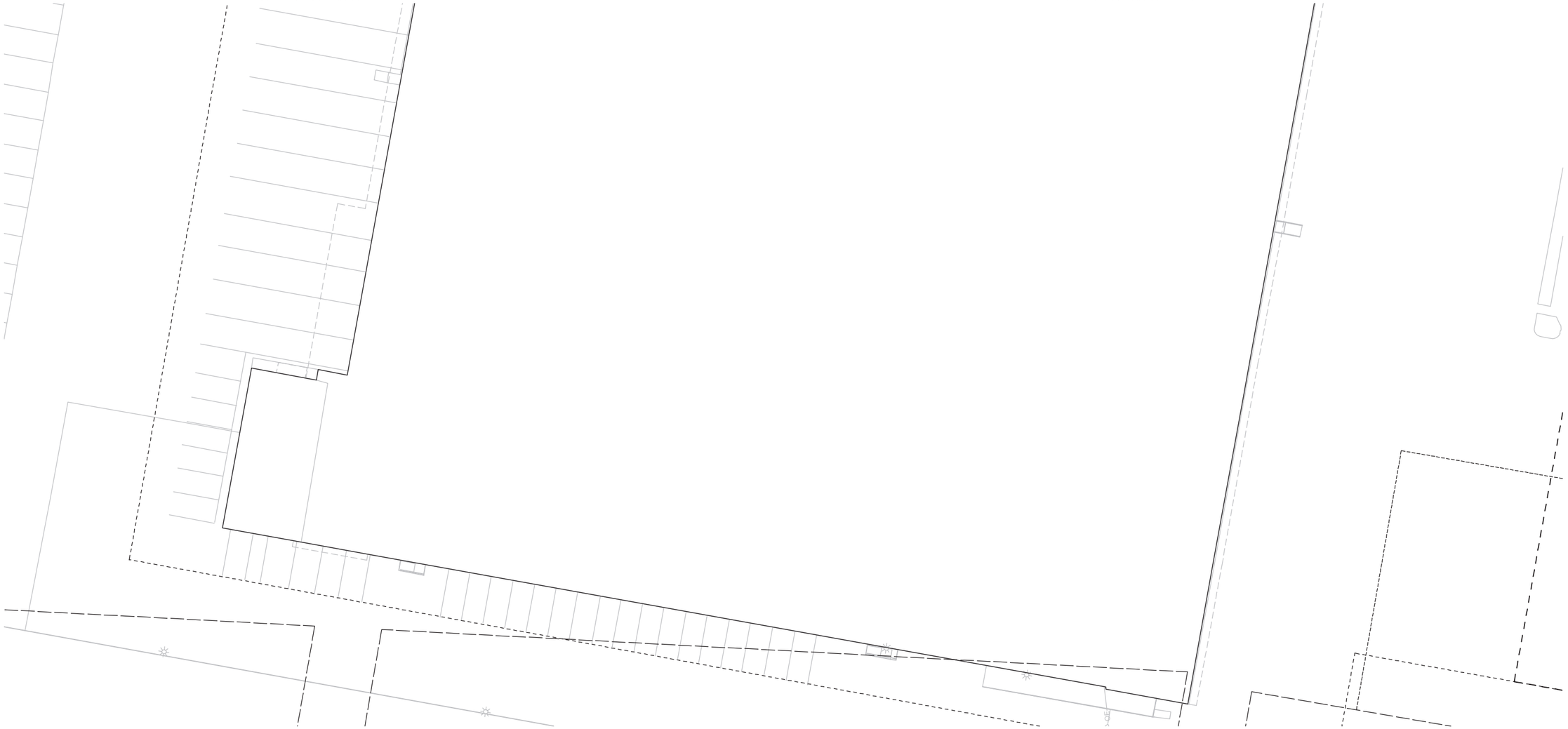
EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT

CIVIL
SITE PLAN

DRAWING No.: **L86-CRP148**
LOCATION ID: E22
SHEET No.: 17
REV: 0

SEE DWG L86-CRP147

SEE DWG L86-CRP148



XREF LIST:
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xE335-L86-KAP100
xE335-L86-RPP100
xE335-L86-SFP100
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xE335-L86-CDP100
xEL-0831nx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CRP100
xE335-L86-SWP100
xE335-L86-JOP100
GB-SEAL-MJM31003
xE335_207323_RD_Design
xE340_192465_RD_Design

NOTES:

1. ROADWAY IMPROVEMENTS SHALL COMPLY WITH THE CITY OF BELLEVUE DESIGN MANUAL UNLESS OTHERWISE NOTED.
2. ROADWAY WIDTHS ARE GIVEN TO THE FACE OF CURB, UNLESS NOTED OTHERWISE.
3. CURB HEIGHTS ARE 6 INCHES, UNLESS OTHERWISE NOTED.
4. SEE L86-SWP SERIES FOR WALL CONSTRUCTION.
5. SEE L86-CGP SERIES FOR GRADING AND PAVING CONSTRUCTION.
6. SEE L86-CPD SERIES FOR ADDITIONAL ROADWAY, SIDEWALK AND DRIVEWAY PAVING AND GRADING ENLARGEMENTS.
7. SEE L86-CMP SERIES FOR PAVEMENT MARKINGS AND SIGNAGE.
8. SEE L86-CDP SERIES FOR STORM DRAINAGE CONSTRUCTION.
9. SEE L86-LPP SERIES FOR LANDSCAPING CONSTRUCTION.

NOTES CONT'D:

10. SEE L86-UCP SERIES FOR COMPOSITE UTILITY PLANS.
11. SEE L86-CXP SERIES FOR HORIZONTAL CONTROL OF SAWCUT LINES.

N

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
01/22/16 | 7:43 AM | CALDWELLJ
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CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: J. MATTHEWS
APPROVED BY: J. SCHUTT

STATE OF WASHINGTON MONICA J. MORRIS 31003 REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

kpff

SUBMITTED BY:

HJH FINAL DESIGN PARTNERS.

DATE:

REVIEWED BY:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

DATE:

SCALE: 1" = 20'
FILENAME: E335-L86-CRP149
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT

CIVIL
SITE PLAN

DRAWING No.: **L86-CRP149**
LOCATION ID: E22
SHEET No.: 18
REV: 0

XREF LIST:
xE335-L86-CAP100
xE335-L86-CMP100
xE335-L86-KAP100
xE335-L86-RPP100
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CRP100
xE335-L86-SWP100
xE335-L86-JOP100
xE335-L86-JEP100
GB-SEAL-MJM31003
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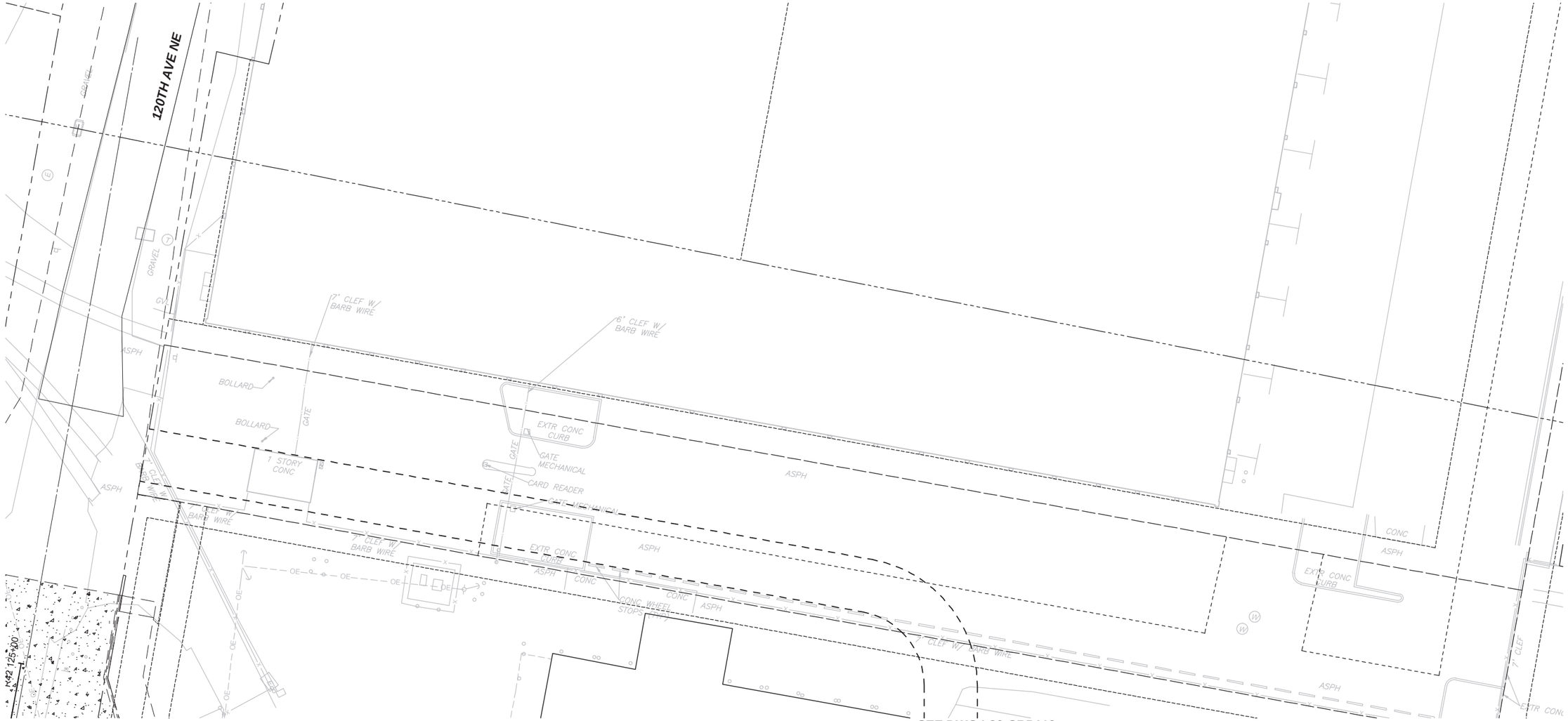

NOTES:

1. ROADWAY IMPROVEMENTS SHALL COMPLY WITH THE CITY OF BELLEVUE DESIGN MANUAL UNLESS OTHERWISE NOTED.
2. ROADWAY WIDTHS ARE GIVEN TO THE FACE OF CURB, UNLESS NOTED OTHERWISE.
3. CURB HEIGHTS ARE 6 INCHES, UNLESS OTHERWISE NOTED.
4. SEE L86-SWP SERIES FOR WALL CONSTRUCTION.
5. SEE L86-CGP SERIES FOR GRADING AND PAVING CONSTRUCTION.
6. SEE L86-CPD SERIES FOR ADDITIONAL ROADWAY, SIDEWALK AND DRIVEWAY PAVING AND GRADING ENLARGEMENTS.
7. SEE L86-CMP SERIES FOR PAVEMENT MARKINGS AND SIGNAGE.
8. SEE L86-CDP SERIES FOR STORM DRAINAGE CONSTRUCTION.
9. SEE L86-LPP SERIES FOR LANDSCAPING CONSTRUCTION.

NOTES CONT'D:

10. SEE L86-UCP SERIES FOR COMPOSITE UTILITY PLANS.
11. SEE L86-CXP SERIES FOR HORIZONTAL CONTROL OF SAWCUT LINES.

N

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

01/22/16 | 7:44 AM | CALDWELLJ
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PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: J. MATTHEWS
APPROVED BY: J. SCHUTT

MONICA J. MORRISETT — STATE OF WASHINGTON — 31003 — REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

kpff

SUBMITTED BY:

H J H FINAL DESIGN PARTNERS.

DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1" = 20'
FILENAME: E335-L86-CRP150
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
CIVIL
SITE PLAN

DRAWING No.: **L86-CRP150**
LOCATION ID: E22
SHEET No.: 19
REV: 0

XREF LIST:
xE330-L86-KAP100
xE320-L85-KAP100
xE335-L86-CAP100
xE335-L86-CMP100
xE335-L86-KAP100
xE335-L86-RPP100
xE340-L87-RZV020
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CRP100
xE335-L86-SWP100
xE335-L86-JOP100
GB-SEAL-MJM31003
xE340_192465_RD_Design

NOTES:

1. ROADWAY IMPROVEMENTS SHALL COMPLY WITH THE CITY OF BELLEVUE DESIGN MANUAL UNLESS OTHERWISE NOTED.
2. ROADWAY WIDTHS ARE GIVEN TO THE FACE OF CURB, UNLESS NOTED OTHERWISE.
3. CURB HEIGHTS ARE 6 INCHES, UNLESS OTHERWISE NOTED.
4. SEE L86-SWP SERIES FOR WALL CONSTRUCTION.
5. SEE L86-CGP SERIES FOR GRADING AND PAVING CONSTRUCTION.
6. SEE L86-CPD SERIES FOR ADDITIONAL ROADWAY, SIDEWALK AND DRIVEWAY PAVING AND GRADING ENLARGEMENTS.
7. SEE L86-CMP SERIES FOR PAVEMENT MARKINGS AND SIGNAGE.
8. SEE L86-CDP SERIES FOR STORM DRAINAGE CONSTRUCTION.
9. SEE L86-LPP SERIES FOR LANDSCAPING CONSTRUCTION.

NOTES CONT'D:

10. SEE L86-UCP SERIES FOR COMPOSITE UTILITY PLANS.
11. SEE L86-CXP SERIES FOR HORIZONTAL CONTROL OF SAWCUT LINES.

N

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
01/22/16 | 7:45 AM | CALDWELLJ
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CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: J. MATTHEWS
APPROVED BY: J. SCHUTT

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

MONICA J. MORRISETTE — STATE OF WASHINGTON — 31003 — REGISTERED PROFESSIONAL ENGINEER

kpff

FINAL DESIGN PARTNERS.

SUBMITTED BY: | DATE: | REVIEWED BY: | DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1" = 20'
FILENAME: E335-L86-CRP151
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
CIVIL
SITE PLAN

DRAWING No.: L86-CRP151
LOCATION ID: E22
SHEET No.: 20 REV: 0

XREF LIST:
xE335-L86-CAP100
xE335-L86-CMP100
xE335-L86-KAP100
xE335-L86-RPP100
xE335-L86-SFP100
xE335-L86-UCP100
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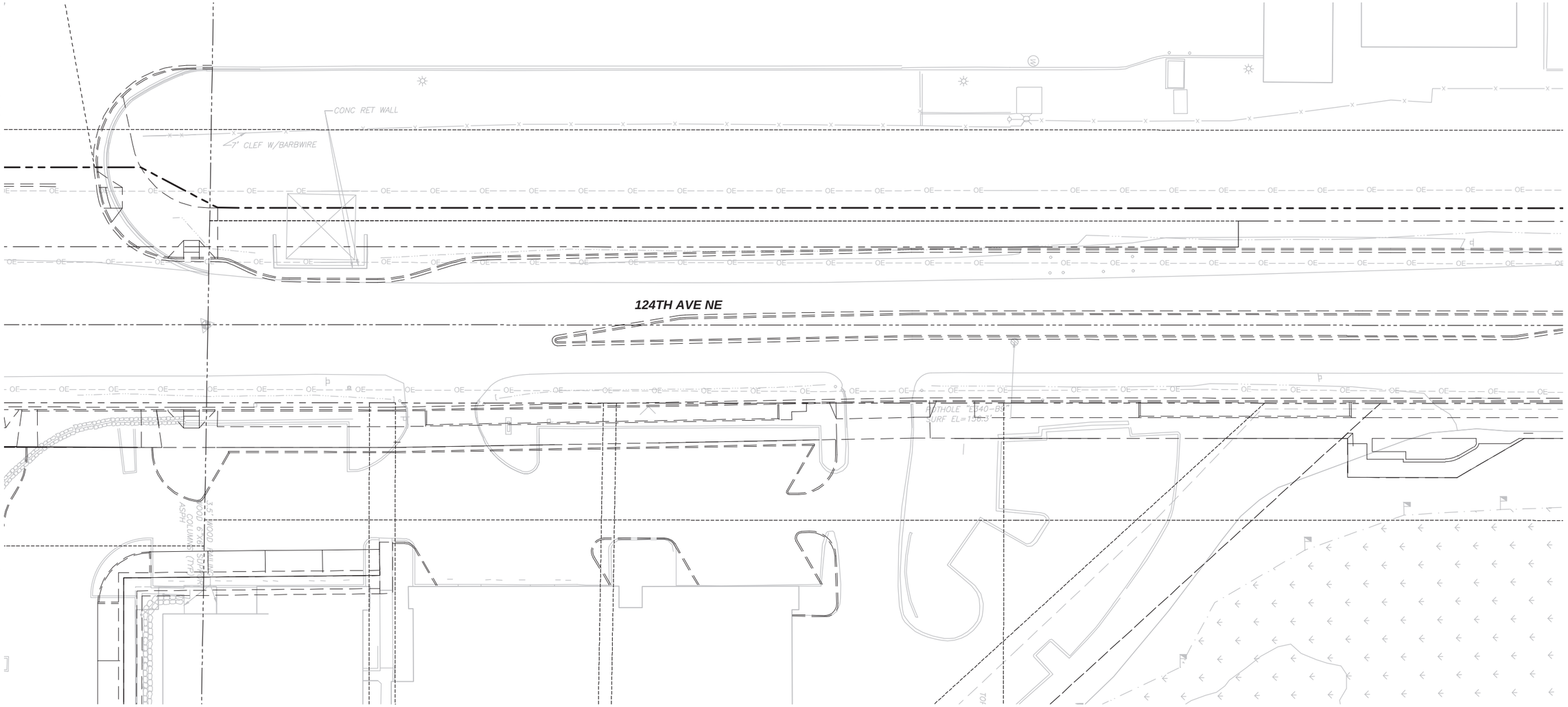
xEL-0834sf
xEL-0834ut
xE335-L86-CRP100
xE335-L86-SWP100
xE335-L86-JOP100
GB-SEAL-MJM31003
xE340_192465_RD_Design

SEE DWG L86-CRP151

SEE DWG L86-CRP120



SEE DWG L86-CRP121

NOTES:

1. ROADWAY IMPROVEMENTS SHALL COMPLY WITH THE CITY OF BELLEVUE DESIGN MANUAL UNLESS OTHERWISE NOTED.
2. ROADWAY WIDTHS ARE GIVEN TO THE FACE OF CURB, UNLESS NOTED OTHERWISE.
3. CURB HEIGHTS ARE 6 INCHES, UNLESS OTHERWISE NOTED.
4. SEE L86-SWP SERIES FOR WALL CONSTRUCTION.
5. SEE L86-CGP SERIES FOR GRADING AND PAVING CONSTRUCTION.
6. SEE L86-CPD SERIES FOR ADDITIONAL ROADWAY, SIDEWALK AND DRIVEWAY PAVING AND GRADING ENLARGEMENTS.
7. SEE L86-CMP SERIES FOR PAVEMENT MARKINGS AND SIGNAGE.
8. SEE L86-CDP SERIES FOR STORM DRAINAGE CONSTRUCTION.
9. SEE L86-LPP SERIES FOR LANDSCAPING CONSTRUCTION.

NOTES CONT'D:

10. SEE L86-UCP SERIES FOR COMPOSITE UTILITY PLANS.
11. SEE L86-CXP SERIES FOR HORIZONTAL CONTROL OF SAWCUT LINES.

N

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SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

01/22/16 | 7:46 AM | CALDWELLJ
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PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: J. MATTHEWS
APPROVED BY: J. SCHUTT

MONICA J. MORRICE — STATE OF WASHINGTON — 21603 — REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

kpff

SUBMITTED BY:

H J H FINAL DESIGN PARTNERS.

DATE:

REVIEWED BY:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

DATE:

SCALE: 1" = 20'
FILENAME: E335-L86-CRP152
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
CIVIL
SITE PLAN

DRAWING No.: L86-CRP152
LOCATION ID: E22
SHEET No.: 21
REV: 0

SEE DWG L86-CGP131

SEE DWG L86-CGP117

SEE DWG L86-CGP119

RETAINING WALLS
SEE L86-SWP180

FACE OF TRACK
BALLAST WALL
LIMITS OF GRAVEL
SEE KAP SHEETS

R42-LT01 13+57.51, 9.50' RT, 8.00' LT
END HMA
MATCH BACK OF SIDEWALK

R42-LT01 13+22.51, 9.50' RT, 8.00' LT
END GRAVEL
BEGIN HMA

CL WB STORAGE TRACK ST2

EAST KIRKLAND
SIGNAL HOUSE (NIC)

CL EB STORAGE TRACK ST2

CL WB TRACK

CL EB TRACK

TRACK BALLAST WALL
SEE KAP SHEETS

TRACK WALL
SEE L86-SWP185

OCS POLE (TYP)

9.00 TYP

R43-10+00

R43-12+00

R43-13+04

R42 125+00

R42 124+00

WB 24+00

WB 22+00

WB G 616+00

WB H 618+00

WB H 620+00

EB 24+00

EB 22+00

EB 618+00

EB 620+00

EB 616+00

120TH AVE NE

SEE DWG L86-CGP146

NOTES:

1. FOR PAVEMENT HATCHING LEGEND, SEE DRAWINGS G86-GZN006 & G86-GZN007.
2. FOR PAVEMENT SECTIONS AND MATERIALS, SEE TYPICAL SECTIONS AND PAVING AND GRADING DETAILS, CYX AND CDP DRAWINGS.
3. SITE GRADING CONTOURS ARE SHOWN FOR CONSTRUCTION, ROADWAY CONTOURS SHOWN FOR REFERENCE ONLY AND ARE NOT FOR CONSTRUCTION.
4. SEE CPD DRAWINGS FOR ADDITIONAL ROADWAY, SIDEWALK AND DRIVEWAY PAVING AND AND GRADING ENLARGEMENTS.
5. ROADWAY WIDTHS ARE GIVEN TO FACE OF CURB, UNLESS OTHERWISE NOTED.
6. ALL CURBS ARE 6 INCHES TALL UNLESS OTHERWISE NOTED.
7. ELEVATIONS REFERENCE FLOW LINE OF CURB UNLESS OTHERWISE NOTED.
8. SEE CXP DRAWINGS FOR SAWCUT LIMITS.

CONSTRUCTION NOTES:

(3) COMMERCIAL ROADWAY HMA PAVEMENT, SEE DETAIL A/L86-CPD101.

(7) GRAVEL SURFACING, SEE DETAIL E/L86-CPD101.

(8) HEAVY DUTY GRAVEL, SEE DETAIL C/L86-CPD101.

N

20 10 0 20 40

SCALE IN FEET

XREF LIST:
xEL-0531rx
xEL-0531tsf
xEL-0531ut
xE335-L86-CAP100
xE335-L86-KAP100
xE335-L86-RPP100
xE340-L87-RZV020
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831rx
xEL-0831tsf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CRP100
xE335-L86-CGP100
xE335-L86-CPP100
xEL-0831rcn
xEL-0531cn
xE335-L86-SWP100
xE335-L86-SEP100
xE335-L86-JEP100
xE335-L86-JOP100
xE335-L86-CGP400
xE340_B120S3C-PPLAN
xE335-L86-KAP101
GB-SEAL-GDS48863
xE335_207199_BR_Design_East
xE335_207199_BR_Design_West
xE335_207323_RD_Design
xE335_207199_RD_Design

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

01/22/16 | 7:29 AM | CALDWELLJ
C:\WORK\TEMP-E335-100PCT-DUD\E335-L86-CGP118.DWG

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: J. MATTHEWS
APPROVED BY: J. SCHUTT

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

SUBMITTED BY:
DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

SCALE: 1" = 20'
FILENAME: E335-L86-CGP118
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT

CIVIL
GRADING AND PAVING PLAN
EB STA 615+00 TO EB STA 620+00

DRAWING No.: L86-CGP118
LOCATION ID: E20
SHEET No.: 22
REV: 0

SEE DWG L86-CGP150

SEE DWG L86-CGP118

SEE DWG L86-CGP120

SEE DWG L86-CGP147

NOTES:

1. FOR PAVEMENT HATCHING LEGEND, SEE DRAWINGS G86-GZN006 & G86-GZN007.
2. FOR PAVEMENT SECTIONS AND MATERIALS, SEE TYPICAL SECTIONS AND PAVING AND GRADING DETAILS, CYX AND CDP DRAWINGS.
3. SITE GRADING CONTOURS ARE SHOWN FOR CONSTRUCTION, ROADWAY CONTOURS SHOWN FOR REFERENCE ONLY AND ARE NOT FOR CONSTRUCTION.
4. SEE CPD DRAWINGS FOR ADDITIONAL ROADWAY, SIDEWALK AND DRIVEWAY PAVING AND AND GRADING ENLARGEMENTS.
5. ROADWAY WIDTHS ARE GIVEN TO FACE OF CURB, UNLESS OTHERWISE NOTED.
6. ALL CURBS ARE 6 INCHES TALL UNLESS OTHERWISE NOTED.
7. ELEVATIONS REFERENCE FLOW LINE OF CURB UNLESS OTHERWISE NOTED.
8. SEE CXP DRAWINGS FOR SAWCUT LIMITS.

CONSTRUCTION NOTES:

(4) PARKING LOT HMA PAVEMENT, SEE DETAIL B/L86-CPD101.

(7) GRAVEL SURFACING, SEE DETAIL E/L86-CPD101.

N

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

01/22/16 | 7:30 AM | CALDWELLJ
C:\WORK\TEMP-E335-100PCT-DUD\E335-L86-CGP119.DWG

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: J. MATTHEWS
APPROVED BY: J. SCHUTT

KENNETH D. SCHUTT — STATE OF WASHINGTON — 48852 — REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

HNTB

H J H FINAL DESIGN PARTNERS.

SUBMITTED BY: | DATE: | REVIEWED BY: | DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1" = 20'
FILENAME: E335-L86-CGP119
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
CIVIL
GRADING AND PAVING PLAN
EB STA 620+00 TO EB STA 625+50

DRAWING No.: L86-CGP119
LOCATION ID: E21
SHEET No.: 23
REV: 0

SEE DWG L86-CGP151

SEE DWG L86-CGP119

SEE DWG L86-CGP121

SEE DWG L86-CGP148

EB XX+XX.XX, XX.X' LT
LIMITS OF GRAVEL
MATCH EXIST

EB XX+XX.XX, XX.X' LT
LIMITS OF GRAVEL
MATCH EXIST

EB XX+XX.XX, XX.X' LT
LIMITS OF GRAVEL
MATCH EXIST

EB XX+XX.XX, XX.X' LT
LIMITS OF GRAVEL
MATCH EXIST

EB XX+XX.XX, XX.X' LT
LIMITS OF GRAVEL
MATCH EXIST

EB XX+XX.XX, XX.X' LT
LIMITS OF GRAVEL
MATCH EXIST

EB XX+XX.XX, XX.X' LT
LIMITS OF GRAVEL
MATCH EXIST

177.20
GRAVEL SURFACING
ELEVATION (APPROX)

EB XX+XX.XX, X.X' XT
END GRAVEL
MATCH EXIST

CL WB TRACK

TRACK WALL
SEE SWPXXX

WB H 626+00

WB H 628+00

WB H 630+00

EB 626+00

EB 628+00

EB 630+00

CL EB TRACK

EB XX+XX.XX, XX.X' XT
LIMITS OF GRAVEL
MATCH EXIST

EB XX+XX.XX, X.XX' XT
END GRAVEL
MATCH EXIST

177.20
GRAVEL SURFACING
ELEVATION (APPROX)

124TH AVE NE

NOTES:

1. FOR PAVEMENT HATCHING LEGEND, SEE DRAWINGS G86-GZN006 & G86-GZN007.
2. FOR PAVEMENT SECTIONS AND MATERIALS, SEE TYPICAL SECTIONS AND PAVING AND GRADING DETAILS, CYX AND CDP DRAWINGS.
3. SITE GRADING CONTOURS ARE SHOWN FOR CONSTRUCTION, ROADWAY CONTOURS SHOWN FOR REFERENCE ONLY AND ARE NOT FOR CONSTRUCTION.
4. SEE CPD DRAWINGS FOR ADDITIONAL ROADWAY, SIDEWALK AND DRIVEWAY PAVING AND AND GRADING ENLARGEMENTS.
5. ROADWAY WIDTHS ARE GIVEN TO FACE OF CURB, UNLESS OTHERWISE NOTED.
6. ALL CURBS ARE 6 INCHES TALL UNLESS OTHERWISE NOTED.
7. ELEVATIONS REFERENCE FLOW LINE OF CURB UNLESS OTHERWISE NOTED.
8. SEE CXP DRAWINGS FOR SAWCUT LIMITS.

CONSTRUCTION NOTES:

(7) GRAVEL SURFACING, SEE DETAIL E/L86-CPD101.

N

20 10 0 20 40
SCALE IN FEET

XREF LIST:
xE335-L86-CAP100
xE335-L86-KAP100
xE335-L86-RPP100
xE340-L87-RZV020
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831nx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CRP100
xE335-L86-CGP100
xE335-L86-CPP100
xE335-L86-SWP100
xE335-L86-SEP100
xEL-0831cn
xE335-L86-JEP100
xE335-L86-KAP001
xE335-L86-JOP100
xE340_192465_RD_Design
xE335_207199_RD_Design
xE335_207323_RD_Design
GB-SEAL-GDS48863

ORIGINATED BY: / DATE: / /
CHECKED BY: / DATE: / /
BACK-CHECKED BY: / DATE: / /
CORRECTED BY: / DATE: / /
VERIFIED BY: / DATE: / /

01/22/16 | 7:31 AM | CALDWELLJ
C:\WORK\TEMP-E335-100\PCT-DUD\E335-L86-CGP120.DWG

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: J. MATTHEWS
APPROVED BY: J. SCHUTT

EUGENE D. SCHWANTES — STATE OF WASHINGTON — 48863 — REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

HNTB

H J H FINAL DESIGN PARTNERS.

SUBMITTED BY: | DATE: | REVIEWED BY: | DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1" = 20'
FILENAME: E335-L86-CGP120
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
CIVIL
GRADING AND PAVING PLAN
EB STA 625+50 TO EB STA 631+00

DRAWING No.: L86-CGP120
LOCATION ID: E22
SHEET No.: 24
REV: 0

SEE DWG L86-CGP119

SEE DWG L86-CGP146

SEE DWG L86-CGP148

SEE DWG L86-CGP149

LIMITS OF GRAVEL MATCH EXISTING

LIMITS OF GRAVEL MATCH EXISTING

177.20
GRAVEL SURFACING ELEVATION (APPROX)

XREF LIST:
xE330-L86-KAP100
xE320-L85-KAP100
xE335-L86-CAP100
xE335-L86-CMP100
xE335-L86-KAP100
xE335-L86-RPP100
xE340-L87-RZV020
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE340-E21-APP200
xE340-E21-APP100
xE335-L86-CRP100
xE335-L86-CGP100
xE335-L86-CPP100
xEL-0831cn
xE335-L86-JOP100
xE335-L86-JEP100
xE335_207323_RD_Design
GB-SEAL-GDS48863

NOTES:

1. FOR PAVEMENT HATCHING LEGEND, SEE DRAWINGS G86-GZN006 & G86-GZN007.
2. FOR PAVEMENT SECTIONS AND MATERIALS, SEE TYPICAL SECTIONS AND PAVING AND GRADING DETAILS, CYX AND CDP DRAWINGS.
3. SITE GRADING CONTOURS ARE SHOWN FOR CONSTRUCTION, ROADWAY CONTOURS SHOWN FOR REFERENCE ONLY AND ARE NOT FOR CONSTRUCTION.
4. SEE CPD DRAWINGS FOR ADDITIONAL ROADWAY, SIDEWALK AND DRIVEWAY PAVING AND AND GRADING ENLARGEMENTS.
5. ROADWAY WIDTHS ARE GIVEN TO FACE OF CURB, UNLESS OTHERWISE NOTED.
6. ALL CURBS ARE 6 INCHES TALL UNLESS OTHERWISE NOTED.
7. ELEVATIONS REFERENCE FLOW LINE OF CURB UNLESS OTHERWISE NOTED.
8. SEE CXP DRAWINGS FOR SAWCUT LIMITS.

CONSTRUCTION NOTES:

(4) PARKING LOT HMA PAVEMENT, SEE DETAIL B/L86-CPD101.

(7) GRAVEL SURFACING, SEE DETAIL E/L86-CPD101.

N

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
01/22/16 | 7:32 AM | CALDWELLJ
C:\WORK\TEMP-E335-100PCT-DUDIE335-L86-CGP147.DWG

CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: J. MATTHEWS
APPROVED BY: J. SCHUTT

SUBMITTED BY:

DATE:

REVIEWED BY:

DATE:

LINE IS 1" AT FULL SCALE

SCALE: 1" = 20'
FILENAME: E335-L86-CGP147
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT

CIVIL
GRADING AND PAVING PLAN

DRAWING No.: **L86-CGP147**
LOCATION ID: E22
SHEET No.: 25
REV: 0

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

XREF LIST:
xE330-L86-KAP100
xE320-L85-KAP100
xE335-L86-CAP100
xE335-L86-CMP100
xE335-L86-KAP100
xE335-L86-RPP100
xE340-L87-RZV020
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831nx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CRP100
xE335-L86-CGP100
xE335-L86-CPP100
xEL-0831cn
xE335-L86-JOP100
xE335-L86-JEP100
xE340_124th-COB_Interim_Design _EL PD
xE335_207323_RD_Design
xE340_192465_RD_Design
GB-SEAL-GDS48863

SEE DWG L86-CGP147

SEE DWG L86-CGP120

LIMITS OF GRAVEL MATCH EXIST

7

177.20
GRAVEL SURFACING ELEVATION (APPROX)

LIMITS OF GRAVEL MATCH EXIST

124TH AVE NE

SEE DWG L86-CGP149

NOTES:

1. FOR PAVEMENT HATCHING LEGEND, SEE DRAWINGS G86-GZN006 & G86-GZN007.
2. FOR PAVEMENT SECTIONS AND MATERIALS, SEE TYPICAL SECTIONS AND PAVING AND GRADING DETAILS, CYX AND CDP DRAWINGS.
3. SITE GRADING CONTOURS ARE SHOWN FOR CONSTRUCTION, ROADWAY CONTOURS SHOWN FOR REFERENCE ONLY AND ARE NOT FOR CONSTRUCTION.
4. SEE CPD DRAWINGS FOR ADDITIONAL ROADWAY, SIDEWALK AND DRIVEWAY PAVING AND AND GRADING ENLARGEMENTS.
5. ROADWAY WIDTHS ARE GIVEN TO FACE OF CURB, UNLESS OTHERWISE NOTED.
6. ALL CURBS ARE 6 INCHES TALL UNLESS OTHERWISE NOTED.
7. ELEVATIONS REFERENCE FLOW LINE OF CURB UNLESS OTHERWISE NOTED.
8. SEE CXP DRAWINGS FOR SAWCUT LIMITS.

CONSTRUCTION NOTES:

(7) GRAVEL SURFACING, SEE DETAIL E/L86-CPD101.

N

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
01/22/16 | 7:32 AM | CALDWELLJ
C:\WORK\TEMP-E335-100PCT-DUD\E335-L86-CGP148.DWG

CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: J. MATTHEWS
APPROVED BY: J. SCHUTT

STATE OF WASHINGTON · BRIAN D. SCHWANTES · 48863 · REGISTERED PROFESSIONAL ENGINEER

HNTB

H J H FINAL DESIGN PARTNERS.

SUBMITTED BY: | DATE: | REVIEWED BY: | DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1" = 20'
FILENAME: E335-L86-CGP148
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
CIVIL
GRADING AND PAVING PLAN

DRAWING No.: L86-CGP148
LOCATION ID: E22
SHEET No.: 26
REV: 0

SEE DWG L86-CGP147

SEE DWG L86-CGP148

XREF LIST:
xE335-L86-CAP100
xE335-L86-CMP100
xE335-L86-KAP100
xE335-L86-RPP100
xE340-L87-RZV020
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE340-E21-SGP200
xE340-E21-SFP100
xE335-L86-CRP100
xE335-L86-CGP100
xE335-L86-CPP100
xEL-0831cn
xE335-L86-JOP100
xE335-L86-JEP100
xE335_207323_RD_Design
GB-SEAL-GDS48863

176.50
GRAVEL SURFACING
ELEVATION (APPROX)

7

LIMITS OF GRAVEL
MATCH EXIST

LIMITS OF GRAVEL
MATCH EXIST

NOTES:

1. FOR PAVEMENT HATCHING LEGEND, SEE DRAWINGS G86-GZN006 & G86-GZN007.
2. FOR PAVEMENT SECTIONS AND MATERIALS, SEE TYPICAL SECTIONS AND PAVING AND GRADING DETAILS, CYX AND CDP DRAWINGS.
3. SITE GRADING CONTOURS ARE SHOWN FOR CONSTRUCTION, ROADWAY CONTOURS SHOWN FOR REFERENCE ONLY AND ARE NOT FOR CONSTRUCTION.
4. SEE CPD DRAWINGS FOR ADDITIONAL ROADWAY, SIDEWALK AND DRIVEWAY PAVING AND AND GRADING ENLARGEMENTS.
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6. ALL CURBS ARE 6 INCHES TALL UNLESS OTHERWISE NOTED.
7. ELEVATIONS REFERENCE FLOW LINE OF CURB UNLESS OTHERWISE NOTED.
8. SEE CXP DRAWINGS FOR SAWCUT LIMITS.

CONSTRUCTION NOTES:

(7) GRAVEL SURFACING, SEE DETAIL E/L86-CPD101.

N

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
VERIFIED BY: / DATE:
01/22/16 | 7:33 AM | CALDWELLJ
C:\WORK\TEMP-E335-100PCT-DUD\E335-L86-CGP149.DWG

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: J. MATTHEWS
APPROVED BY: J. SCHUTT

EVAN D. SCHWANTES — STATE OF WASHINGTON — 48863 — REGISTERED PROFESSIONAL ENGINEER

HNTB

H J H FINAL DESIGN PARTNERS.

SUBMITTED BY:
DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

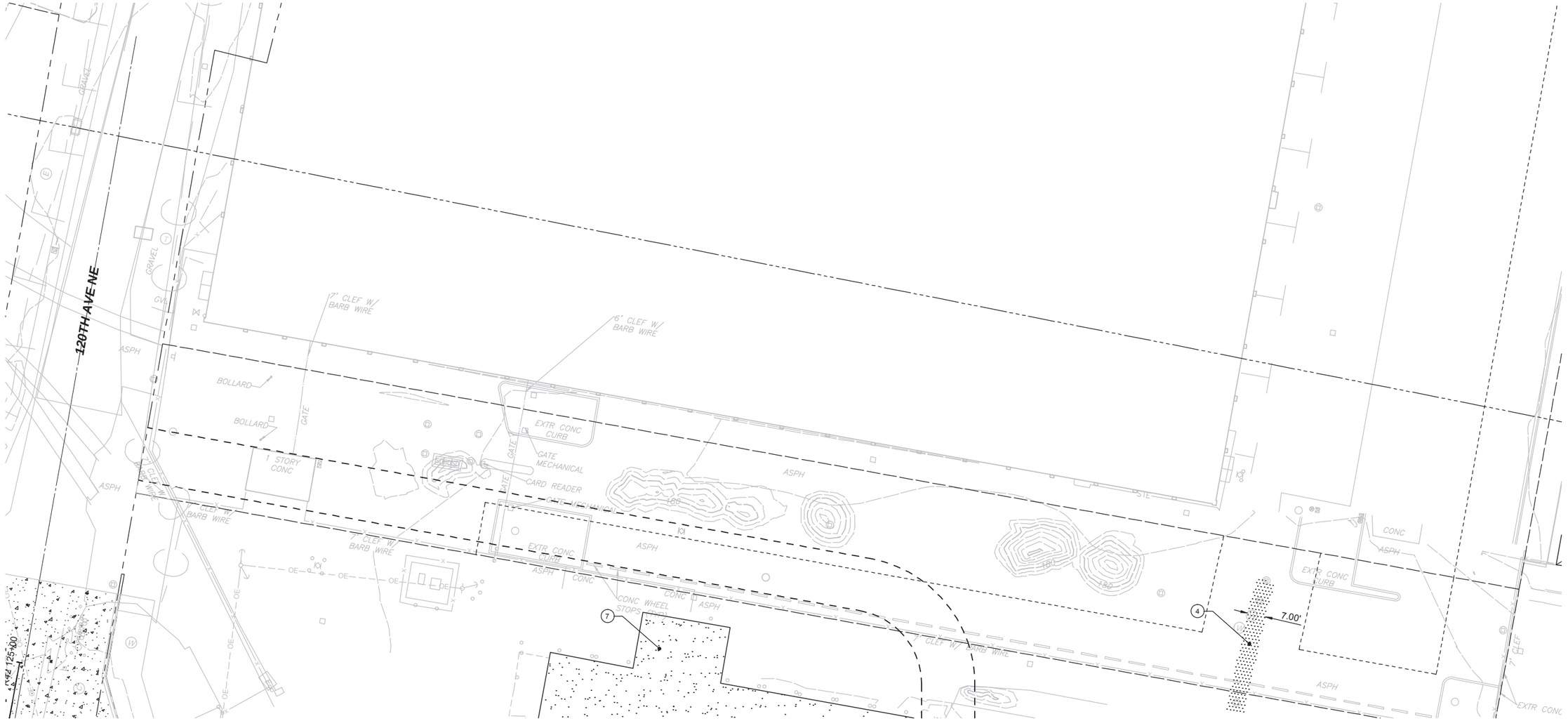
SOUNDTRANSIT

SCALE: 1" = 20'
FILENAME: E335-L86-CGP149
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
CIVIL
GRADING AND PAVING PLAN

DRAWING No.: L86-CGP149
LOCATION ID: E22
SHEET No.: 27
REV: 0

XREF LIST:
xE330-L86-KAP100
xE320-L85-KAP100
xE335-L86-CAP100
xE335-L86-CMP100
xE335-L86-KAP100
xE335-L86-RPP100
xE340-L87-RZV020
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CRP100
xE335-L86-CGP100
xE335-L86-CPP100
xE335-L86-KAP001
xEL-0831cn
xE335-L86-JOP100
xE335-L86-JEP100
xE340_B120S3C-PPLAN
GB-SEAL-GDS48863



NOTES:

1. FOR PAVEMENT HATCHING LEGEND, SEE DRAWINGS G86-GZN006 & G86-GZN007.
2. FOR PAVEMENT SECTIONS AND MATERIALS, SEE TYPICAL SECTIONS AND PAVING AND GRADING DETAILS, CYX AND CDP DRAWINGS.
3. SITE GRADING CONTOURS ARE SHOWN FOR CONSTRUCTION, ROADWAY CONTOURS SHOWN FOR REFERENCE ONLY AND ARE NOT FOR CONSTRUCTION.
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6. ALL CURBS ARE 6 INCHES TALL UNLESS OTHERWISE NOTED.
7. ELEVATIONS REFERENCE FLOW LINE OF CURB UNLESS OTHERWISE NOTED.
8. SEE CXP DRAWINGS FOR SAWCUT LIMITS.

CONSTRUCTION NOTES:

(4) PARKING LOT HMA PAVEMENT, SEE DETAIL B/L86-CPD101.
(7) GRAVEL SURFACING, SEE DETAIL E/L86-CPD101.

N

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
01/22/16 | 7:34 AM | CALDWELLJ
C:\WORK\TEMP-E335-100PCT-DUD\E335-L86-CGP150.DWG

CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: J. MATTHEWS
APPROVED BY: J. SCHUTT

GRANT D. SCHWANTES STATE OF WASHINGTON 24893 REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

HNTB
SUBMITTED BY:

H J H FINAL DESIGN PARTNERS.
DATE:
REVIEWED BY:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT
DATE:

SCALE: 1" = 20'
FILENAME: E335-L86-CGP150
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
CIVIL
GRADING AND PAVING PLAN

DRAWING No.: L86-CGP150
LOCATION ID: E22
SHEET No.: 28
REV: 0

XREF LIST:
xE330-L86-KAP100
xE320-L85-KAP100
xE335-L86-CAP100
xE335-L86-CMP100
xE335-L86-KAP100
xE335-L86-RPP100
xE340-L87-RZV020
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CRP100
xE335-L86-CGP100
xE335-L86-CPP100
xEL-0831cn
xE335-L86-JOP100
xE335-L86-JEP100
xE340_192465_RD_Design
GB-SEAL-GDS48863

SEE DWG L86-CGP105

NOTES:

1. FOR PAVEMENT HATCHING LEGEND, SEE DRAWINGS G86-GZN006 & G86-GZN007.
2. FOR PAVEMENT SECTIONS AND MATERIALS, SEE TYPICAL SECTIONS AND PAVING AND GRADING DETAILS, CYX AND CDP DRAWINGS.
3. SITE GRADING CONTOURS ARE SHOWN FOR CONSTRUCTION, ROADWAY CONTOURS SHOWN FOR REFERENCE ONLY AND ARE NOT FOR CONSTRUCTION.
4. SEE CPD DRAWINGS FOR ADDITIONAL ROADWAY, SIDEWALK AND DRIVEWAY PAVING AND AND GRADING ENLARGEMENTS.
5. ROADWAY WIDTHS ARE GIVEN TO FACE OF CURB, UNLESS OTHERWISE NOTED.
6. ALL CURBS ARE 6 INCHES TALL UNLESS OTHERWISE NOTED.
7. ELEVATIONS REFERENCE FLOW LINE OF CURB UNLESS OTHERWISE NOTED.
8. SEE CXP DRAWINGS FOR SAWCUT LIMITS.

CONSTRUCTION NOTES:

(7) GRAVEL SURFACING, SEE DETAIL E/L86-CPD101.

N

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
01/22/16 | 7:35 AM | CALDWELLJ
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CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: J. MATTHEWS
APPROVED BY: J. SCHUTT

GLENN D. SCHWANTES STATE OF WASHINGTON 48863 REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

HNTB

H J H FINAL DESIGN PARTNERS.

SUBMITTED BY: | DATE: | REVIEWED BY: | DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1" = 20'
FILENAME: E335-L86-CGP151
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
CIVIL
GRADING AND PAVING PLAN

DRAWING No.: **L86-CGP151**
LOCATION ID: E22
SHEET No.: 29 REV: 0

SEE DWG L86-CGP151

SEE DWG L86-CGP120

SEE DWG L86-CGP121

XREF LIST:
xE330-L86-KAP100
xE320-L85-KAP100
xE335-L86-CAP100
xE335-L86-CMP100
xE335-L86-KAP100
xE335-L86-RPP100
xE340-L87-RZV020
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xEL-0834rx
xEL-0834sf
xEL-0834ut
xE335-L86-CRP100
xE335-L86-CGP100
xE335-L86-CPP100
xEL-0834cn
xEL-0831cn
xE335-L86-JOP100
xE335-L86-JEP100
xE340_192465_RD_Design
GB-SEAL-GDS48863

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
01/22/16 | 7:36 AM | CALDWELLJ
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CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

NOTES:

1. FOR PAVEMENT HATCHING LEGEND, SEE DRAWINGS G86-GZN006 & G86-GZN007.
2. FOR PAVEMENT SECTIONS AND MATERIALS, SEE TYPICAL SECTIONS AND PAVING AND GRADING DETAILS, CYX AND CDP DRAWINGS.
3. SITE GRADING CONTOURS ARE SHOWN FOR CONSTRUCTION, ROADWAY CONTOURS SHOWN FOR REFERENCE ONLY AND ARE NOT FOR CONSTRUCTION.
4. SEE CPD DRAWINGS FOR ADDITIONAL ROADWAY, SIDEWALK AND DRIVEWAY PAVING AND AND GRADING ENLARGEMENTS.
5. ROADWAY WIDTHS ARE GIVEN TO FACE OF CURB, UNLESS OTHERWISE NOTED.
6. ALL CURBS ARE 6 INCHES TALL UNLESS OTHERWISE NOTED.
7. ELEVATIONS REFERENCE FLOW LINE OF CURB UNLESS OTHERWISE NOTED.
8. SEE CXP DRAWINGS FOR SAWCUT LIMITS.

N

20 10 0 20 40
SCALE IN FEET

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: J. MATTHEWS
APPROVED BY: J. SCHUTT

SUBMITTED BY:
DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

SCALE: 1" = 20'
FILENAME: E335-L86-CGP152
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT

CIVIL
GRADING AND PAVING PLAN

DRAWING No.: **L86-CGP152**
LOCATION ID: E22
SHEET No.: 30
REV: 0

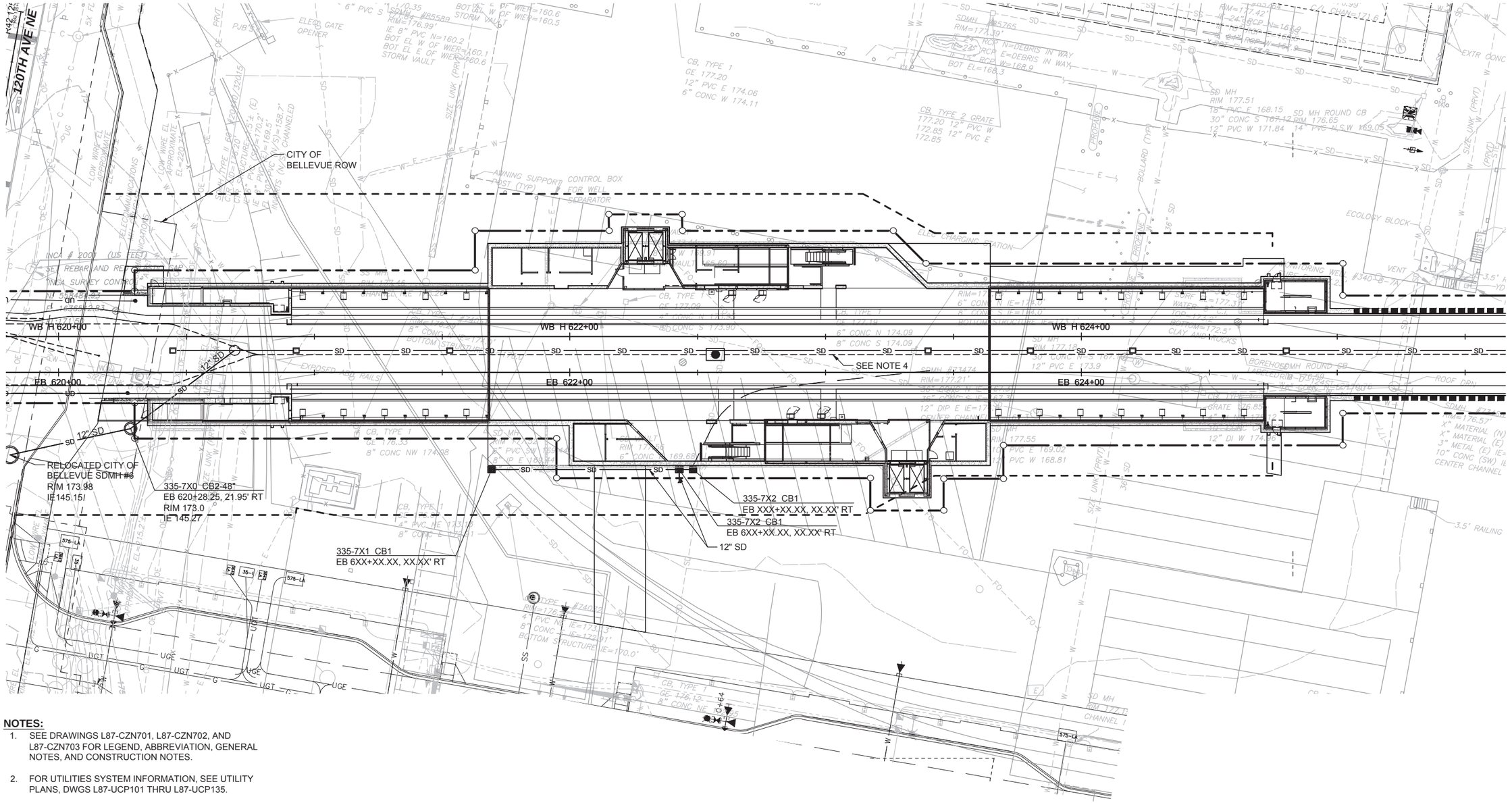
PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

SEE DWG L86-CDP150

SEE DWG L86-CDP118

SEE DWG L86-CDP120

XREF LIST:
xE335-L86-KAP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CRP100
xE335-L86-SWP100
xE335-L86-CGP100
xE335-L86-CAP100
xE335-L86-CMP100
xE335-L86-JEP100
xE335-L86-JOP100
xE335-L86-KAP001
xE335-L86-KAP500
xE335-L86-LPP100
xE335-L86-LTP100
xE335-L86-RPP100
xE335-L86-SEP100
xE335-L86-SFP100
xE335-L86-SGP100
xEL-0831cn
xEL-0831rx
xE335-P86-SSP100
xE335-P86-SSP200
xE335-P86-SSP300
xE335-P86-SSP400
xE335-E21-SWP100
xE335-E21-SFP100
xE335-E21-SGP200
xE335-E21-SGP300
xE335-E21-SSP100
xE335-E21-APP100
xE335-E21-LSP100
xE335-L86-CLP100
GB-SEAL-AMS33802
xE335-L86-KAP101
xE335_207323_IL_ITS_SIGN_Design
xE335_207323_RD_Design
xE335_207323_RD_Irrigation
xE335_207323_Traffic_Signal_Design
xE335_207323_UT_Design
xE335_207323_WM_Design
xE335-E21-APP200
xE340_B120S3C-PPLAN



NOTES:

1. SEE DRAWINGS L87-CZN701, L87-CZN702, AND L87-CZN703 FOR LEGEND, ABBREVIATION, GENERAL NOTES, AND CONSTRUCTION NOTES.
2. FOR UTILITIES SYSTEM INFORMATION, SEE UTILITY PLANS, DWGS L87-UCP101 THRU L87-UCP135.
3. FOR ILLUMINATION SYSTEM INFORMATION, SEE ILLUMINATION PLANS, DWGS L87-CLP100 THRU L87-CLP110.
4. FOR STORM DRAINAGE PROFILES SEE DWGS L87-CDV101 THRU L87-CDV506

N

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

01/22/16 | 9:34 AM | THOMA
C:\USERS\PUBLIC\DOCUMENTS\THOMA\THOMA\HTTPS\SHAREPOINT.SOUNDTRANSIT.ORG\443\SITES\CAD\ELBELRED\E335\DRAWINGS\E335-L86-CDP119.DWG

BACKSTOP DESIGN LOCK

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: A. THOM
DRAWN BY: A. THOM
CHECKED BY: A. SEETHOFF
APPROVED BY: J. SCHUTT

ANNE SEETHOFF STATE OF WASHINGTON 23805 REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

HNTB
SUBMITTED BY:

H J H FINAL DESIGN PARTNERS.
DATE:
REVIEWED BY:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT
DATE:

SCALE: 1" = 20'
FILENAME: E335-L86-CDP119
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
CIVIL
DRAINAGE PLAN

DRAWING No.: L86-CDP119
LOCATION ID: E21
SHEET No.: 31
REV: 0

XREF LIST:

xE335-L86-CAP100
xE335-L86-KAP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CRP100
xE335-L86-SWP100
xE335-L86-CGP100
xE335-L86-SGP100
E335-L86-CDP_C3D-2
xE335-L86-CMP100
xE335-L86-JEP100
xE335-L86-JOP100
xE335-L86-LPP100
xE335-L86-LTP100
xE335-L86-RPP100
xE335-L86-SEP100
xE335-L86-SFP100
xEL-0831cn
xE335-L86-CLP100
GB-SEAL-AMS33802
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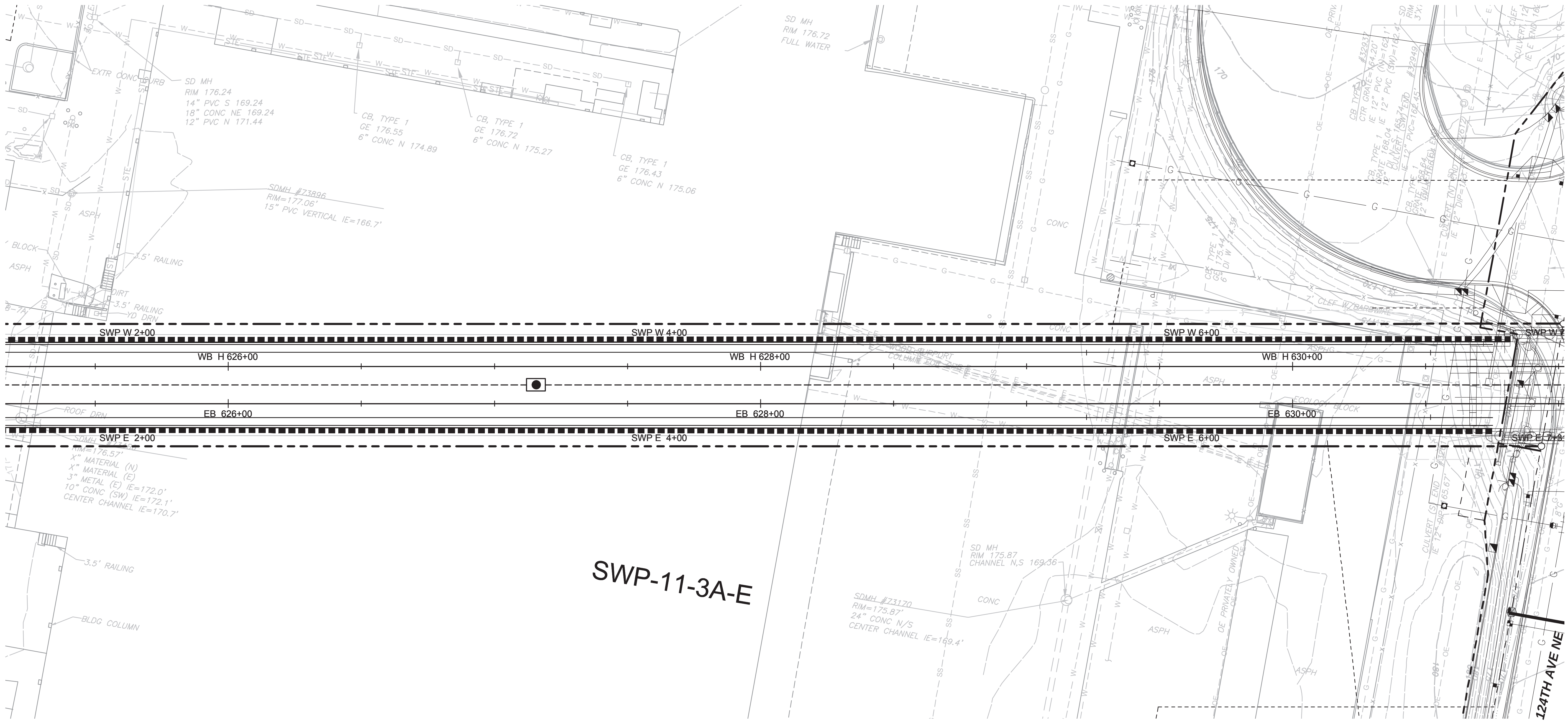
xE340_192465_DR_Design
xE340_192465_IL_ITS_SIGN_Design
xE340_192465_RD_Design
xE340_192465_RD_Irrigation
xE340_192465_SS_Design
xE340_192465_UT_Design
xE340_192465_WM_Design



ORIGINATED BY: / DATE: /
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BACK-CHECKED BY: / DATE: /
CORRECTED BY: / DATE: /
VERIFIED BY: / DATE: /

01/22/16 | 7:26 AM | CALDWELLJ
C:\WORK\TEMP-E335-100PCT-DUD\E335-L86-CDP120.DWG

BACKSTOP DESIGN LOCK

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: A. THOM
DRAWN BY: A. THOM
CHECKED BY: A. SEETHOFF
APPROVED BY: J. SCHUTT

ANNE SEETHOFF — STATE OF WASHINGTON — 33802 — REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

HNTB

H J H FINAL DESIGN PARTNERS.

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SUBMITTED BY: | DATE: | REVIEWED BY: | DATE:

SCALE: 1" = 20'
FILENAME: E335-L86-CDP120
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

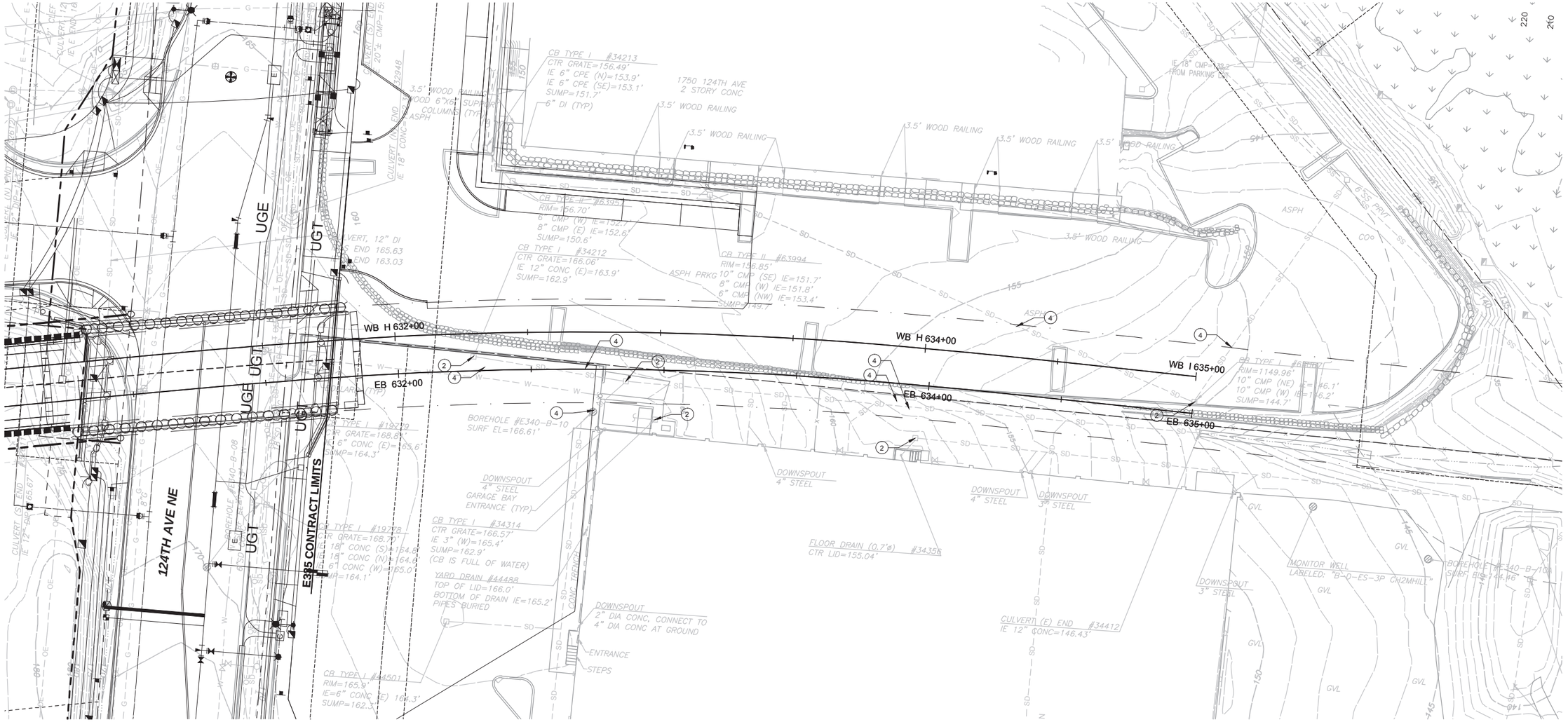
EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT

CIVIL
DRAINAGE PLAN

DRAWING No.: **L86-CDP120**
LOCATION ID: E22
SHEET No.: 32
REV: 0

XREF LIST:
xE335-L86-CMP100
xE335-L86-KAP100
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CRP100
xE335-L86-SWP100
xE335-L86-SWP500
xE335-L86-SEP100
xE335-L86-CGP100
xE335-L86-CAP100
xE335-L86-JEP100
xE335-L86-JOP100
xE335-L86-LPP100
xE335-L86-RPP100
xE335-L86-SGP100
xEL-0831cn
xEL-0831rx
xE340_192465_BR_Design
xE340_192465_DR_Design
xE340_192465_UT_Design
xE335-L86-CLP100
GB-SEAL-AMS33802
xE340_192465_IL_ITS_SIGN_Design
xE340_192465_RD_Design
xE340_192465_RD_Irrigation
xE340_192465_SS_Design
xE340_192465_WM_Design

SEE DWG L86-CDP120



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20 10 0 20 40
SCALE IN FEET

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CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
VERIFIED BY: / DATE:
01/22/16 | 7:27 AM | CALDWELLJ
C:\WORK\TEMP-E335-100PCT-DUD\E335-L86-CDP121.DWG

BACKSTOP DESIGN LOCK

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: A. THOM
DRAWN BY: A. THOM
CHECKED BY: A. SEETHOFF
APPROVED BY: J. SCHUTT

AARON SEETHOFF STATE OF WASHINGTON 23992 REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

HNTB

H J H FINAL DESIGN PARTNERS.

SUBMITTED BY: | DATE: | REVIEWED BY: | DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

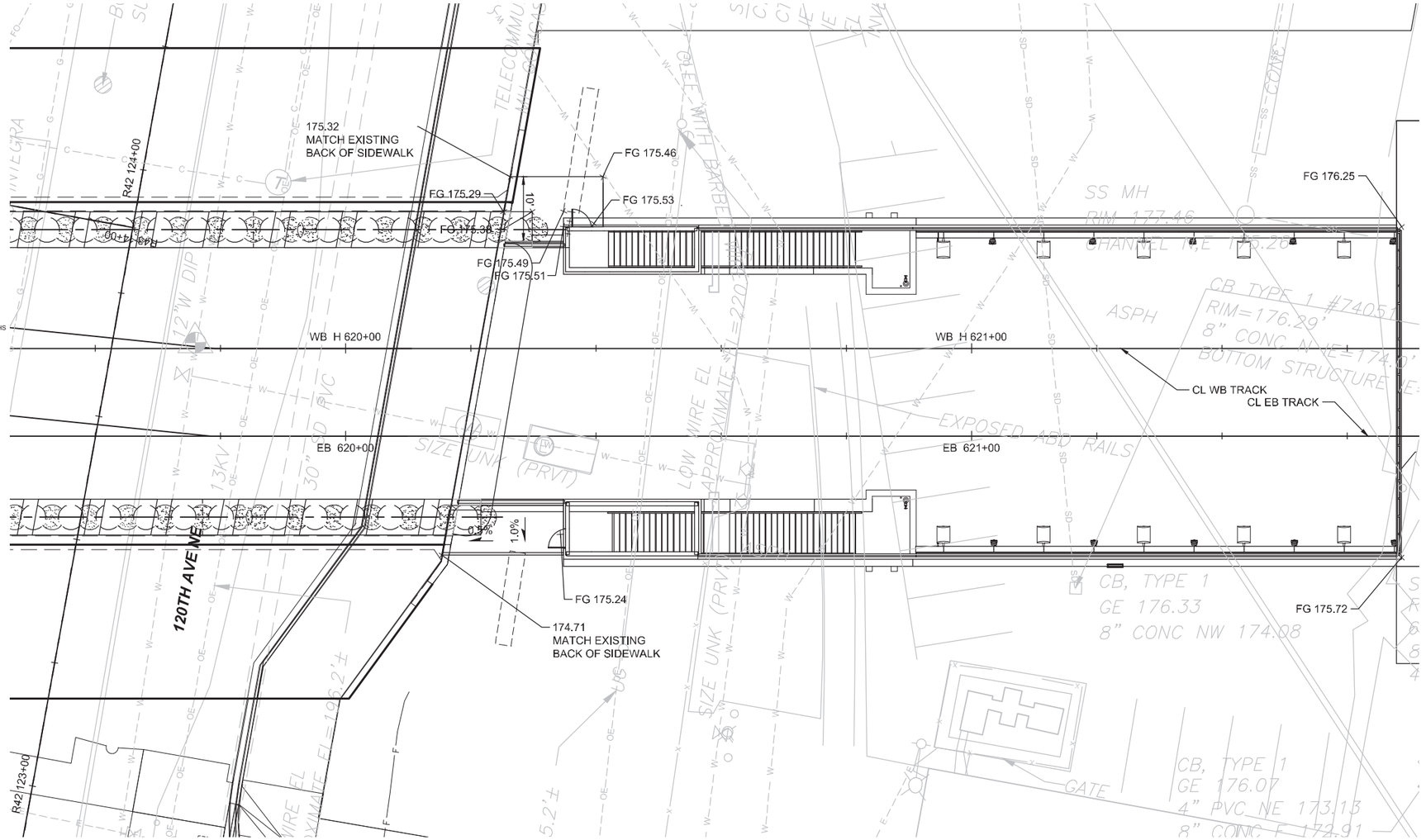
SCALE: 1" = 20'
FILENAME: E335-L86-CDP121
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT

CIVIL
DRAINAGE PLAN

DRAWING No.: L86-CDP121
LOCATION ID: E22
SHEET No.: 33
REV: 0

XREF LIST:
xE335-L86-CAP100
xE335-L86-KAP100
xEL-0531rx
xEL-0531sf
xEL-0531ut
xE330-L86-RZV020
xE335-L86-RPP100
xE335-GB-TB22x34
xE335-L86-CRP100
xEL-St_Names_East
xE335-L86-CGP100
GB-SEAL-GDS48863
xE335-E21-APP200
xE335-E21-LSP100
xE335-E21-SWP100
xE335-E21-SGP200
xE335-L86-KAP101
xE335-E21-SFP100
xE335-L86-SFP100
xE335_207199_RD_Design
xE335_207323_RD_Design
xE340_192465_RD_Design
xE335_X1500001C-01-OE-RD-HS
xE340_B120S3C-PPLAN
xEL-0831sf
xEL-0831rx
xEL-0831ut
xE340_B120S3A-BRIDGE



NOTES:

1. ELEVATIONS ARE MEASURED AT FLOW LINE OF CURB/GUTTER UNLESS OTHERWISE NOTED.
2. HORIZONTAL CONTROL IS AT FACE OF CURB UNLESS OTHERWISE NOTED.
3. ALL CURBS ARE 6 INCHES TALL UNLESS OTHERWISE NOTED.

POINT TABLE CR-xx

PNT	STATION/OFFSET	EL	NOTES
1			
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CURVE DATA TABLE (X)

CURVE #	RADIUS	DELTA	TANGENT	PC	PT
1					
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SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
VERIFIED BY: / DATE:
01/22/16 | 7:37 AM | CALDWELLJ
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BACKSTOP DESIGN LOCK

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: K. IRELAND
APPROVED BY: J. SCHUTT

GRAHAM D. SCHWANTES STATE OF WASHINGTON 48863 REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

HNTB

FINAL DESIGN PARTNERS.

SUBMITTED BY: | DATE: | REVIEWED BY: | DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

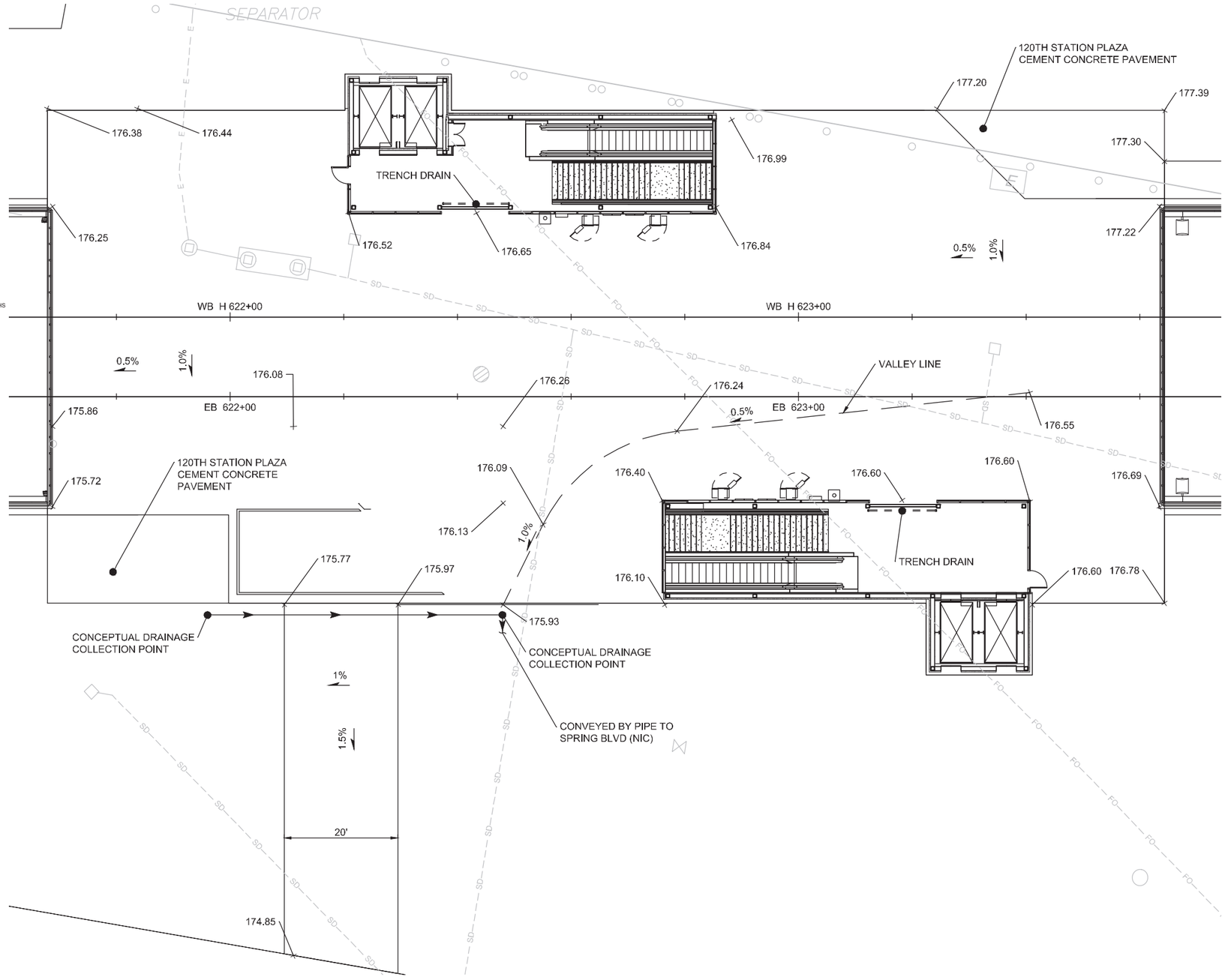
SCALE: 1" = 10'
FILENAME: E335-L86-CPD304
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT

CIVIL
GRADING DETAIL
120TH STATION EGRESS

DRAWING No.: L86-CPD304
LOCATION ID: E19
SHEET No.: 34 REV: 0

XREF LIST:
xE335-L86-CAP100
xE335-L86-KAP100
xEL-0531rx
xEL-0531sf
xEL-0531ut
xE330-L86-RZV020
xE335-L86-RPP100
xE335-GB-TB22x34
xE335-L86-CRP100
xEL-St_Names_East
xE335-L86-CGP100
GB-SEAL-GDS48863
xE335-E21-APP100
xE335-E21-APP200
xE335-E21-LSP100
xE335-E21-SWP100
xE335-E21-SGP200
xE335-L86-KAP101
xE335-E21-SFP100
xE335-L86-SFP100
xE335_207199_RD_Design
xE335_207323_RD_Design
xE340_192465_RD_Design
xE335_X1500001C-01-DE-RD-HS
xE340_B120S3C-PPLAN
xEL-0831sf
xEL-0831rx
xEL-0831ut



NOTES:

1. ELEVATIONS ARE MEASURED AT FLOW LINE OF CURB/GUTTER UNLESS OTHERWISE NOTED.
2. HORIZONTAL CONTROL IS AT FACE OF CURB UNLESS OTHERWISE NOTED.
3. ALL CURBS ARE 6 INCHES TALL UNLESS OTHERWISE NOTED.

POINT TABLE CR-xx

PNT	STATION/OFFSET	EL	NOTES
1			
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CURVE DATA TABLE (X)

CURVE #	RADIUS	DELTA	TANGENT	PC	PT
1					
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14					

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10 5 0 10 20
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
01/22/16 | 7:37 AM | CALDWELLJ
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CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

BACKSTOP DESIGN LOCK

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: K. IRELAND
APPROVED BY: J. SCHUTT

SUBMITTED BY: / DATE:
REVIEWED BY: / DATE:

LINE IS 1" AT FULL SCALE

SCALE: 1" = 10'
FILENAME: E335-L86-CPD305
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

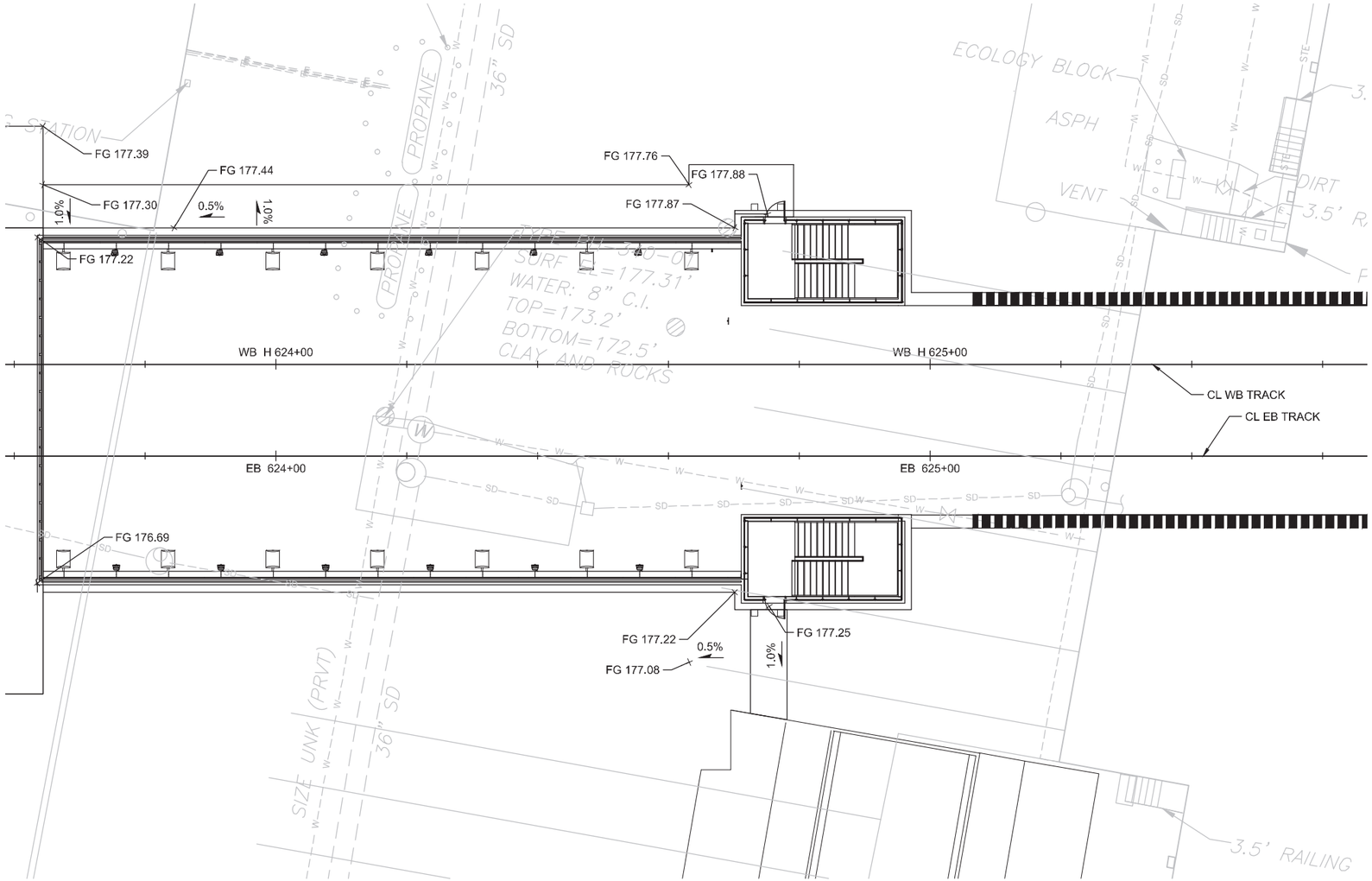
EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT

CIVIL
GRADING DETAIL
120TH STATION PLAZA

DRAWING No.: L86-CPD305
LOCATION ID: E19
SHEET No.: 35 REV: 0

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

XREF LIST:
xE335-L86-CAP100
xE335-L86-KAP100
xEL-0531rx
xEL-0531sf
xEL-0531ut
xE330-L86-RZV020
xE335-L86-RPP100
xE335-GB-TB22x34
xE335-L86-CRP100
xEL-St_Names_East
xE335-L86-CGP100
GB-SEAL-GDS48863
xE335-E21-APP200
xE335-E21-LSP100
xE335-E21-SWP100
xE335-E21-SGP200
xE335-L86-KAP101
xE335-E21-SFP100
xE335-L86-SFP100
xE335_207199_RD_Design
xE335_207323_RD_Design
xE340_192465_RD_Design
xE335_X1500001C-01-DE-RD-HS
xE340_B120S3C-PPLAN
xEL-0831sf
xEL-0831rx
xEL-0831ut
xE335-L86-SWP100



NOTES:

1. ELEVATIONS ARE MEASURED AT FLOW LINE OF CURB/GUTTER UNLESS OTHERWISE NOTED.
2. HORIZONTAL CONTROL IS AT FACE OF CURB UNLESS OTHERWISE NOTED.
3. ALL CURBS ARE 6 INCHES TALL UNLESS OTHERWISE NOTED.

POINT TABLE CR-xx

PNT	STATION/OFFSET	EL	NOTES
1			
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15			

CURVE DATA TABLE (X)

CURVE #	RADIUS	DELTA	TANGENT	PC	PT
1					
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14					

N

10 5 0 10 20
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
01/22/16 | 7:38 AM | CALDWELLJ
C:\WORK\TEMP-E335-100PCT-DUD\E335-L86-CPD306.DWG

CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

BACKSTOP DESIGN LOCK

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: G. SCHWANTES
DRAWN BY: D. FRANKUM
CHECKED BY: K. IRELAND
APPROVED BY: J. SCHUTT

GLENN D. SCHWANTES STATE OF WASHINGTON 48863 REGISTERED PROFESSIONAL ENGINEER

HNTB

H J H FINAL DESIGN PARTNERS.

SUBMITTED BY: | DATE: | REVIEWED BY: | DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1" = 10'
FILENAME: E335-L86-CPD306
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT

CIVIL
GRADING DETAIL
120TH STATION EGRESS

DRAWING No.: L86-CPD306
LOCATION ID: E19
SHEET No.: 36
REV: 0

XREF LIST:
xEL-0531rx
xEL-0531sf
xEL-0531ut
xE335-L86-CAP100
xE335-L86-KAP100
xE335-L86-RPP100
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CRP100
K:\E335\Xref\xE335-L86-KAP101
GB-SEAL-MJM31003
xE335-L86-JEP100
xE335-L86-JOP100
xE340_B120S3C-PUTIL
xE340_B120S3C-PPLAN
xE340_B120S3A-BRIDGE
xE340_B120-PSD
xE335-L86-CLP100
xE335-L86-EPP100
xE335-L86-EPP300
xE335-L86-SWP100
xE335-L86-TSP100

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
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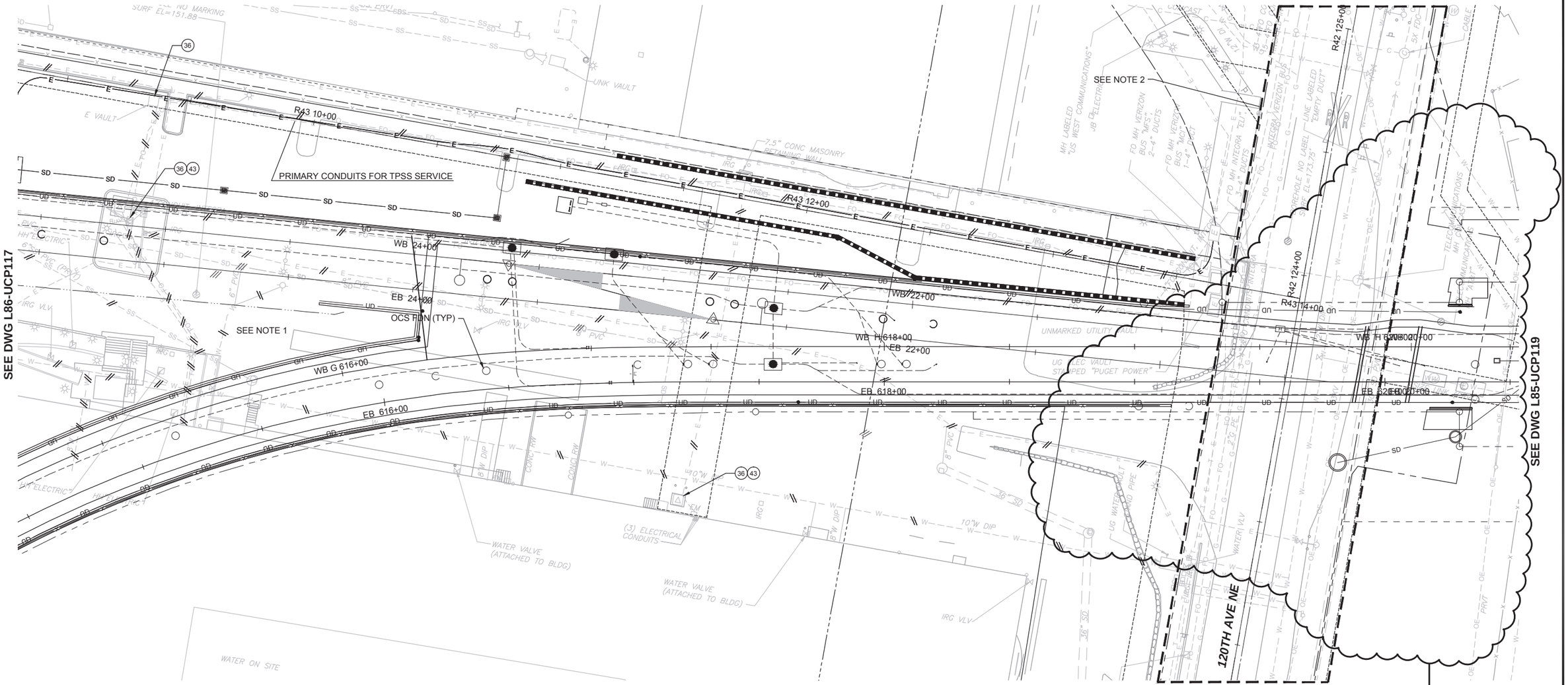
CORRECTED BY: / DATE:
VERIFIED BY: / DATE:
01/22/16 | 7:55 AM | CALDWELLJ
C:\WORK\TEMP-E335-100PCT-DUD\E335-L86-UCP118.DWG



NOTES:

1. FOR DISCONNECTION, ABANDONMENT AND REMOVAL OF UTILITY SERVICES AT BUILDING TO BE DEMOLISHED, SEE DRAWING L86-UZN001 NOTES.
2. CONSTRUCTION LIMIT FOR PROPOSED 120TH ST NE BRIDGE PROJECT BY COB. SEE SPECIAL CONDITIONS SECTION 00 73 00 FOR DEFINITION OF WORK, SCHEDULE AND COORDINATION REQUIREMENTS RELATED TO WORK TO BE COMPLETED UNDER THE COB CONTRACT.

CONSTRUCTION NOTES:

(36) RMV POWER VLT/JB
(43) PSE TO RMV TRANF, NIC
(59) CONST GATE VALVE.
(63) CONST 2" DOM WATER SVC PER COB STD PLAN W-30.
(65) CONST DI 4" FIRE SVC PER COB STD PLAN W-40.
(67) CONST CONC TB PER COB STD PLAN W-1.
(68) CONNECT TO EXIST WM.
(72) CONST STD MANHOLE PER COB STD PLAN S-1.
(88) UTIL TO CONST TELECOMM SVC, NIC.

90% DESIGN UNDER DEVELOPMENT

N

20 10 0 20 40
SCALE IN FEET

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: L. OLSEN
DRAWN BY: D. FRANKUM
CHECKED BY: S. KIRBY
APPROVED BY: J. SCHUTT

STATE OF WASHINGTON · MONICA J. MORRIS · 31003 · REGISTERED PROFESSIONAL ENGINEER

kpff

HJH FINAL DESIGN PARTNERS.

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SUBMITTED BY: | DATE: | REVIEWED BY: | DATE:

SCALE: 1" = 20'
FILENAME: E335-L86-UCP118
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT

COMPOSITE UTILITY PLAN
EB STA 615+00 TO EB STA 620+00

DRAWING No.: L86-UCP118
LOCATION ID:
SHEET No.: 37
REV: 0

XREF LIST:
xE335-L86-CAP100
xE335-L86-KAP100
xE335-L86-RPP100
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CRP100
xE335-L86-LPP100
xE335-L86-SWP100
GB-SEAL-MJM31003
xE335-L86-JEP100
xE335-L86-JOP100
xE340_B120S3C-PUTIL
xE340_B120S3C-PPLAN
xE340_B120S3A-BRIDGE
xE335-L86-CLP100
xE335-L86-EPP100
xE335-L86-EPP300
xE335-L86-TSP100
K:\E335\Xref\xE335-L86-KAP101

NOTES:

1. FOR DISCONNECTION, ABANDONMENT AND REMOVAL OF UTILITY SERVICES AT BUILDING TO BE DEMOLISHED, SEE DRAWING L86-UZN001 NOTES.
2. CONSTRUCTION LIMIT FOR PROPOSED 120TH ST NE BRIDGE PROJECT BY COB. SEE SPECIFICATION 00 73 00 FOR DEFINITION OF WORK, SCHEDULE AND COORDINATION REQUIREMENTS RELATED TO WORK TO BE COMPLETED UNDER THE COB CONTRACT.
3. ### DENOTES POTHOLE. SEE DWG L86-UCD103 FOR MORE INFORMATION.

CONSTRUCTION NOTES:

(7) RMV OH POWER.
(8) RMV UTIL POLE.
(9) PIP EXIST WM.
(20) ABD SS MAIN.
(22) ABD SSMH. REMOVE TO 6 FT BELOW FINISH GRADE.
(23) ABD WM.
(45) PSE TO ABD ELEC SVC, NIC. CONTRACTOR TO RMV W/I EXC LIMITS.
(63) CONST 2" DOM WATER SVC PER COB STD PLAN W-30.
(64) CONST DI FIRE SVC PER COB STD PLAN W-40.
(65) CONST DI 4" FIRE SVC.
(66) CONST DCVA PER COB STD PLAN W-45.
(67) CONST CONC TB PER COB STD PLAN W-1.
(70) CONST 6" SIDE SEWER.
(88) UTIL TO CONST TELECOMM SVC, NIC.

N
20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
01/22/16 | 7:56 AM | CALDWELLJ
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CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

DESIGNED BY: L. OLSEN
DRAWN BY: D. FRANKUM
CHECKED BY: S. KIRBY
APPROVED BY: J. SCHUTT

MONICA J. MORRICE STATE OF WASHINGTON 31003 REGISTERED PROFESSIONAL ENGINEER

kpff
SUBMITTED BY:

H J H FINAL DESIGN PARTNERS.
DATE:

REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT
SCALE: 1" = 20'
FILENAME: E335-L86-UCP119
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
COMPOSITE UTILITY PLAN
EB STA 620+00 TO EB STA 625+00

DRAWING No.: L86-UCP119
LOCATION ID:
SHEET No.: 38
REV: 0

SEE DWG L86-UCP151

SEE DWG L86-UCP121

SEE DWG L86-UCP148

SWP-11-3A-E

XREF LIST:
xE335-L86-CAP100
xE335-L86-KAP100
xE335-L86-RPP100
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CRP100
xE335-L86-SWP100
GB-SEAL-MJM31003
xE335-L86-JEP100
xE335-L86-JOP100
xE340_192465_UT_Design
xE340_192465_WM_Design
xE340_192465_RD_Proposed_ROW
xE340_192465_BR_Design
xE340_192465_DR_Design
xE335-L86-CLP100
xE335-L86-EPP100
xE335-L86-EPP300
xE335-L86-TSP100

EB 628+51.20, 144.50' LT
CAP AND BLOCK WM (67)

ABD STEAM LINES

EB 631+92.46, 95.07' LT
CAP GAS MAIN

EB 633+20.61, 60.28' RT
CAP GAS MAIN

WB H 626+00
EB 626+00
WB H 628+00
EB 628+00
WB H 630+00
EB 630+00

124TH AVE NE

SEE NOTE 2

NOTES:

1. FOR DISCONNECTION, ABANDONMENT AND REMOVAL OF UTILITY SERVICES AT BUILDING TO BE DEMOLISHED, SEE DRAWING L86-UZN001 NOTES.
2. CONSTRUCTION LIMIT FOR PROPOSED 120TH ST NE BRIDGE PROJECT BY COB. SEE SPECIFICATION 00 73 00 FOR DEFINITION OF WORK, SCHEDULE AND COORDINATION REQUIREMENTS RELATED TO WORK TO BE COMPLETED UNDER THE COB CONTRACT.

CONSTRUCTION NOTES:

(8) PSE TO RMV UTIL POLE
(9) PIP EXIST WM.
(20) ABD SS MAIN.
(22) ABD SSMH. REMOVE TO 6 FT BELOW FINISH GRADE.
(23) ABD WM.
(24) ABD WATER SVC.
(43) PSE TO RMV TRANSF, NIC.
(45) PSE TO ABD ELEC SVC, NIC. CONTRACTOR TO RMV W/I EXC LIMITS.
(46) PSE TO ABD GAS MAIN, NIC. CONTRACTOR TO RMV W/I EXC LIMITS.
(47) PSE TO ABD GAS SVC, NIC.
(48) PSE TO ABD GAS METER, NIC.
(67) CONST CONC TB PER COB STD PLAN W-1.
(96) CONST UTIL POLE.
(97) CONST OH POWER.

N

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
VERIFIED BY: / DATE:
01/22/16 | 7:57 AM | CALDWELLJ
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PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

DESIGNED BY:	L. OLSEN
DRAWN BY:	D. FRANKUM
CHECKED BY:	S. KIRBY
APPROVED BY:	J. SCHUTT
SUBMITTED BY:	
DATE:	
REVIEWED BY:	
DATE:	
SCALE:	1" = 20'
FILENAME:	E335-L86-UCP120
CONTRACT No.:	RTA/CN 0045-14C
DATE:	03/08/2016

MONICA J. MORRISETTE — STATE OF WASHINGTON — 31003 — REGISTERED PROFESSIONAL ENGINEER

kpff

HJH FINAL DESIGN PARTNERS.

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT

COMPOSITE UTILITY
PLAN
EB STA 625+00 TO EB STA 630+00

DRAWING No.:	L86-UCP120
LOCATION ID:	
SHEET No.:	39
REV:	0

SEE DWG L86-UCP152

SEE DWG L86-UCP120

END CONTRACT E335

XREF LIST:
xE335-L86-CAP100
xE335-L86-KAP100
xE335-L86-RPP100
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE335-L86-CRP100
xE335-L86-SWP100
GB-SEAL-MJM31003
xE335-L86-JEP100
xE335-L86-JOP100
xE340_192465_WM_Design
xE340_192465_UT_Design
xE340_192465_RD_Proposed_ROW
xE340_192465_RD_Design
xE340_192465_BR_Design
xE335-L86-CLP100
xE335-L86-EPP100
xE335-L86-EPP300
xE335-L86-TSP100

2710
163.753
MON IN CASE

124TH AVE NE

END E320 CONTRACT
BEGIN E335 CONTRACT

SEE NOTE 2

WB H 632+00
EB 632+00
WB H 634+00
EB 634+00
WB I 635+00
EB 635+00

1750 124TH AVE
2 STORY CONC.

3.5' WOOD RAILING
3.5' WOOD 6"x6" SUPPORT COLUMNS (TYP)

ASPH
ASPH PRKG
ASPH PRMT

BOREHOLE #E340-B-10
SURF EL=166.61'

GARAGE BAY ENTRANCE (TYP)

WATER PRESSURE RELEASE VALVES (SIZES VARY)

YARD DRAIN #4448B
TOP OF LID=166.0'
BOTTOM OF DRAIN IE=165.2'

TELECOMMUNICATIONS MH QWEST (BELL SYSTEMS) PIPES BURIED

PAINTED UG WATER LINE MARKED "12" DIC UNLOCATABLE"

CB TYPE I #4450J
RIM=165.9'
IE=6" CONC (E) 162.3'
SUMP=162.3'

DOWNSPOUT
2" DIA CONC, CONNECT TO 4" DIA CONC AT GROUND

ENTRANCE
STEPS

IE 18" CMP=139.2
FROM PARKING LOT

GVL

MONITOR WELL
LABELED: "B-D-ES-3P CH2MHILL"

BOREHOLE #E340-B-10A
SURF EL=144.46'

3 WIRES EACH SIDE
APPROXIMATE EL=227.0'±

NOTES:

1. FOR DISCONNECTION, ABANDONMENT AND REMOVAL OF UTILITY SERVICES AT BUILDING TO BE DEMOLISHED, SEE DRAWING L86-UZN001 NOTES.
2. CONSTRUCTION LIMIT FOR PROPOSED 120TH ST NE BRIDGE PROJECT BY COB. SEE SPECIFICATION 00 73 00 FOR DEFINITION OF WORK, SCHEDULE AND COORDINATION REQUIREMENTS RELATED TO WORK TO BE COMPLETED UNDER THE COB CONTRACT.

CONSTRUCTION NOTES:

(3) PIP EXIST OH POWER , COORD W/ SCL.
(9) PIP EXIST WM.
(18) PIP EXIST W VALVE.
(47) PSE TO ABD GAS SVC, NIC.

N

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

01/22/16 | 7:58 AM | CALDWELLJ
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PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: L. OLSEN
DRAWN BY: D. FRANKUM
CHECKED BY: S. KIRBY
APPROVED BY: J. SCHUTT

STATE OF WASHINGTON MONICA J. MORRELL 31003 REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

kpff

SUBMITTED BY:

H J H FINAL DESIGN PARTNERS.

DATE:

REVIEWED BY:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

DATE:

SCALE: 1" = 20'
FILENAME: E335-L86-UCP121
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT

COMPOSITE UTILITY PLAN
EB STA 630+00 TO EB STA 635+00

DRAWING No.: L86-UCP121
LOCATION ID:
SHEET No.: 40
REV: 0

SEE DWG L86-UCP119

SEE DWG L86-UCP146

SEE DWG L86-UCP148

NOTES:

1. FOR DISCONNECTION, ABANDONMENT AND REMOVAL OF UTILITY SERVICES AT BUILDING TO BE DEMOLISHED, SEE DRAWING L86-UZN001 NOTES.

CONSTRUCTION NOTES:

(7) RMV OH POWER
(16) RMV UG POWER
(23) ABD WM FILL W/CDF
(25) CAP AND BLOCK WM
(67) CONST CONC TB PER COB STD PLAN W-1.

N

20 10 0 20 40
SCALE IN FEET

XREF LIST:
xE335-L86-CAP100
xE335-L86-KAP100
xE335-L86-RPP100
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xE340-E21-APP200
xE340-E21-APP100
xE340-E21-SGP200
xE340-E21-SFP100
GB-SEAL-MJM31003
xE335-L86-JEP100
xE335-L86-JOP100
xE335-L86-CLP100
xE335-L86-CRP100
xE335-L86-EPP100
xE335-L86-EPP300
xE335-L86-SWP100
xE335-L86-TSP100

ORIGINATED BY: / / DATE:
CHECKED BY: / / DATE:
BACK-CHECKED BY: / / DATE:
01/22/16 | 7:59 AM | CALDWELLJ
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CORRECTED BY: / / DATE:
VERIFIED BY: / / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: L. OLSEN
DRAWN BY: D. FRANKUM
CHECKED BY: S. KIRBY
APPROVED BY: J. SCHUTT

MONICA J. MORRELL — STATE OF WASHINGTON — 31009 — REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

kpff

H J H FINAL DESIGN PARTNERS.

SUBMITTED BY: | DATE: | REVIEWED BY: | DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1" = 20'
FILENAME: E335-L86-UCP147
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT

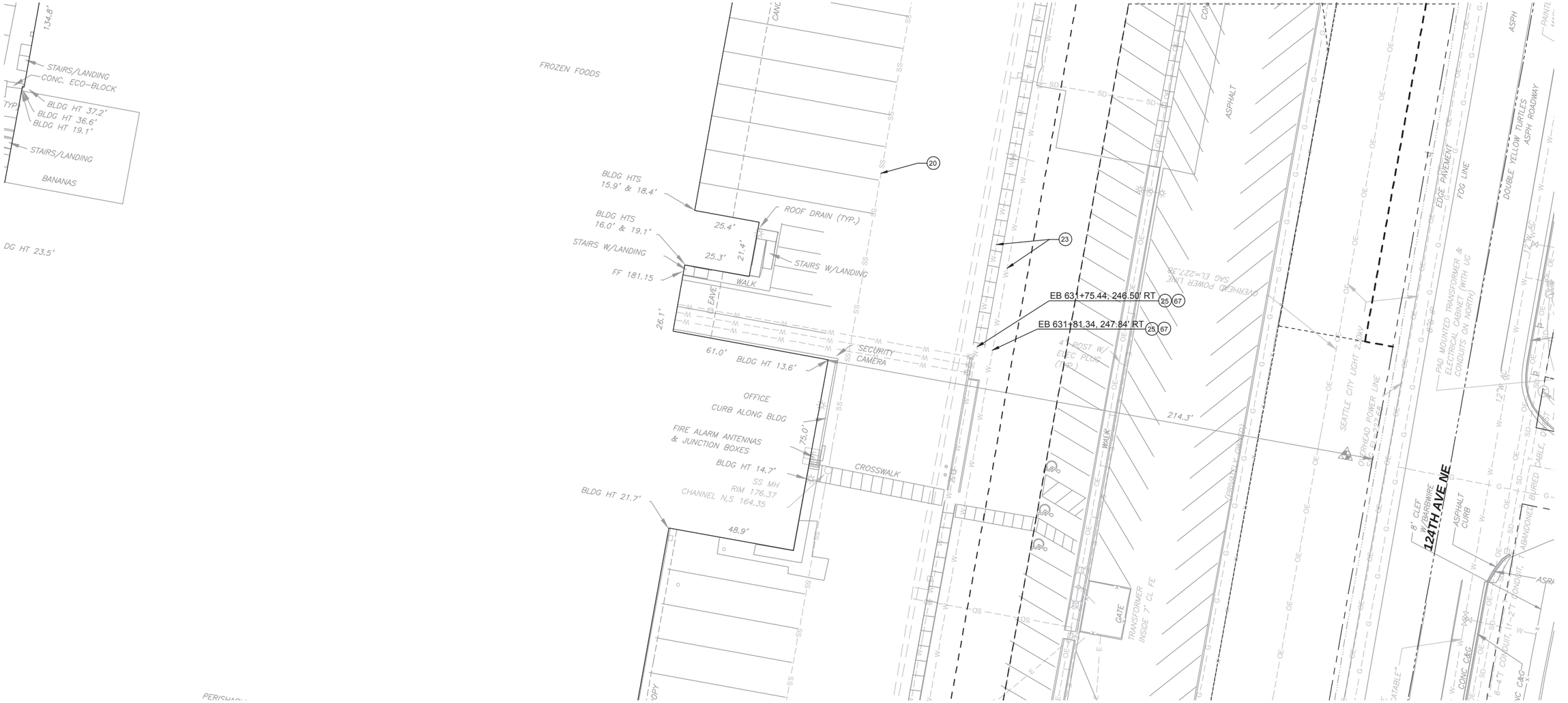
COMPOSITE UTILITY PLAN SUPPLEMENT

DRAWING No.: **L86-UCP147**
LOCATION ID:
SHEET No.: 41
REV: 0

XREF LIST:
xE335-L86-CAP100
xE335-L86-KAP100
xE335-L86-RPP100
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
GB-SEAL-MJM31003
xE335-L86-JEP100
xE335-L86-JOP100
xE335-L86-CRP100
xE335-L86-CLP100
xE335-L86-EPP100
xE335-L86-EPP300
xE335-L86-SWP100
xE335-L86-TSP100

SEE DWG L86-UCP147

SEE DWG L86-UCP120



NOTES:

1. FOR DISCONNECTION, ABANDONMENT AND REMOVAL OF UTILITY SERVICES AT BUILDING TO BE DEMOLISHED, SEE DRAWING L86-UZN001 NOTES.

CONSTRUCTION NOTES:

(20) ABD SS MAIN. FILL W/CDF
(23) ABD WM FILL W/CDF
(25) CAP AND BLOCK WM
(67) CONST CONC TB PER COB STD PLAN W-1.

N

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
01/22/16 | 8:00 AM | CALDWELLJ
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CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

DESIGNED BY: L. OLSEN
DRAWN BY: D. FRANKUM
CHECKED BY: S. KIRBY
APPROVED BY: J. SCHUTT

STATE OF WASHINGTON MONICA J. MORRIS 31003 REGISTERED PROFESSIONAL ENGINEER

kpff

H J H FINAL DESIGN PARTNERS.

SUBMITTED BY: / DATE: / REVIEWED BY: / DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

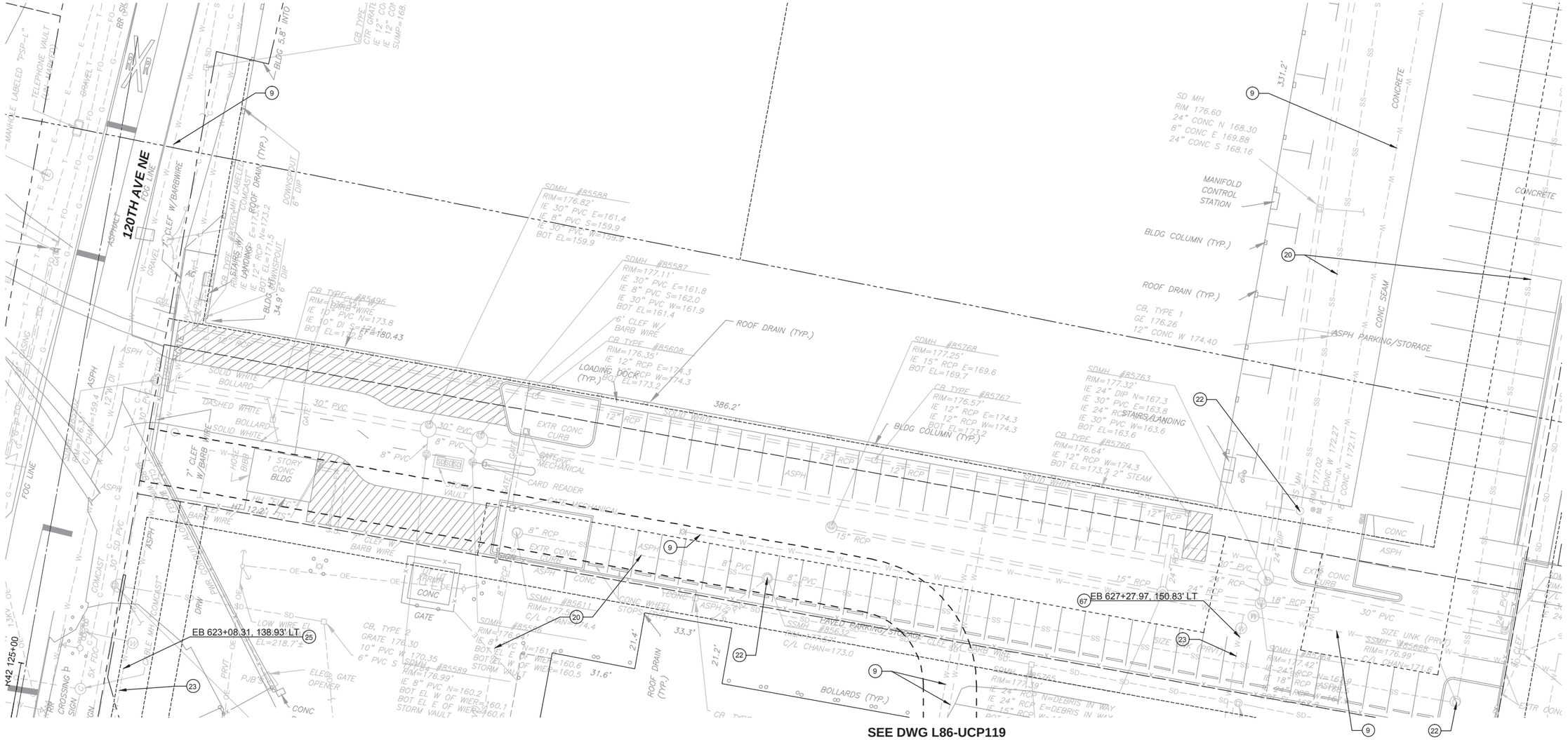
SCALE: 1" = 20'
FILENAME: E335-L86-UCP148
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
COMPOSITE UTILITY PLAN SUPPLEMENT

DRAWING No.: L86-UCP148
LOCATION ID:
SHEET No.: 42
REV: 0

FatBoy

XREF LIST:
xE335-L86-CAP100
xE335-L86-KAP100
xE335-L86-RPP100
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
GB-SEAL-MUM31003
xE335-L86-JEP100
xE335-L86-JOP100
xE335-L86-CLP100
xE335-L86-CRP100
xE335-L86-EPP100
xE335-L86-EPP300
xE335-L86-SWP100
xE335-L86-TSP100



NOTES:

1. FOR DISCONNECTION, ABANDONMENT AND REMOVAL OF UTILITY SERVICES AT BUILDING TO BE DEMOLISHED, SEE DRAWING L86-UZN001 NOTES.

CONSTRUCTION NOTES:

(9) PIP EXIST WM
(20) ABD SS MAIN. FILL W/CDF
(22) ABD SSMH. RMV TO 6 FT BELOW FINISH GRADE.
(23) ABD WM FILL W/CDF
(25) CAP AND BLOCK WM
(67) CONST CONC TB PER COB STD PLAN W-1.

N

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
01/22/16 | 8:01 AM | CALDWELLJ
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CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: L. OLSEN
DRAWN BY: D. FRANKUM
CHECKED BY: S. KIRBY
APPROVED BY: J. SCHUTT

MONICA J. MORRISETT — 31003 — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

kpff

HJH FINAL DESIGN PARTNERS.

SUBMITTED BY: | DATE: | REVIEWED BY: | DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

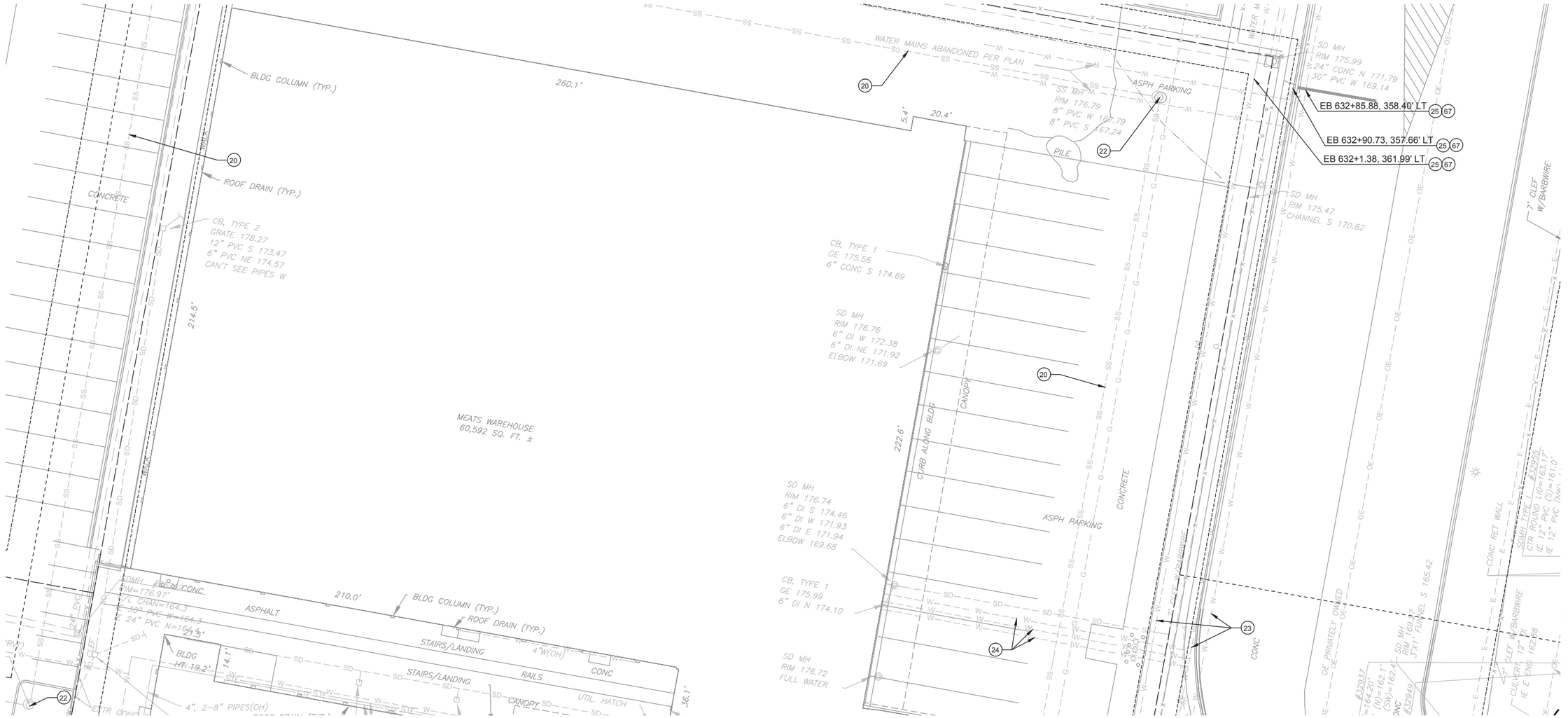
SCALE: 1" = 20'
FILENAME: E335-L86-UCP150
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
COMPOSITE UTILITY PLAN SUPPLEMENT

DRAWING No.: L86-UCP150
LOCATION ID:
SHEET No.: 43
REV: 0

XREF LIST:
xE335-L86-CAP100
xE335-L86-KAP100
xE335-L86-RPP100
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
GB-SEAL-MUM31003
xE335-L86-JEP100
xE335-L86-JOP100
xE335-L86-CLP100
xE335-L86-CRP100
xE335-L86-EPP100
xE335-L86-EPP300
xE335-L86-SWP100
xE335-L86-TSP100

SEE DWG L86-UCP150



SEE DWG L86-UCP120

NOTES:

1. FOR DISCONNECTION, ABANDONMENT AND REMOVAL OF UTILITY SERVICES AT BUILDING TO BE DEMOLISHED, SEE DRAWING L86-UZN001 NOTES.

CONSTRUCTION NOTES:

(20) ABD SS MAIN. FILL W/CDF
(22) ABD SSMH. RMV TO 6 FT BELOW FINISH GRADE.
(23) ABD WM FILL W/CDF
(24) ABD WATER SVC.
(25) CAP AND BLOCK WM
(67) CONST CONC TB PER COB STD PLAN W-1.

N

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

01/22/16 | 8:02 AM | CALDWELLJ
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PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: L. OLSEN
DRAWN BY: D. FRANKUM
CHECKED BY: S. KIRBY
APPROVED BY: J. SCHUTT

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

SUBMITTED BY: / DATE: / REVIEWED BY: / DATE:

LINE IS 1" AT FULL SCALE

SCALE: 1" = 20'
FILENAME: E335-L86-UCP151
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
COMPOSITE UTILITY PLAN SUPPLEMENT

DRAWING No.: **L86-UCP151**
LOCATION ID:
SHEET No.: 44
REV: 0

XREF LIST:
xE335-L86-CAP100
xE335-L86-KAP100
xE335-L86-RPP100
xE335-L86-SFP100
xE335-L86-UCP100
xE335-L86-CDP100
xEL-0831rx
xEL-0831sf
xEL-0831ut
xE335-GB-TB22x34
xEL-0834rx
xEL-0834sf
xEL-0834ut
GB-SEAL-MJM31003
xE335-L86-JEP100
xE335-L86-JOP100
xE335-L86-CLP100
xE335-L86-CRP100
xE335-L86-EPP100
xE335-L86-EPP300
xE335-L86-SWP100
xE335-L86-TSP100

SEE DWG L86-UCP151

SEE DWG L86-UCP121

CONC RET WALL
UNKN. MH
WATER VAULT ON CONC.
7' CLEF W/BARBWIRE
W 172.62
DRY STAND PIPES
SEATTLE CITY LIGHT 230KV TOWERS EACH SIDE
LOW WIRE EL. APPROXIMATE EL=238.0'±
230KV ON STEEL TOWERS
8"G STL
EDGE PAVEMENT
FOG LINE
124TH AVE NE
340-B9
DOUBLE YELLOW TURTLES
9-4"T CONDUIT, 2-2"T CONDUIT, @WEST
12"W CI
SIGN
POTHOLE "E340-B9" SURF EL=156.3'
TEL R
ASPH PARKING
15' WOOD RAILING
CONC RET WALL (TYP)

NOTES:

1. FOR DISCONNECTION, ABANDONMENT AND REMOVAL OF UTILITY SERVICES AT BUILDING TO BE DEMOLISHED, SEE DRAWING L86-UZN001 NOTES.
2. CONSTRUCTION LIMIT FOR PROPOSED 124TH AVE NE BRIDGE PROJECT BY COB. SEE SPECIFICATION XXXX FOR DEFINITION OF WORK, SCHEDULE, AND COORDINATION REQUIREMENT RELATED TO WORK TO BE COMPLETED UNDER THE COB CONTRACT.
3. ### DENOTES POTHOLE. SEE DWG L86-UCD103 FOR MORE INFORMATION.

N

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
VERIFIED BY: / DATE:
01/22/16 | 8:03 AM | CALDWELLJ
C:\WORK\TEMP-E335-100PCT-DUD\E335-L86-UCP152.DWG

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: L. OLSEN
DRAWN BY: D. FRANKUM
CHECKED BY: S. KIRBY
APPROVED BY: J. SCHUTT

MONICA J. MORRILEE — STATE OF WASHINGTON — 31003 — REGISTERED PROFESSIONAL ENGINEER

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

kpff

SUBMITTED BY:

H J H FINAL DESIGN PARTNERS.

DATE: REVIEWED BY:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

DATE:

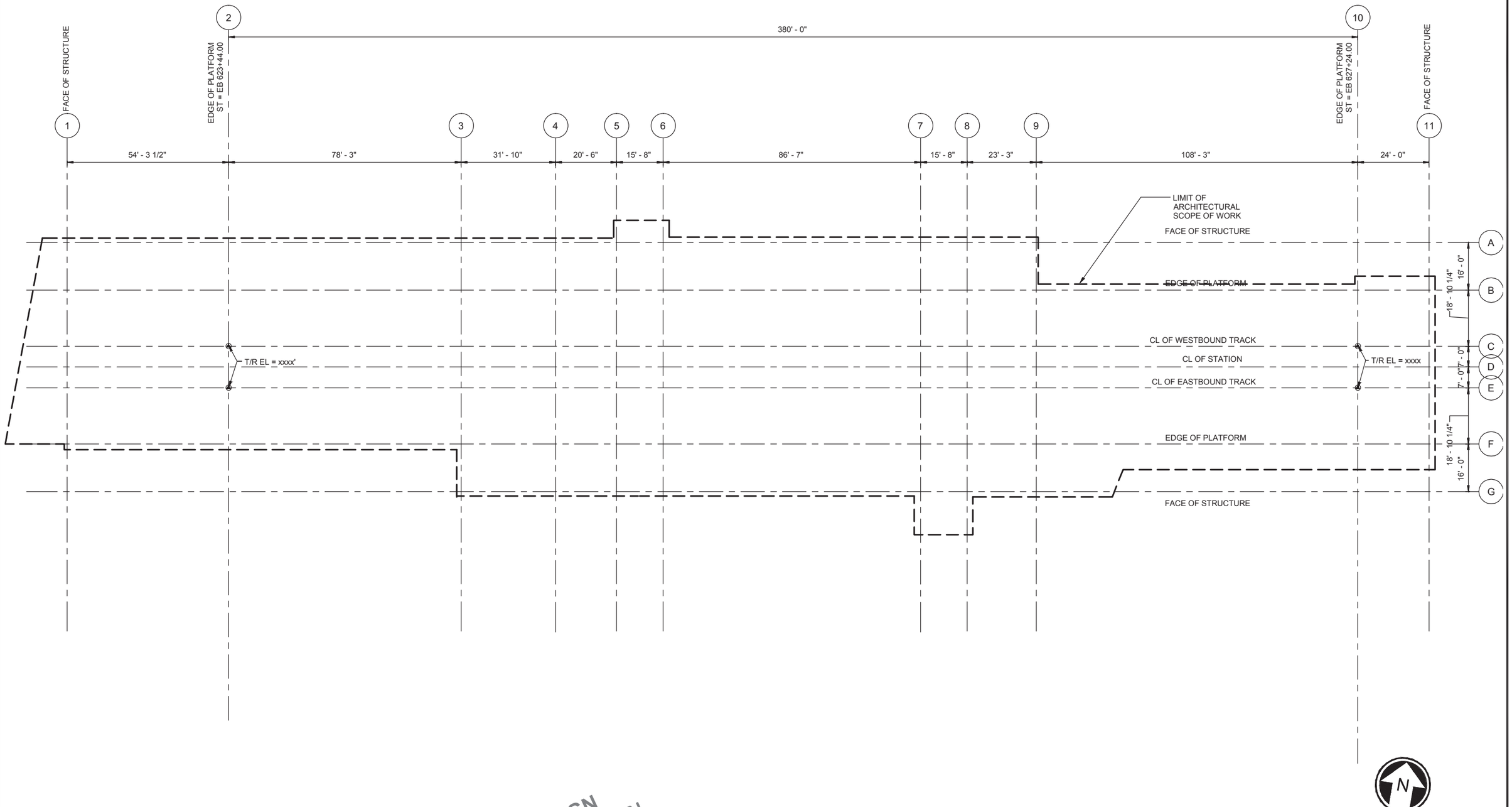
SCALE: 1" = 20'
FILENAME: E335-L86-UCP152
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT

COMPOSITE UTILITY PLAN SUPPLEMENT

DRAWING No.: **L86-UCP152**
LOCATION ID:
SHEET No.: 45
REV: 0

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241



ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
01/22/16 | 12:31 PM | CALDWELLJ
C:\WORK\TEMP-E335-100PCT-DUD\E335-E21-AZV001.DWG

CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

2241 REGISTERED ARCHITECT JOHN F. NESHOLM STATE OF WASHINGTON

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

LMN
801 SECOND AVENUE, SUITE 501 SEATTLE, WA 98104 206.682.3460 FAX 206.343.3868

SUBMITTED BY:

HJH FINAL DESIGN PARTNERS.

DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1/16" = 1'-0"
FILENAME: E335-E21-AZV001
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

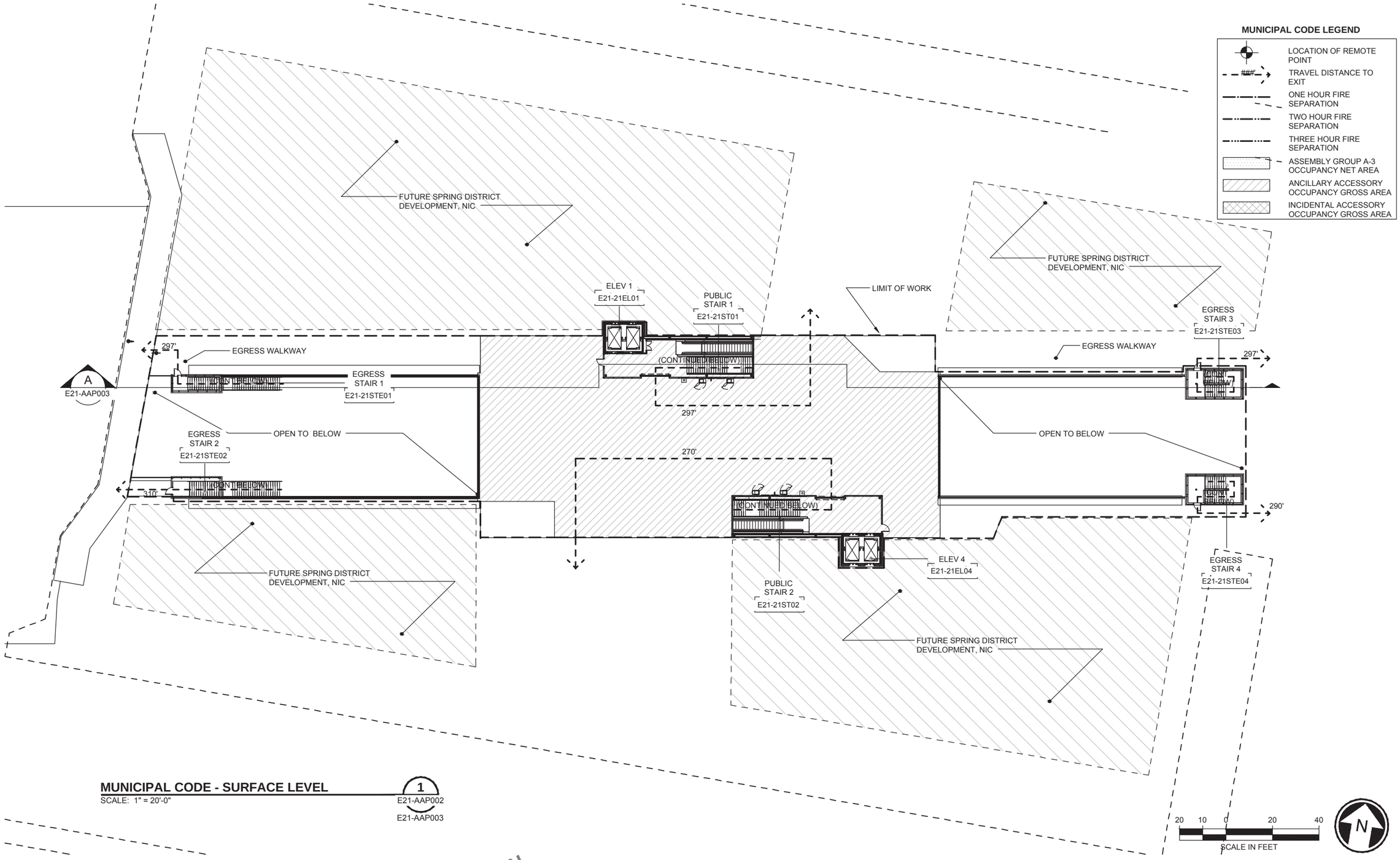
EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL
INFORMATIONAL
GRID DIMENSIONS & TRACK STATIONING

DRAWING No.: **E21-AZV001**
LOCATION ID: E21
SHEET No.: 60
REV: 0

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241

MUNICIPAL CODE LEGEND

- LOCATION OF REMOTE POINT
- ###' TRAVEL DISTANCE TO EXIT
- ONE HOUR FIRE SEPARATION
- TWO HOUR FIRE SEPARATION
- THREE HOUR FIRE SEPARATION
- ASSEMBLY GROUP A-3 OCCUPANCY NET AREA
- ANCILLARY ACCESSORY OCCUPANCY GROSS AREA
- INCIDENTAL ACCESSORY OCCUPANCY GROSS AREA



MUNICIPAL CODE - SURFACE LEVEL 1
SCALE: 1" = 20'-0" E21-AAP002
E21-AAP003

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
01/22/16 | 12:23 PM | CALDWELLJ
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CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

2241 REGISTERED ARCHITECT
JOHN F. NESHOLM
STATE OF WASHINGTON

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

LMN
801 SECOND AVENUE, SUITE 501 SEATTLE, WA 98104
206.682.3460 FAX 206.343.0388

FINAL DESIGN PARTNERS.

LINE IS 1" AT FULL SCALE

SUBMITTED BY:
DATE:
REVIEWED BY:
DATE:

SCALE: 1" = 20'
FILENAME: E335-E21-AAP002
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

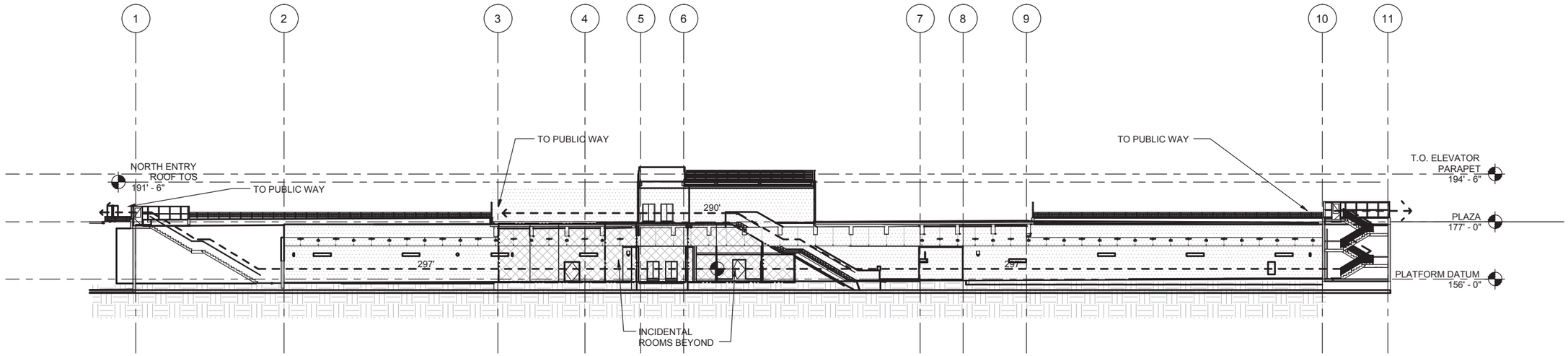
EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL CODE
MUNICIPAL CODE INFORMATION - SURFACE LEVEL

DRAWING No.: **E21-AAP002**
LOCATION ID: E21
SHEET No.: 61
REV: 0

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241

MUNICIPAL CODE LEGEND

- LOCATION OF REMOTE POINT
- ### TRAVEL DISTANCE TO EXIT
- ONE HOUR FIRE SEPARATION
- TWO HOUR FIRE SEPARATION
- THREE HOUR FIRE SEPARATION
- ASSEMBLY GROUP A-3 OCCUPANCY NET AREA
- ANCILLARY ACCESSORY OCCUPANCY GROSS AREA
- INCIDENTAL ACCESSORY OCCUPANCY GROSS AREA



MUNICIPAL CODE - SECTION

SCALE: 1" = 20'-0"

A
E21-AAP003
E21-AAP001

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
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CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

2241 REGISTERED ARCHITECT
JOHN F. NESHOLM
STATE OF WASHINGTON

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

LMN
801 SECOND AVENUE, SUITE 501 206.682.3460
SEATTLE, WA 98104 FAX 206.343.0388

SUBMITTED BY:

HJH FINAL DESIGN PARTNERS.

DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1" = 20'
FILENAME: E335-E21-AAP003
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL
CODE
MUNICIPAL CODE INFORMATION - LONGITUDINAL SECTION

DRAWING No.: **E21-AAP003**
LOCATION ID: E21
SHEET No.: 62
REV: 0

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241

GENERAL NOTES

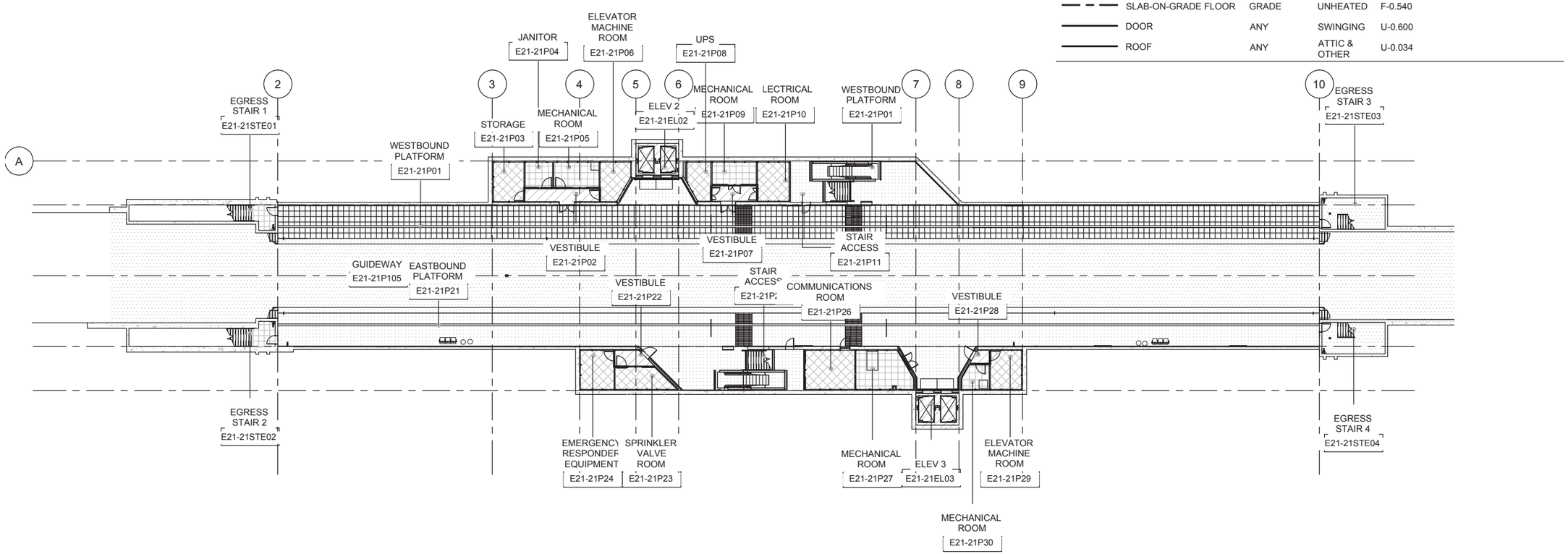
1) SEE MECHANICAL DWGS FOR ENERGY CODE COMPLIANCE REGARDING MECHANICAL SYSTEMS

2) SEE ELECTRICAL DWGS FOR ENERGY CODE COMPLIANCE REGARDING LIGHTING AND ELECTRICAL SYSTEMS

ENERGY CODE LEGEND

PATTERN	CONDITIONING TYPE	HEATED	COOLED	VENTILATED	DESIGN TEMP (°F)
	NONE	NO	NO	NO	AMBIENT TEMP
	UNCONDITIONED	NO	NO	YES	N/A
	HEATED ONLY	YES	NO	YES	55° - 104° (UNO)
	FULLY CONDITIONED	YES	YES	YES	55° - 70° (UNO)

SYMBOL	OPAQUE ELEMENT	LOCATION	TYPE	U-VALUE	R-VALUE
· · · · · ·	WALL	ABV OR BLW GRADE	MASS	U-0.104	
— · —	WALL	ABV OR BLW GRADE	STEEL FRAMED	U-0.052	
— — —	FLOOR	ANY	MASS	U-0.031	
— — —	SLAB-ON-GRADE FLOOR	GRADE	UNHEATED	F-0.540	
———	DOOR	ANY	SWINGING	U-0.600	
———	ROOF	ANY	ATTIC & OTHER	U-0.034	



ENERGY CODE - PLATFORM LEVEL

SCALE: 1" = 20'-0"

1 — E21-AAP011 / E21-AAP003

20 10 0 20 40
SCALE IN FEET

N

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

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PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

2241 REGISTERED ARCHITECT
JOHN F. NESHOLM
STATE OF WASHINGTON

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

LMN
801 SECOND AVENUE, SUITE 501 SEATTLE, WA 98104 206.682.3460 FAX 206.343.0388

H J H FINAL DESIGN PARTNERS.

SUBMITTED BY:
DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1" = 20'
FILENAME: E335-E21-AAP011
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL
CODE
ENERGY CODE INFORMATION - PLATFORM

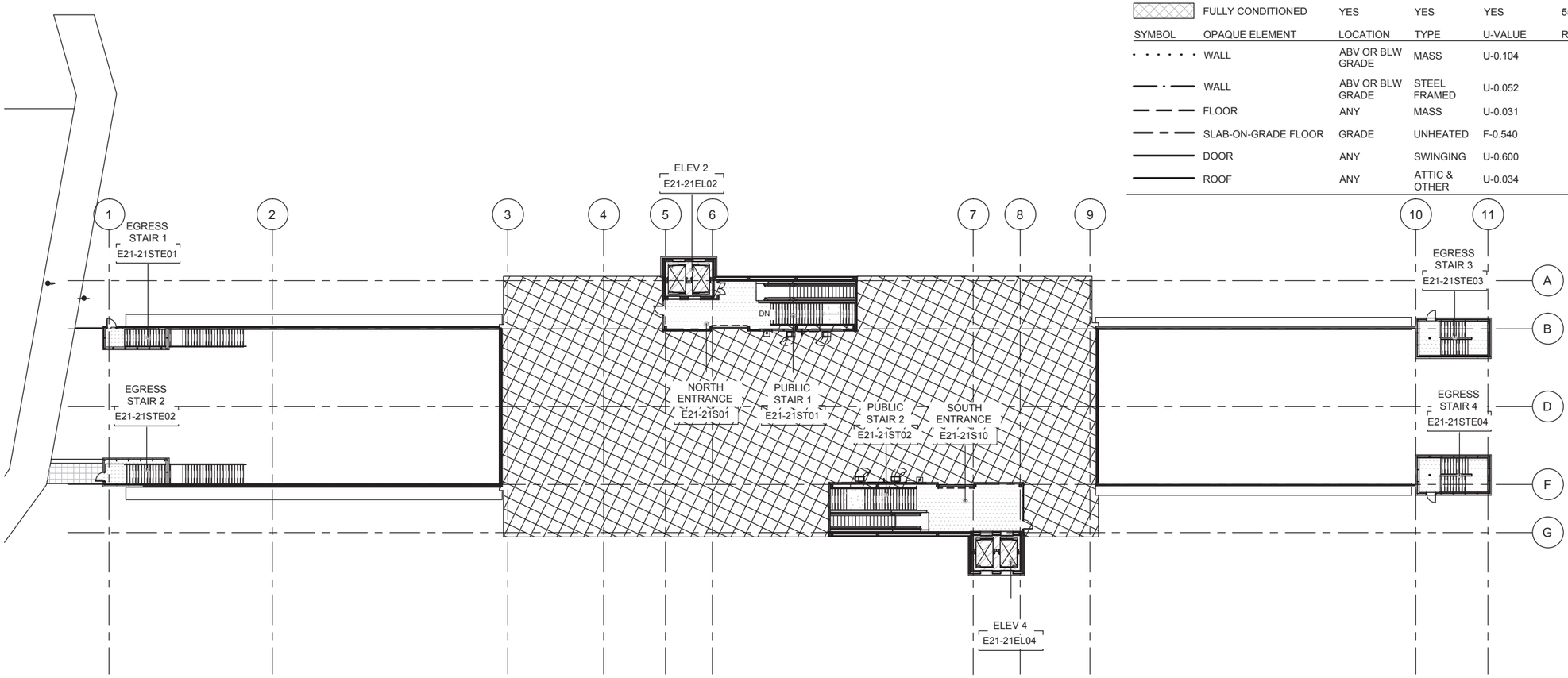
DRAWING No.: **E21-AAP011**
LOCATION ID: E21
SHEET No.: 63
REV: 0

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241

ENERGY CODE LEGEND

PATTERN	CONDITIONING TYPE	HEATED	COOLED	VENTILATED	DESIGN TEMP (°F)
	NONE	NO	NO	NO	AMBIENT TEMP
	UNCONDITIONED	NO	NO	YES	N/A
	HEATED ONLY	YES	NO	YES	55° - 104° (UNO)
	FULLY CONDITIONED	YES	YES	YES	55° - 70° (UNO)

SYMBOL	OPAQUE ELEMENT	LOCATION	TYPE	U-VALUE	R-VALUE
· · · · · ·	WALL	ABV OR BLW GRADE	MASS	U-0.104	
— · —	WALL	ABV OR BLW GRADE	STEEL FRAMED	U-0.052	
— — —	FLOOR	ANY	MASS	U-0.031	
— — —	SLAB-ON-GRADE FLOOR	GRADE	UNHEATED	F-0.540	
———	DOOR	ANY	SWINGING	U-0.600	
———	ROOF	ANY	ATTIC & OTHER	U-0.034	



ENERGY CODE - SURFACE LEVEL

SCALE: 1" = 20'-0"

1
E21-AAP012
E21-AAP003

20 10 0 20 40
SCALE IN FEET

N

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
01/22/16 | 12:24 PM | CALDWELLJ
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CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

2241 REGISTERED ARCHITECT
JOHN F. NESHOLM
STATE OF WASHINGTON

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

LMN
801 SECOND AVENUE, SUITE 501 SEATTLE, WA 98104 206.682.3460 FAX 206.343.0388

HJH FINAL DESIGN PARTNERS.

LINE IS 1" AT FULL SCALE

SUBMITTED BY:
DATE:
REVIEWED BY:
DATE:

SOUNDTRANSIT

SCALE: 1" = 20'
FILENAME: E335-E21-AAP012
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL
CODE
ENERGY CODE INFORMATION - SURFACE LEVEL

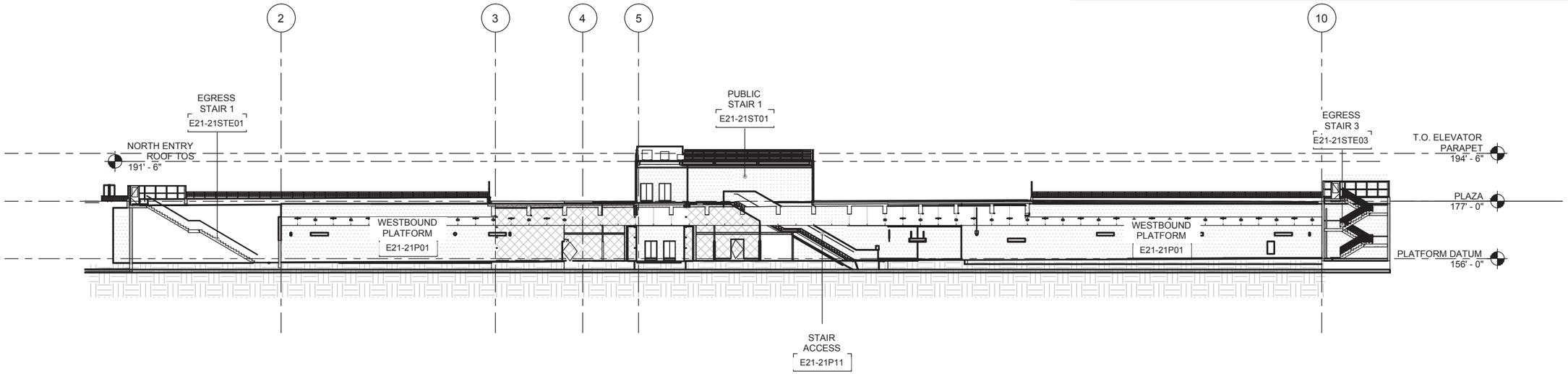
DRAWING No.: **E21-AAP012**
LOCATION ID: E21
SHEET No.: 64
REV: 0

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241

ENERGY CODE LEGEND

PATTERN	CONDITIONING TYPE	HEATED	COOLED	VENTILATED	DESIGN TEMP (°F)
	NONE	NO	NO	NO	AMBIENT TEMP
	UNCONDITIONED	NO	NO	YES	N/A
	HEATED ONLY	YES	NO	YES	55° - 104° (UNO)
	FULLY CONDITIONED	YES	YES	YES	55° - 70° (UNO)

SYMBOL	OPAQUE ELEMENT	LOCATION	TYPE	U-VALUE	R-VALUE
	WALL	ABV OR BLW GRADE	MASS	U-0.104	
	WALL	ABV OR BLW GRADE	STEEL FRAMED	U-0.052	
	FLOOR	ANY	MASS	U-0.031	
	SLAB-ON-GRADE FLOOR	GRADE	UNHEATED	F-0.540	
	DOOR	ANY	SWINGING	U-0.600	
	ROOF	ANY	ATTIC & OTHER	U-0.034	



ENERGY CODE - SECTION

SCALE: 1" = 20'-0"

1
E21-AAP013
E21-AZN003

20 10 0 20 40
SCALE IN FEET

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

2241 REGISTERED ARCHITECT
JOHN F. NESHOLM
STATE OF WASHINGTON

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

LMN
801 SECOND AVENUE, SUITE 501 SEATTLE, WA 98104 206.682.3460 FAX 206.343.8788

HJH FINAL DESIGN PARTNERS.

SUBMITTED BY:
DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1" = 20'
FILENAME: E335-E21-AAP013
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL
CODE
ENERGY CODE INFORMATION - LONGITUDINAL SECTION

DRAWING No.: E21-AAP013
LOCATION ID: E21
SHEET No.: 65
REV: 0

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

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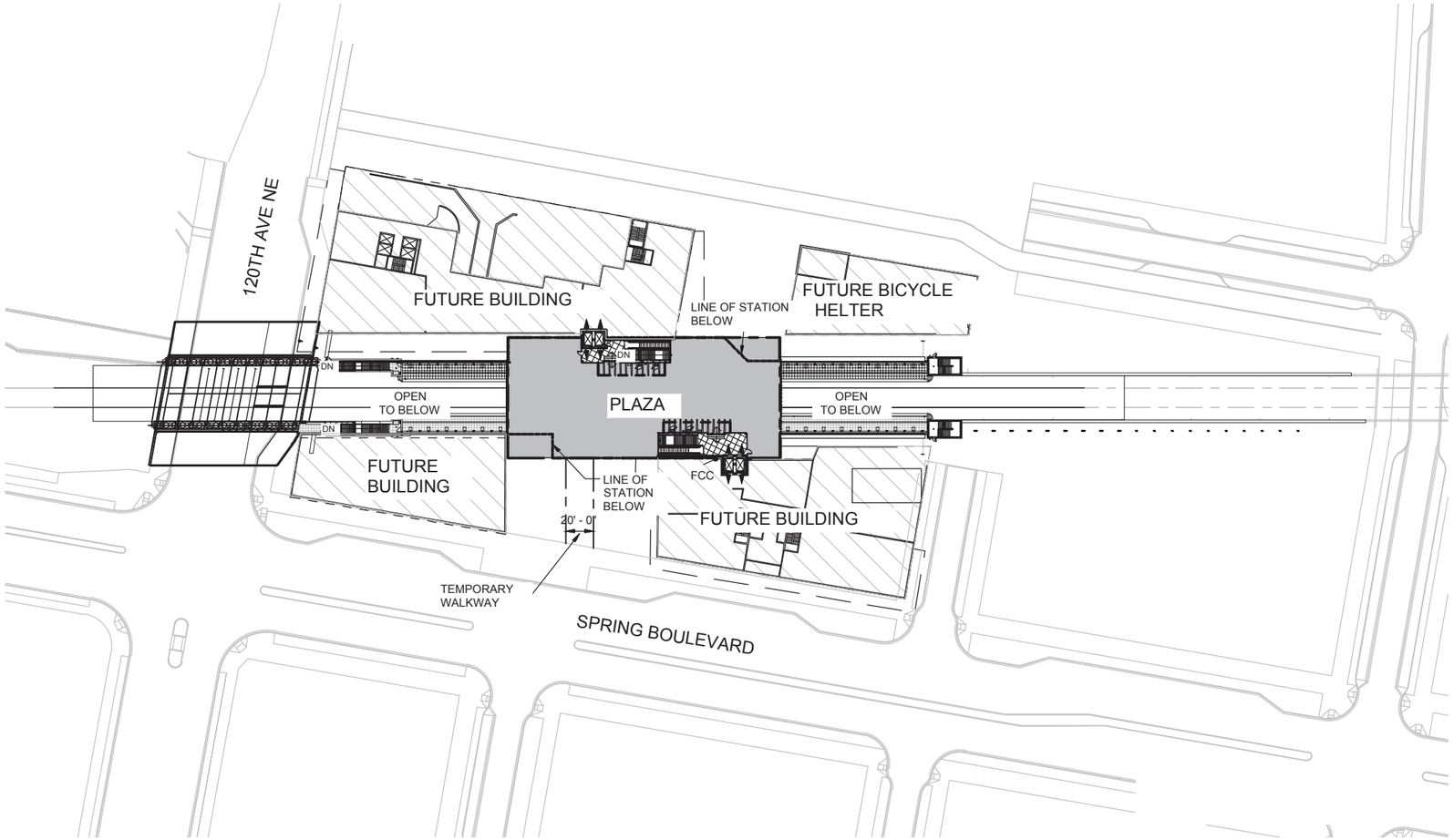
XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241



50 25 0 50 100
SCALE IN FEET

N

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
01/22/16 | 12:30 PM | CALDWELLJ
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CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

2241 REGISTERED ARCHITECT
JOHN F. NESHOLM
STATE OF WASHINGTON

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

LMN
801 SECOND AVENUE, SUITE 501 SEATTLE, WA 98104
206.682.3460 FAX 206.343.9388

SUBMITTED BY:

HJH
FINAL DESIGN PARTNERS.

DATE:
REVIEWED BY:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

DATE:

SCALE: 1" = 50'
FILENAME: E335-E21-ASP100
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL
SITE
SITE PLAN - OVERALL

DRAWING No.: **E21-ASP100**
LOCATION ID: E21
SHEET No.: 66
REV: 0

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241

380' - 0"

1 2 3 4 5 6 7 8 9 10 11

132' - 6 1/2" | 31' - 10" | 20' - 6" | 102' - 3" | 15' - 8" | 23' - 3" | 108' - 3" | 24' - 0"

FUTURE BUILDING
(NIC)

1 E21-APP101

1 E21-APP102

1 E21-APP103

1 E21-AEX601

A E21-AEX602

1 E21-AEX603

EDGE OF LID ABOVE

1 E21-AEX100

2 E21-AEX100

OPEN ABOVE

199' - 0" LID

OPEN ABOVE

N.B. PLATFORM

UP

UP

UP

E.B. PLATFORM

EDGE OF LID ABOVE

LOCATION OF KNOCK-OUT PANEL/CONNECTION COLLAR

A
B
C
D
E
F
G

16' - 0"
18' - 10 1/4"
7' - 0"
7' - 0"
18' - 10 1/4"
16' - 0"

FUTURE BUILDING
(NIC)

N

FLOOR PLAN- PLATFORM LEVEL OVERALL

SCALE: 1" = 20'-0"

1 E21-APP100
E21-AAP003

20 10 0 20 40
SCALE IN FEET

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
01/22/16 | 12:29 PM | CALDWELLJ
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CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

2241 REGISTERED ARCHITECT
JOHN F. NESHOLM
STATE OF WASHINGTON

LMN
801 SECOND AVENUE, SUITE 501 SEATTLE, WA 98104
206.682.3460 FAX 206.343.3588

HJH
FINAL DESIGN PARTNERS.

SUBMITTED BY:
DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

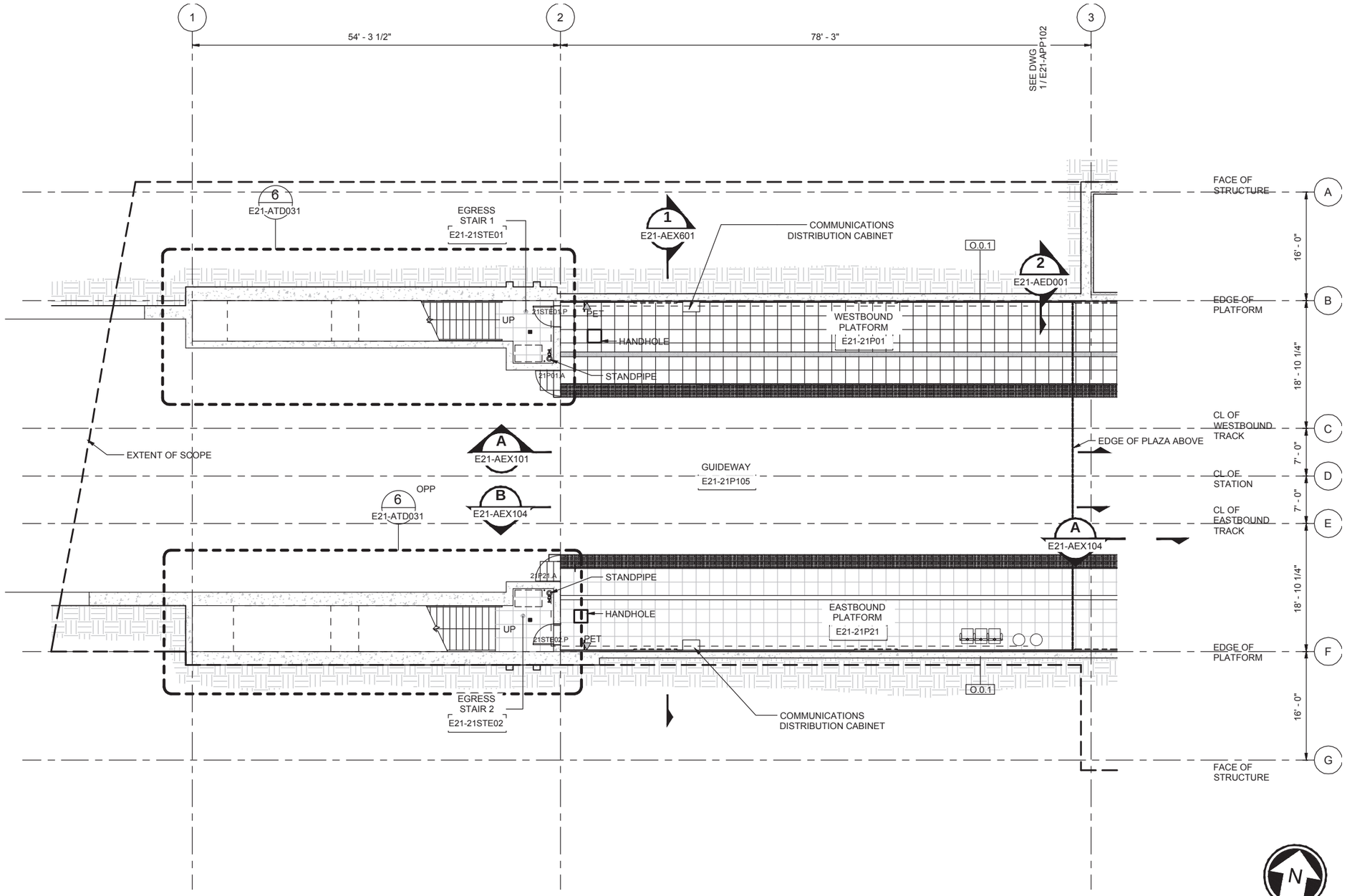
SOUNDTRANSIT

SCALE: 1" = 30'
FILENAME: E335-E21-APP100
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL
FLOOR PLANS
PLATFORM LEVEL - FLOOR PLAN - OVERALL

DRAWING No.: **E21-APP100**
LOCATION ID: E21
SHEET No.: 67
REV: 0

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241



FLOOR PLAN - PLATFORM LEVEL - WEST

SCALE: 1/8" = 1'-0"

1
E21-APP101
E21-APP100

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
01/22/16 | 12:29 PM | CALDWELLJ
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CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

2241 REGISTERED ARCHITECT
JOHN F. NESHOLM
STATE OF WASHINGTON

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

LMN
801 SECOND AVENUE, SUITE 501 SEATTLE, WA 98104 206.682.3460 FAX 206.343.3588

H J H
FINAL DESIGN PARTNERS.

SUBMITTED BY:
DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

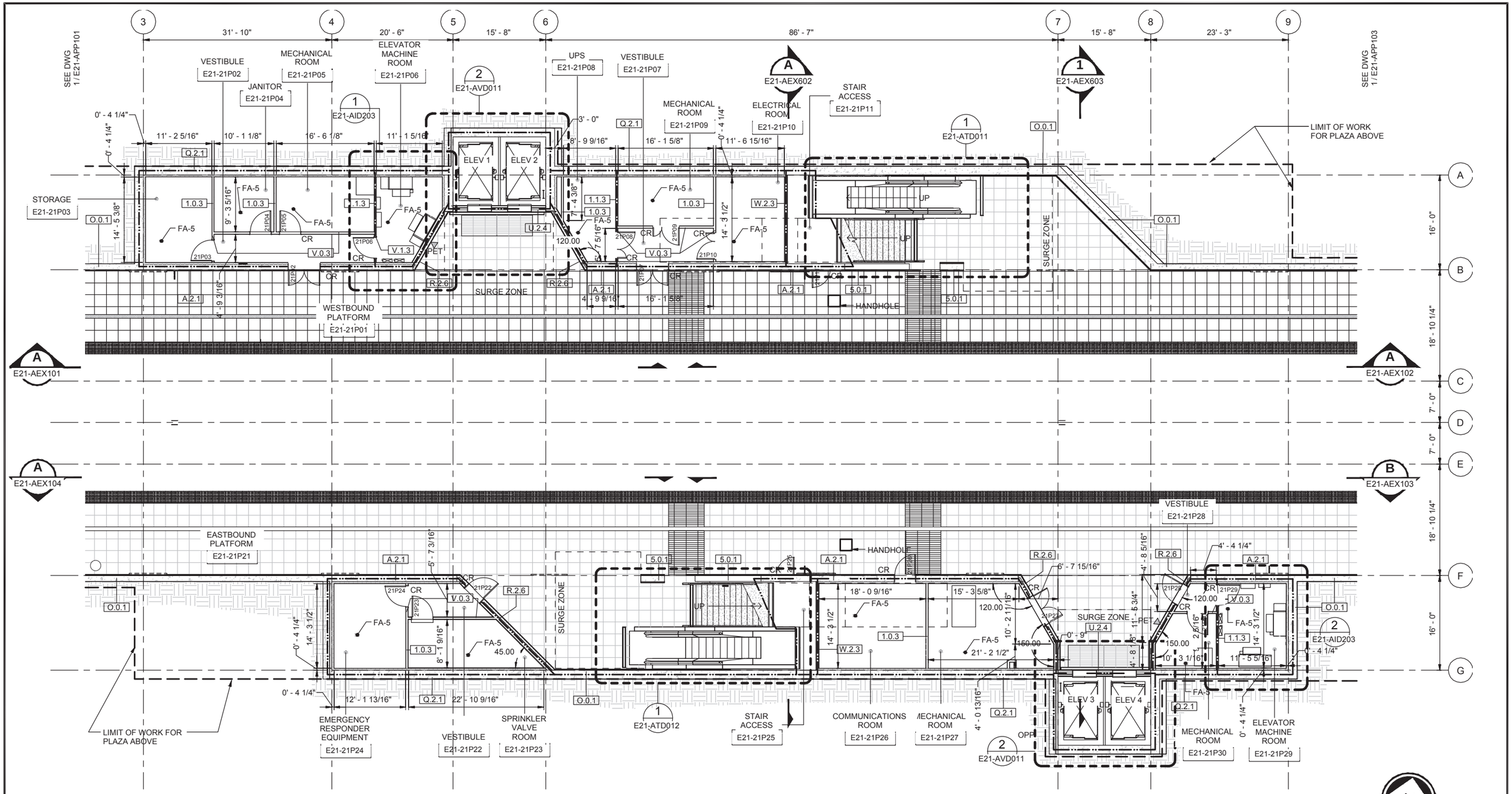
SOUNDTRANSIT

SCALE: 1/8" = 1'-0"
FILENAME: E335-E21-APP101
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL
FLOOR PLANS
PLATFORM LEVEL - FLOOR PLAN - WEST

DRAWING No.: E21-APP101
LOCATION ID: E21
SHEET No.: 68
REV: 0

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241



FLOOR PLAN - PLATFORM LEVEL - CENTRAL

SCALE: 1/8" = 1'-0"

E21-APP102 / E21-APP100

ORIGINATED BY: / DATE:
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APPROVED BY:

2241 REGISTERED ARCHITECT JOHN F. NESHOLM STATE OF WASHINGTON

LMN 801 SECOND AVENUE, SUITE 501 SEATTLE, WA 98104 206.682.3460 FAX 206.343.0388

HJH FINAL DESIGN PARTNERS.

SUBMITTED BY:
DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

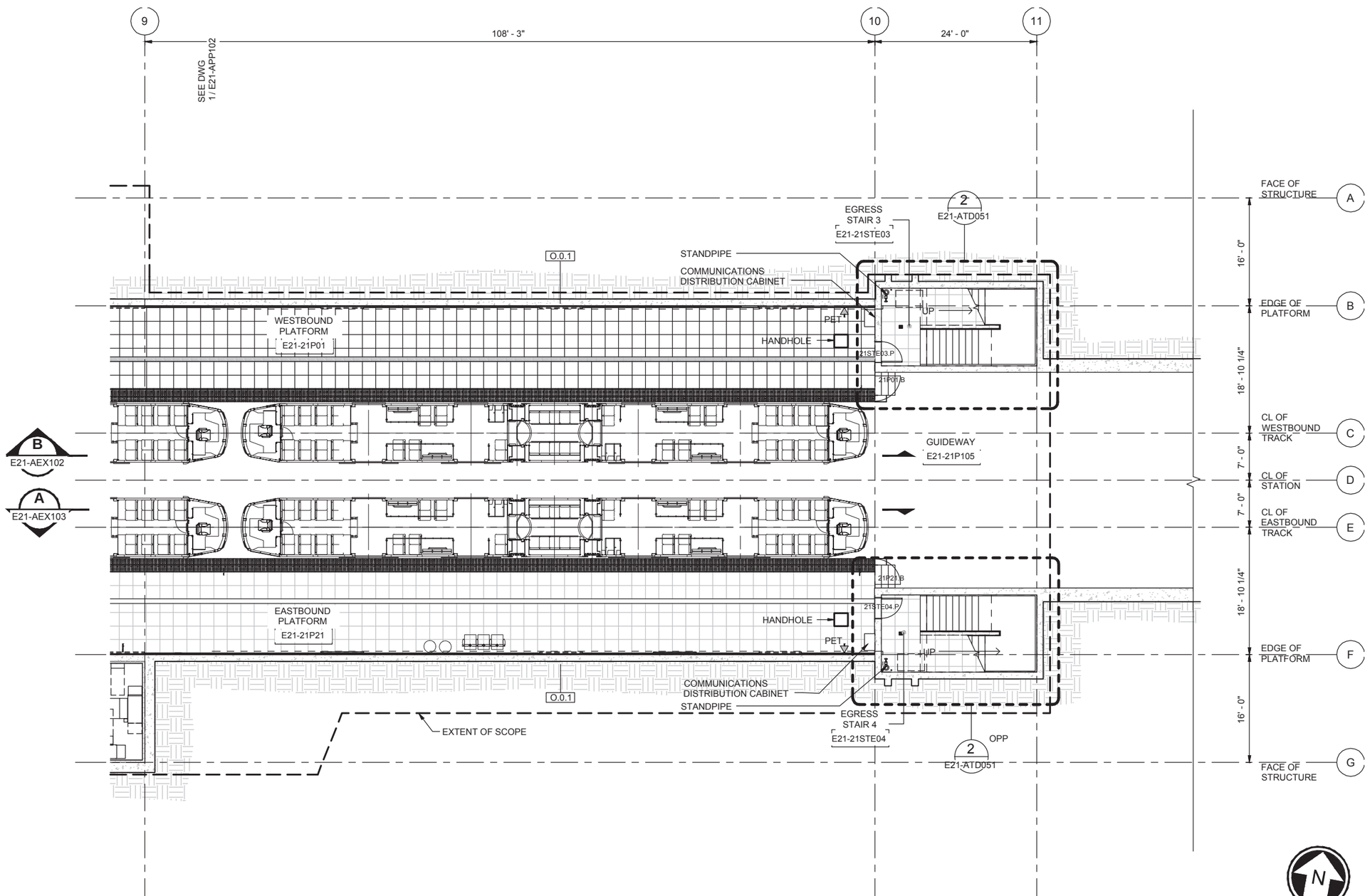
SCALE: 1/8" = 1'-0"
FILENAME: E335-E21-APP102
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT

120TH STATION - ARCHITECTURAL
FLOOR PLANS
PLATFORM LEVEL - FLOOR PLAN - CENTRAL

DRAWING No.: E21-APP102
LOCATION ID: E21
SHEET No.: 69
REV: 0

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241



FLOOR PLAN - PLATFORM LEVEL - EAST

SCALE: 1/8" = 1'-0"

1 / E21-APP103 / E21-APP100

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
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VERIFIED BY: / DATE:

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2241 REGISTERED ARCHITECT
JOHN F. NESHOLM
STATE OF WASHINGTON

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SUBMITTED BY:
DATE:
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DATE:

LINE IS 1" AT FULL SCALE

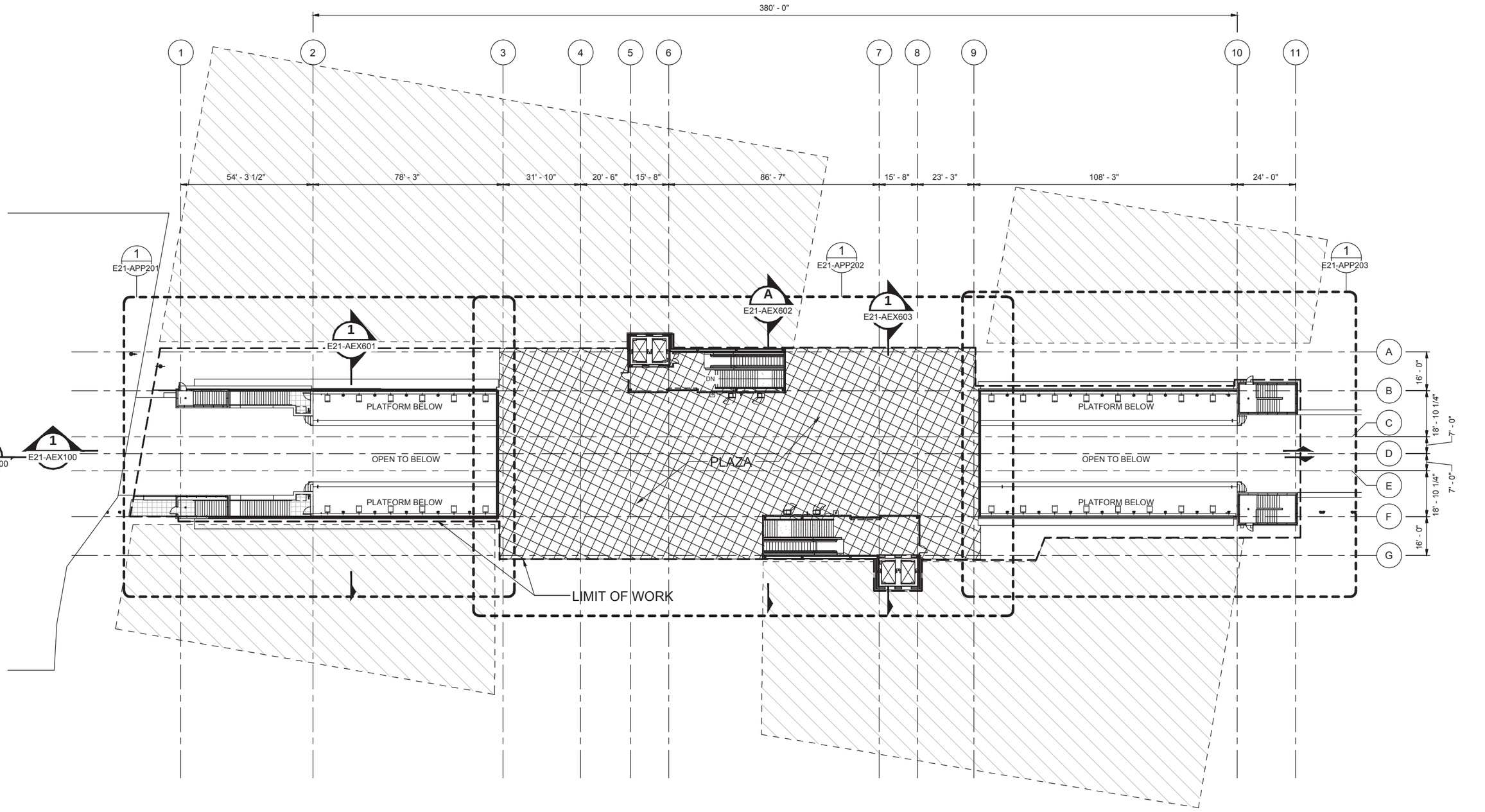
SOUNDTRANSIT

SCALE: 1/8" = 1'-0"
FILENAME: E335-E21-APP103
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL
FLOOR PLANS
PLATFORM LEVEL - FLOOR PLAN - EAST

DRAWING No.: **E21-APP103**
LOCATION ID: E21
SHEET No.: 70
REV: 0

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241



FLOOR PLAN- PLAZA LEVEL OVERALL

SCALE: 1" = 20'-0"

1
E21-APP200
E21-AAP003

20 10 0 20 40
SCALE IN FEET

N

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
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VERIFIED BY: / DATE:

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801 SECOND AVENUE, SUITE 501 206.682.3460
SEATTLE, WA 98104 FAX 206.343.3068

H J H
FINAL DESIGN PARTNERS.

SUBMITTED BY:
DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

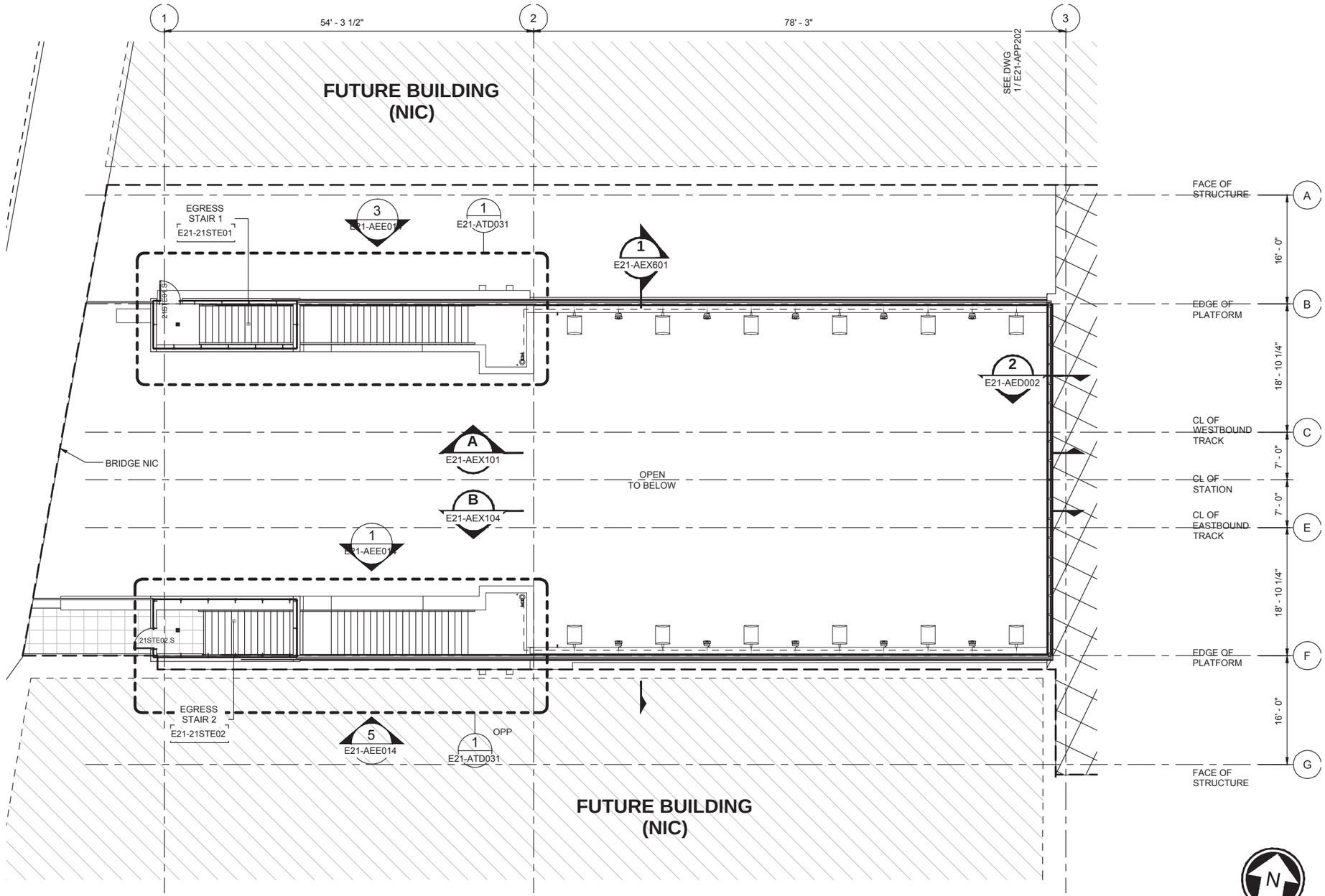
SOUNDTRANSIT

SCALE: 1" = 30'
FILENAME: E335-E21-APP200
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL
FLOOR PLANS
SURFACE LEVEL - FLOOR PLAN - OVERALL

DRAWING No.: E21-APP200
LOCATION ID: E21
SHEET No.: 71
REV: 0

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241



FLOOR PLAN - SURFACE LEVEL - WEST

SCALE: 1/8" = 1'-0"

1 E21-APP201 / E21-APP200

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
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APPROVED BY:

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SUBMITTED BY:
DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1/8" = 1'-0"
FILENAME: E335-E21-APP201
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL
FLOOR PLANS
SURFACE LEVEL - FLOOR PLAN - WEST

DRAWING No.: E21-APP201
LOCATION ID: E21
SHEET No.: 72
REV: 0

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241

3 | 4 | 5 | 6 | 7 | 8 | 9

31' - 10" | 20' - 6" | 15' - 8" | 86' - 7" | 15' - 8" | 23' - 3"

SEE DWG 1/ E21-APP201

SEE DWG 1/ E21-APP203

FUTURE BUILDING (NIC)

1 E21-AVD011

A E21-AEX602

1 E21-AEX603

S.2.4

FACP E21-21S02

T.0.8

NORTH ENTRANCE E21-21S01

7.3.2

1.0.3

7.2.2

8.2.4

21S01.A

CR

FA-4

21S01.B

PUBLIC STAIR 1 E21-21ST01

EMERGENCY EGRESS

1 E21-ATD011

PET

CANOPY ABOVE

2 E21-AED002

2 E21-AEE012

OPEN TO BELOW

THROW BARRIER

B E21-AEX104

A E21-AEX104

PLAZA

RA-10

CANOPY ABOVE

EMERGENCY EGRESS

3 E21-ADS004

2 E21-ADS004

PET

21S10.B

CR

FA-4

SOUTH ENTRANCE E21-21S10

8.2.4

CR

21S10.A

6 E21-ADS004

1 E21-ATD012

5 E21-ADS004

T.0.8

PLAZA LIMIT OF WORK

FUTURE BUILDING (NIC)

S.2.4

S.2.4

1 E21-AVD011

1 E21-AEE012

B E21-AEX102

A E21-AEX102

OPEN TO BELOW

THROW BARRIER

A | B | C | D | E | F | G

16' - 0" | 18' - 10 1/4" | 7' - 0" | 7' - 0" | 18' - 10 1/4" | 16' - 0"

N

FLOOR PLAN - SURFACE LEVEL - CENTRAL 1 E21-APP202 / E21-APP200

SCALE: 1/8" = 1'-0"

ORIGINATED BY: / DATE:
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APPROVED BY:

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HJH FINAL DESIGN PARTNERS.

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LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1/8" = 1'-0"
FILENAME: E335-E21-APP202
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL
FLOOR PLANS
SURFACE LEVEL - FLOOR PLAN - CENTRAL

DRAWING No.: E21-APP202
LOCATION ID: E21
SHEET No.: 73 REV: 0

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241

9
10
11

SEE DWG 1 / E21-APP202

FUTURE BUILDING (NIC)

1
E21-AED002

EGRESS STAIR 3
E21-21STE03

1
E21-ATD051

21ST EXIT S

FACE OF STRUCTURE — A
EDGE OF PLATFORM — B
CL OF WESTBOUND TRACK — C
CL OF STATION — D
CL OF EASTBOUND TRACK — E
EDGE OF PLATFORM — F
FACE OF STRUCTURE — G

16' - 0"
18' - 10 1/4"
7' - 0"
7' - 0"
18' - 10 1/4"
16' - 0"

B
E21-AEX102

A
E21-AEX103

OPEN TO BELOW

21ST EXIT S

OPP
1
E21-ATD051

EGRESS STAIR 4
E21-21STE04

FUTURE BUILDING (NIC)

N

FLOOR PLAN - SURFACE LEVEL - EAST

SCALE: 1/8" = 1'-0"

1
E21-APP203
E21-APP200

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
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APPROVED BY:

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H J H FINAL DESIGN PARTNERS.

SUBMITTED BY:
DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1/8" = 1'-0"
FILENAME: E335-E21-APP203
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL
FLOOR PLANS
SURFACE LEVEL - FLOOR PLAN - EAST

DRAWING No.: E21-APP203
LOCATION ID: E21
SHEET No.: 74
REV: 0

XREF LIST:
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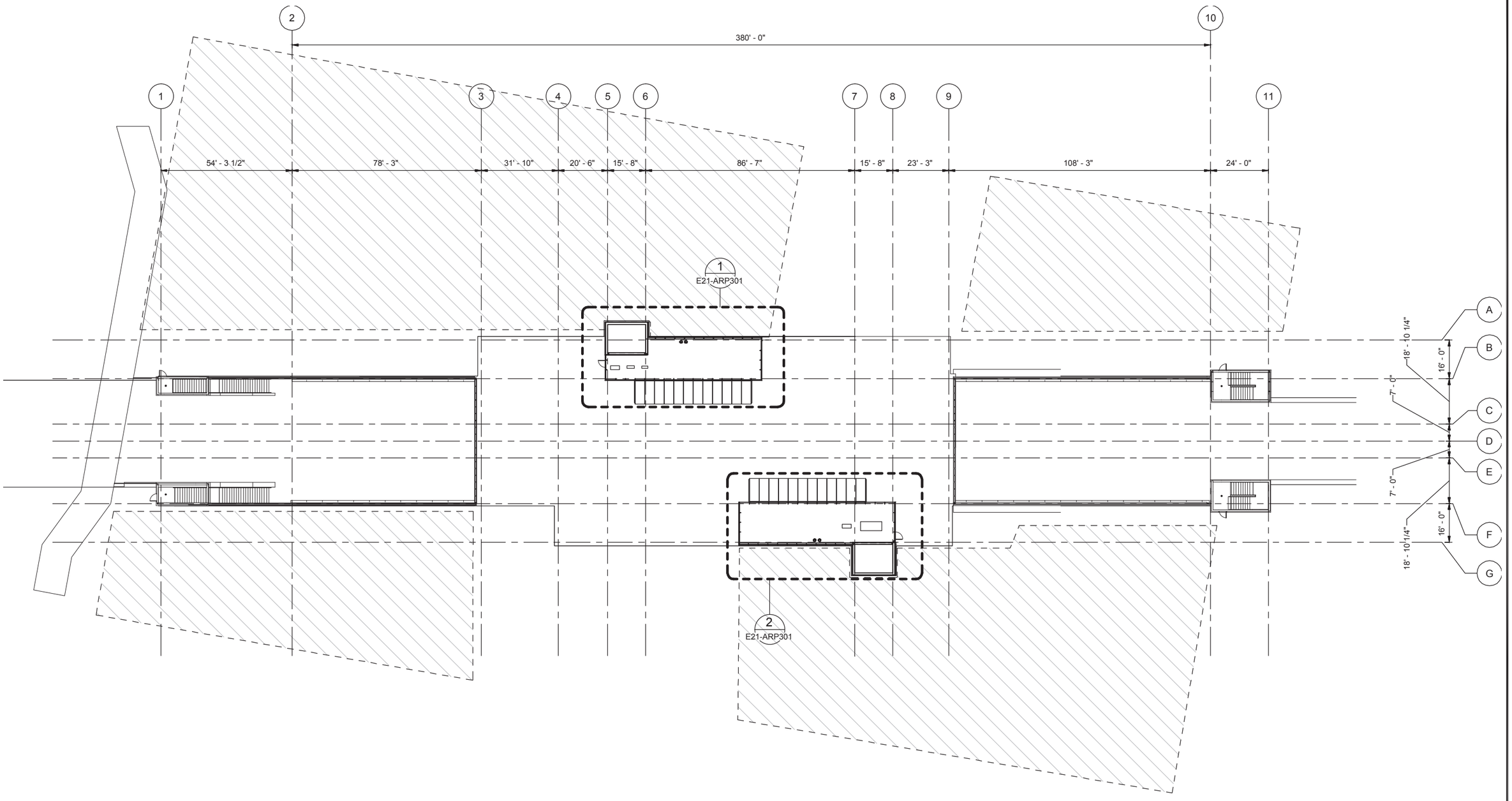
GB-SEAL-JFN2241



ROOF LEVEL - OVERALL PLAN
SCALE: 1" = 20'-0"

1
E21-ARP300
E21-AAP003

20 10 0 20 40
SCALE IN FEET

N

ORIGINATED BY: / DATE:
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BACK-CHECKED BY: / DATE:
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JOHN F. NESHOLM
STATE OF WASHINGTON

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SEATTLE, WA 98104 FAX 206.343.3868

H J H
FINAL DESIGN PARTNERS.

SUBMITTED BY:
DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1" = 30'
FILENAME: E335-E21-ARP300
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL
FLOOR PLANS
ROOF LEVEL - FLOOR PLAN - OVERALL

DRAWING No.: **E21-ARP300**
LOCATION ID: E21
SHEET No.: 75
REV: 0

XREF LIST:
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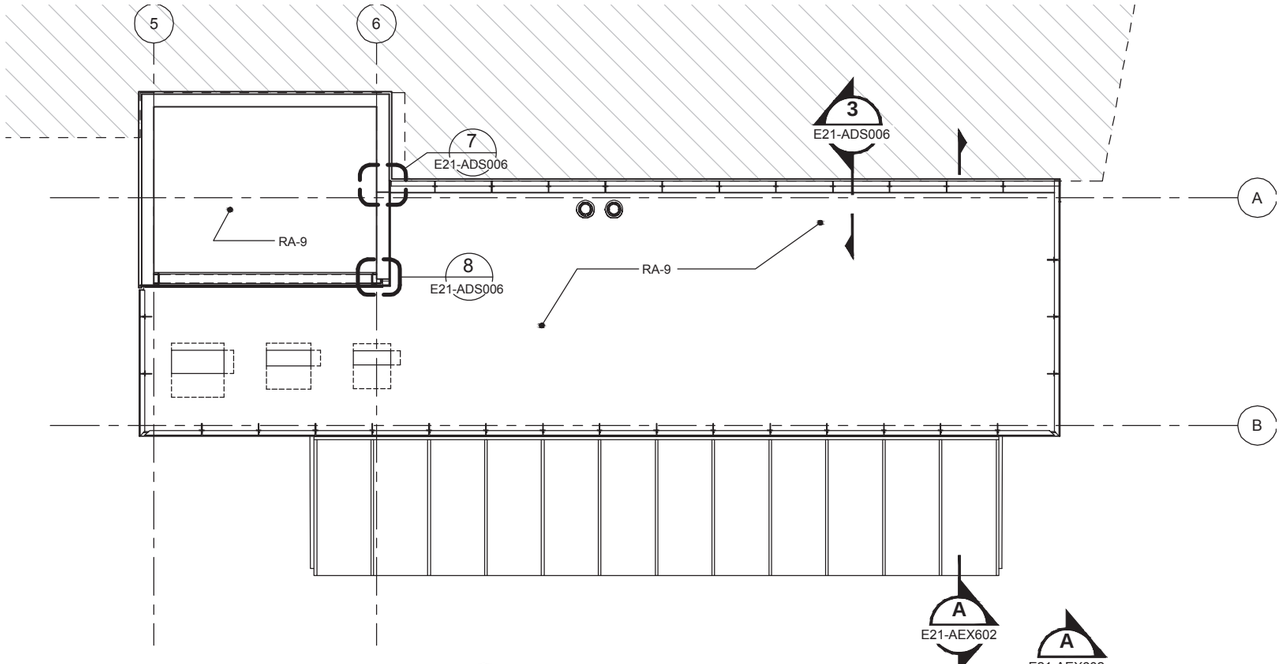
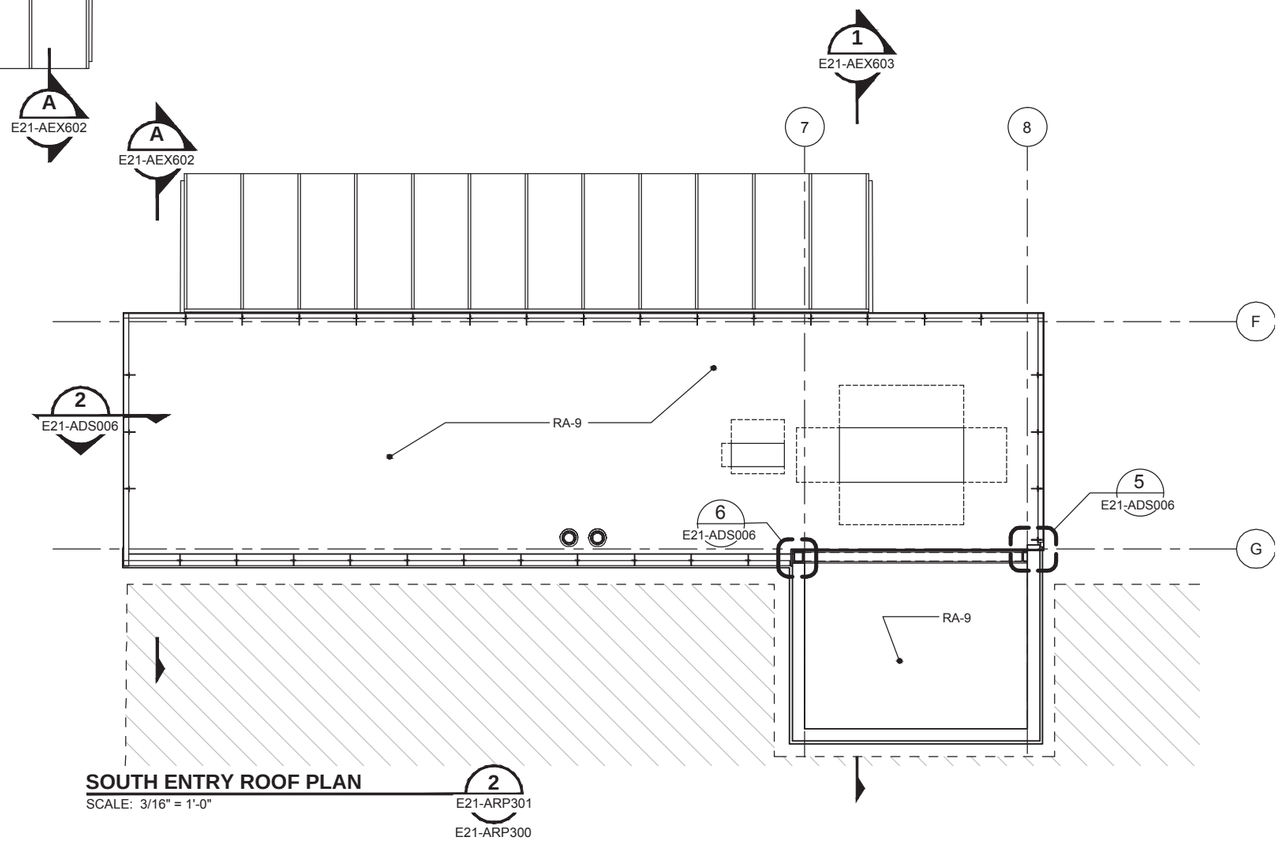
GB-SEAL-JFN2241



NORTH ENTRY-ROOF PLAN
SCALE: 3/16" = 1'-0"

1
E21-ARP301
E21-ARP300



SOUTH ENTRY ROOF PLAN
SCALE: 3/16" = 1'-0"

2
E21-ARP301
E21-ARP300

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PROGRESS PRINT #1

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STATE OF WASHINGTON

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HJH FINAL DESIGN PARTNERS.

SUBMITTED BY:
DATE:
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DATE:

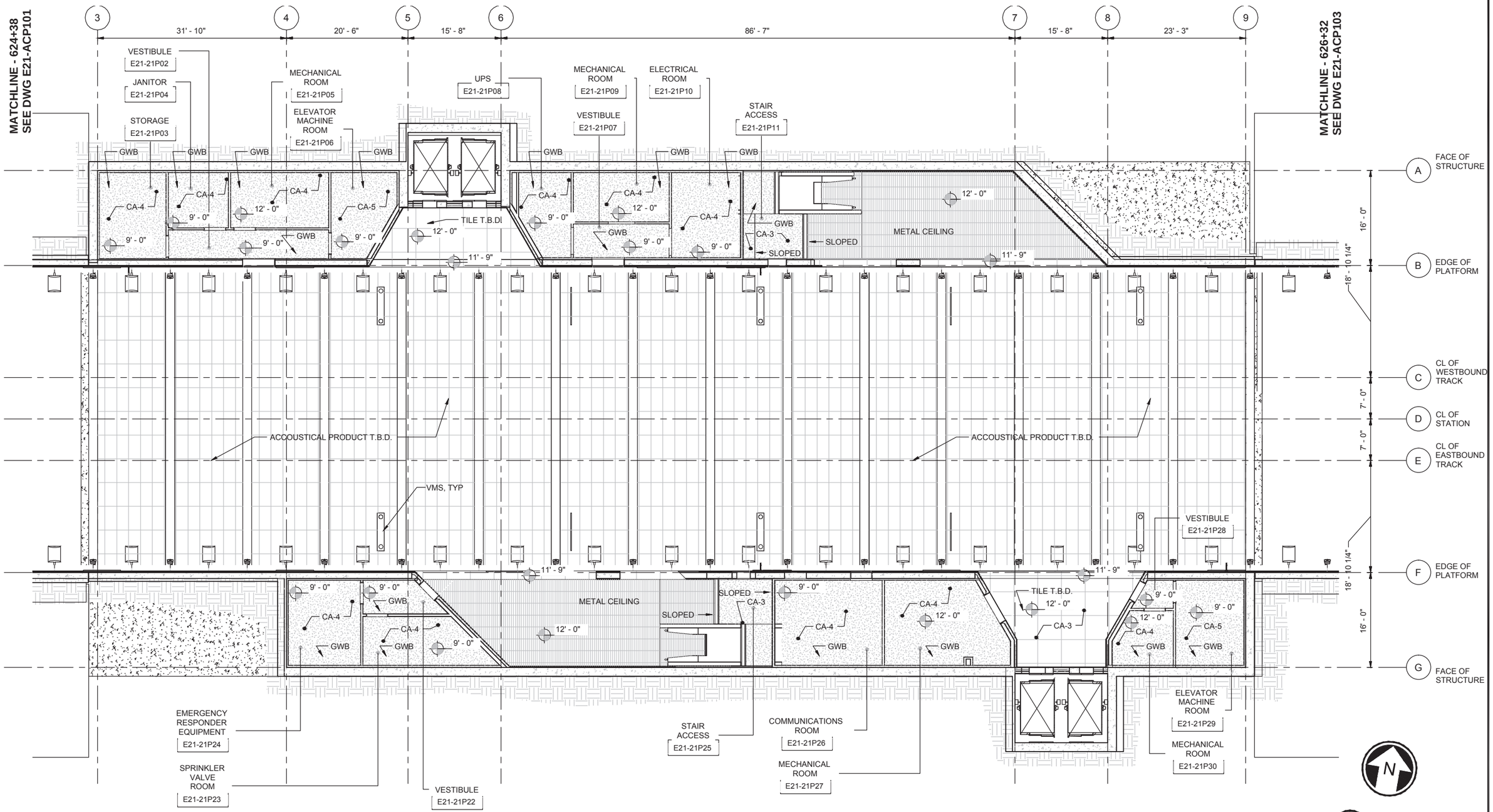
LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1/8" = 1'-0"
FILENAME: E335-E21-ARP301
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL
FLOOR PLANS
ROOF LEVEL - FLOOR PLAN - WEST

DRAWING No.: **E21-ARP301**
LOCATION ID: E21
SHEET No.: 76
REV: 0



REFLECTED CEILING PLAN - PLATFORM LEVEL (1)
SCALE: 1/8" = 1'-0"
E21-ACP102
E21-AAP003

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241

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PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

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STATE OF WASHINGTON

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HJH FINAL DESIGN PARTNERS.

SUBMITTED BY:
DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

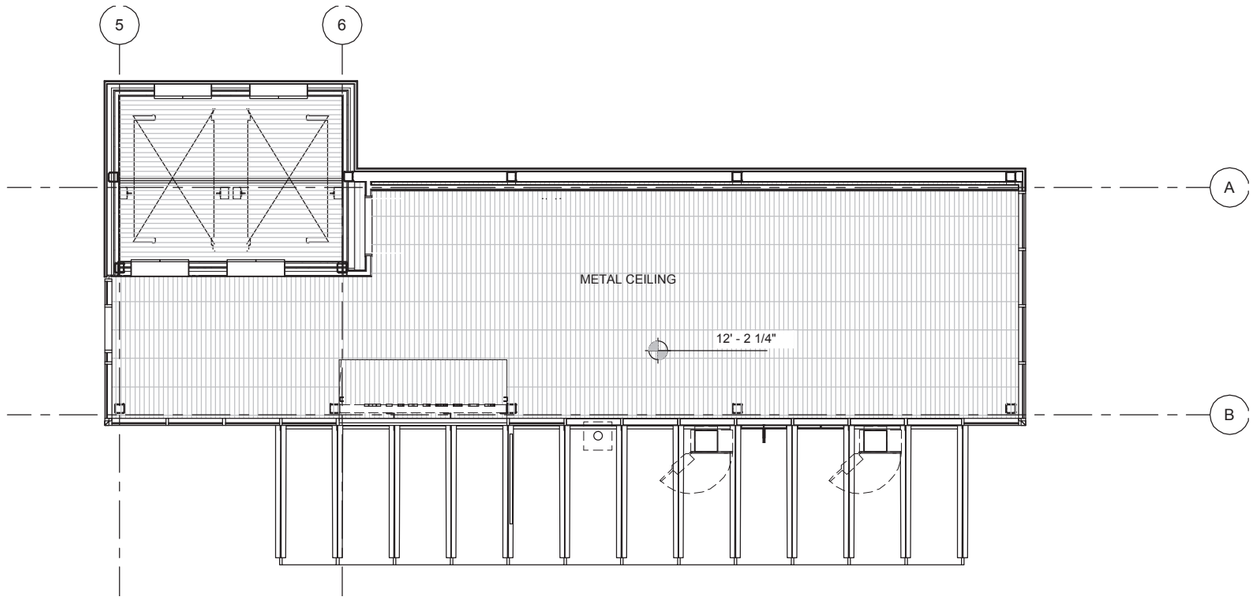
SOUNDTRANSIT

SCALE: 1/8" = 1'-0"
FILENAME: E335-E21-ACP102
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL
REFLECTED CEILING PLANS
PLATFORM LEVEL - REFLECTED CEILING PLAN - CENTRAL

DRAWING No.: **E21-ACP102**
LOCATION ID: E21
SHEET No.: 77
REV: 0

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241



RCP- NORTH ENTRY 1
SCALE: 3/16" = 1'-0"
E21-ACP202
E21-AAP003

RCP- SOUTH ENTRY 2
SCALE: 3/16" = 1'-0"
E21-ACP202
E21-AAP003

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BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
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HJH FINAL DESIGN PARTNERS.

SUBMITTED BY:
DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

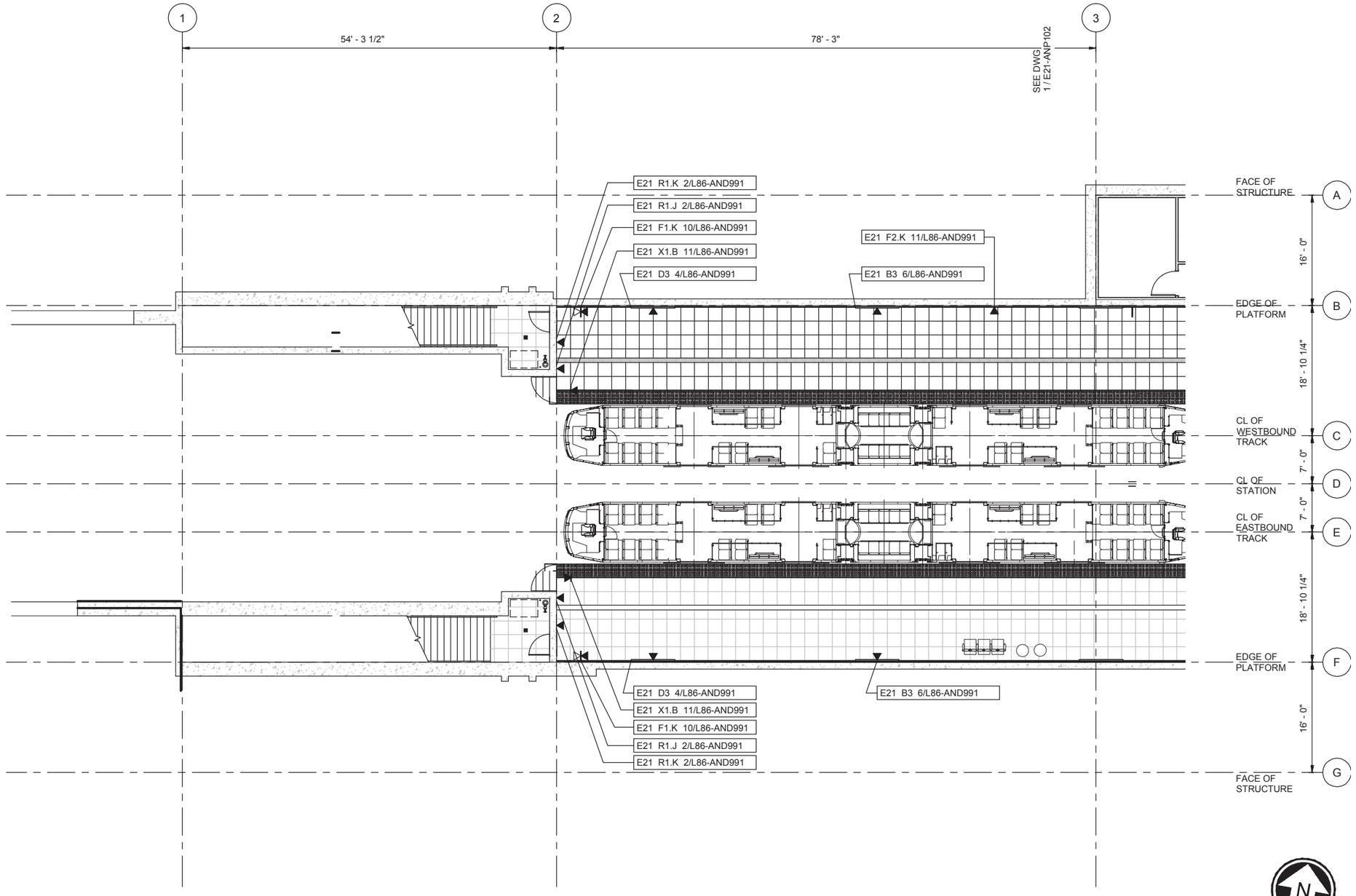
SOUNDTRANSIT

SCALE: 1/8" = 1'-0"
FILENAME: E335-E21-ACP202
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL
REFLECTED CEILING PLANS
SURFACE LEVEL - REFLECTED CEILING PLAN - CENTRAL

DRAWING No.: **E21-ACP202**
LOCATION ID: E21
SHEET No.: 78
REV: 0

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241



SIGNAGE PLAN - PLATFORM LEVEL - WEST

SCALE: 1/8" = 1'-0"

1
E21-ANP101
E21-AAP003

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
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SEATTLE, WA 98104 FAX 206.343.9388

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FINAL DESIGN PARTNERS.

SUBMITTED BY:
DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

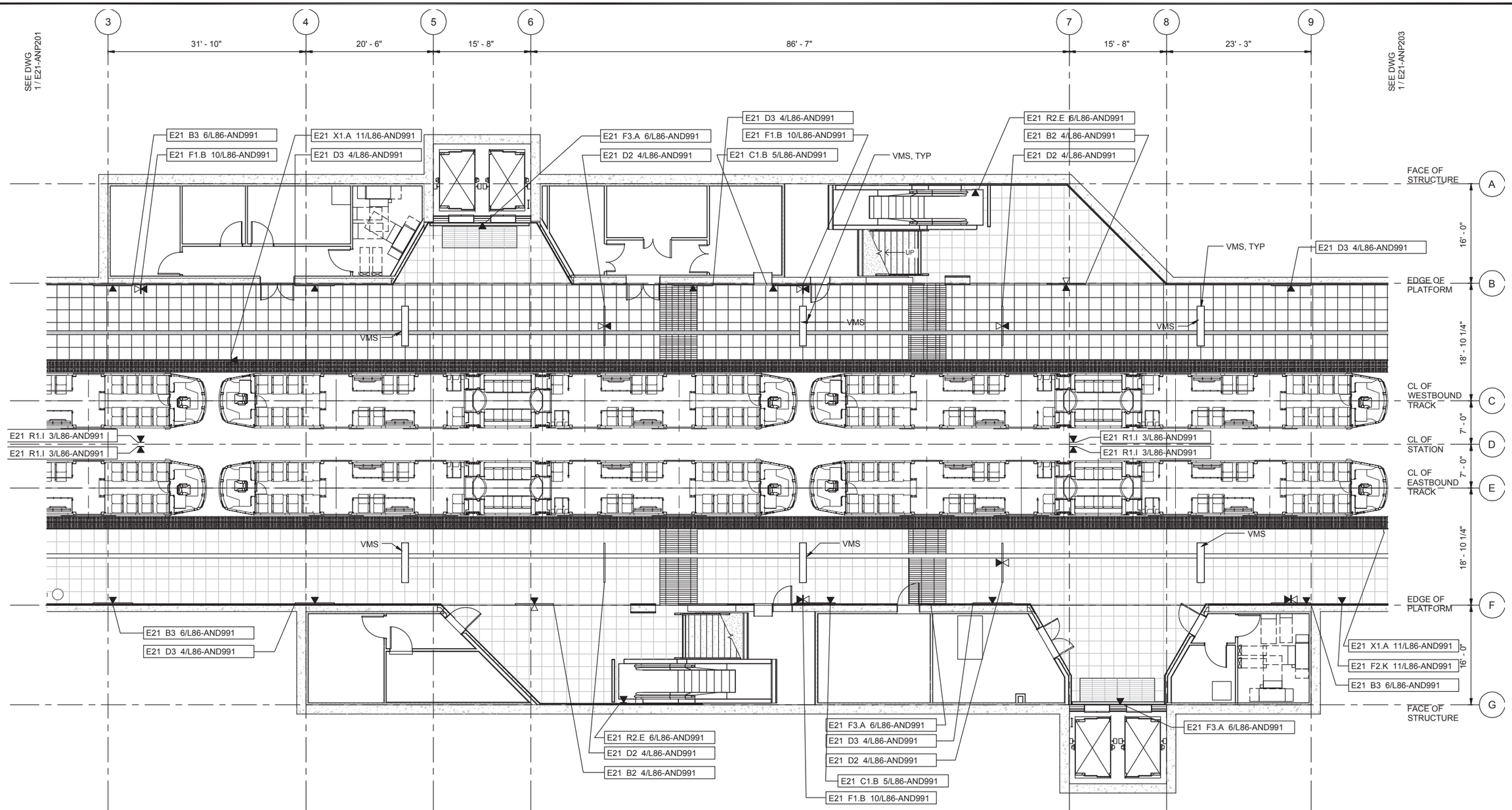
SOUNDTRANSIT

SCALE: 1/8" = 1'-0"
FILENAME: E335-E21-ANP101
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL SIGNAGE
PLATFORM LEVEL - SIGNAGE PLAN - WEST

DRAWING No.: **E21-ANP101**
LOCATION ID: E21
SHEET No.: 79
REV: 0

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241



SIGNAGE PLAN - PLATFORM LEVEL - CENTRAL (1)

SCALE: 1/8" = 1'-0"

E21-ANP102
E21-AAP003

ORIGINATED BY: / DATE:
CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

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PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

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DRAWN BY:
CHECKED BY:
APPROVED BY:

2241 REGISTERED ARCHITECT JOHN F. NESHOLM STATE OF WASHINGTON

LMN
801 SECOND AVENUE, SUITE 501 SEATTLE, WA 98104 206.682.3460 FAX 206.343.9388

SUBMITTED BY:

HJH FINAL DESIGN PARTNERS.

DATE:
REVIEWED BY:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

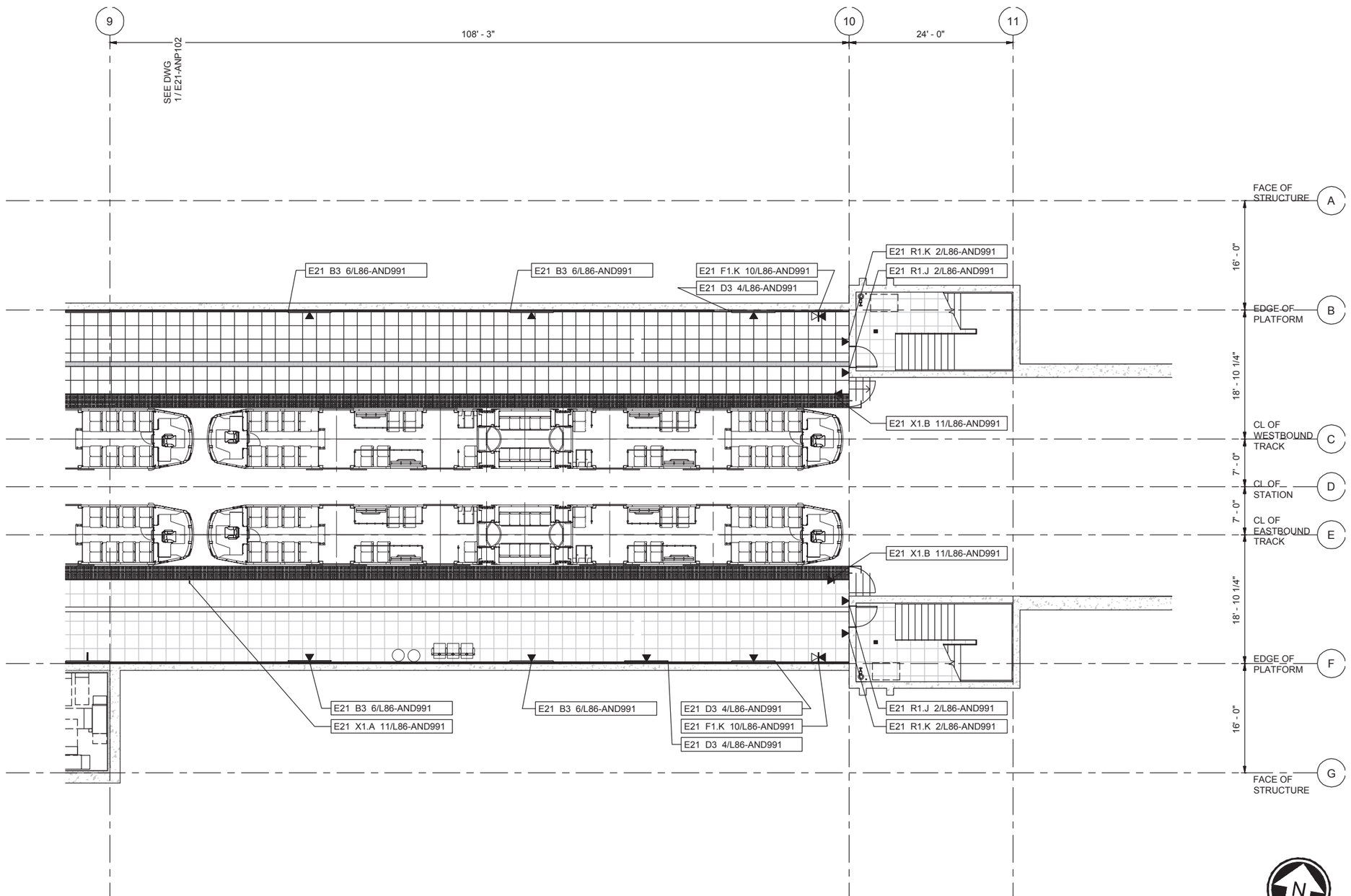
DATE:

SCALE: 1/8" = 1'-0"
FILENAME: E335-E21-ANP102
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL SIGNAGE
PLATFORM LEVEL - SIGNAGE PLAN - CENTRAL

DRAWING No.: **E21-ANP102**
LOCATION ID: E21
SHEET No.: 80
REV: 0

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241



SIGNAGE PLAN - PLATFORM LEVEL - EAST

SCALE: 1/8" = 1'-0"

1 / E21-ANP103 / E21-AAP003

ORIGINATED BY: / DATE:
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PROGRESS PRINT #1

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DESIGNED BY:
DRAWN BY:
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APPROVED BY:

2241 REGISTERED ARCHITECT JOHN F. NESHOLM STATE OF WASHINGTON

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

LMN 801 SECOND AVENUE, SUITE 501 SEATTLE, WA 98104 206.682.3460 FAX 206.343.0788

HJH FINAL DESIGN PARTNERS.

SUBMITTED BY:
DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

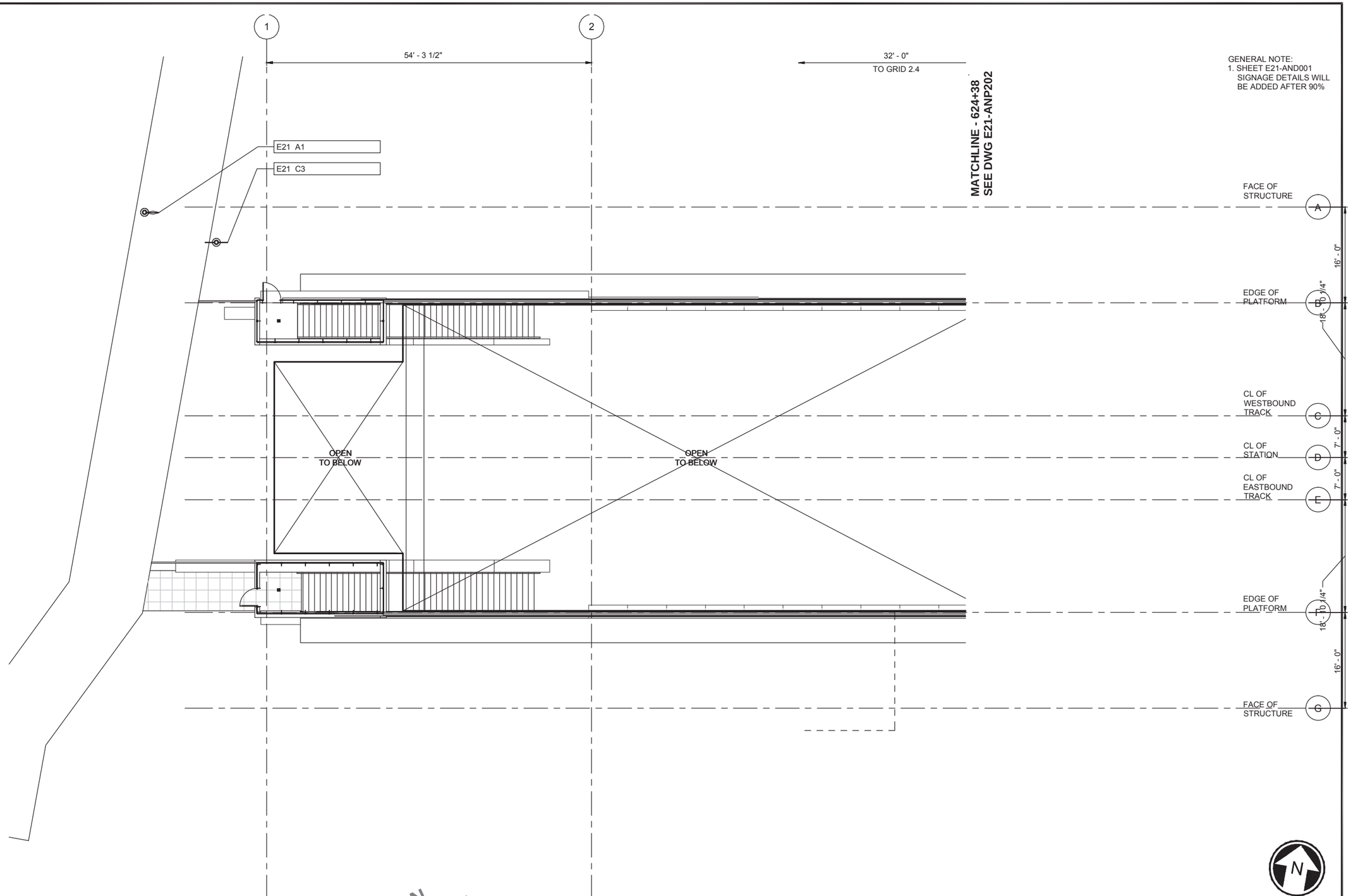
SOUNDTRANSIT

SCALE: 1/8" = 1'-0"
FILENAME: E335-E21-ANP103
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL SIGNAGE
PLATFORM LEVEL - SIGNAGE PLAN - EAST

DRAWING No.: **E21-ANP103**
LOCATION ID: E21
SHEET No.: 81
REV: 0

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241



GENERAL NOTE:
1. SHEET E21-AND001 SIGNAGE DETAILS WILL BE ADDED AFTER 90%

ORIGINATED BY: / DATE:
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PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY:
DRAWN BY:
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APPROVED BY:

2241 REGISTERED ARCHITECT
JOHN F. NESHOLM
STATE OF WASHINGTON

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

LMN
801 SECOND AVENUE, SUITE 501 206.682.3460
SEATTLE, WA 98104 FAX 206.343.9388

SUBMITTED BY:

HJH
FINAL DESIGN PARTNERS.

DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1/8" = 1'-0"
FILENAME: E335-E21-ANP201
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL SIGNAGE
SURFACE LEVEL - SIGNAGE PLAN - WEST

DRAWING No.: **E21-ANP201**
LOCATION ID: E21
SHEET No.: 82
REV: 0

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241

3 4 5 6 7 8

32' - 0" TO GRID 2.3

36' - 2"

86' - 7"

15' - 8"

32' - 0" TO GRID 3.7

MATCHLINE - 624+38
SEE DWG E21-ANP201

MATCHLINE - 626+32
SEE DWG E21-ANP203

FACP
E21-21S02

ESCALATOR 1
E21-21ES01

ELEV 1
E21-21EL01

ELEV 2
E21-21EL02

NORTH ENTRANCE
E21-21S01

DN

PUBLIC STAIR 1
E21-21ST01

E21_C6_5/L86-AND991

E21_F1.C_10/L86-AND991

E21_F2.K_11/L86-AND991

E21_C6_5/L86-AND991

E21_D3_9/L86-AND993

E21_C6_5/L86-AND991

E21_F1.C_10/L86-AND991

E21_C6_5/L86-AND991

E21_F2.K_11/L86-AND991

E21_D3_9/L86-AND993

PUBLIC STAIR 2
E21-21ST02

SOUTH ENTRANCE
E21-21S10

ELEV 3
E21-21EL03

ELEV 4
E21-21EL04

FACE OF STRUCTURE — A

16' - 0"

EDGE OF PLATFORM — B

18' - 10 1/4"

CL OF WESTBOUND TRACK — C

7' - 0"

CL OF STATION — D

7' - 0"

CL OF EASTBOUND TRACK — E

18' - 10 1/4"

EDGE OF PLATFORM — F

16' - 0"

FACE OF STRUCTURE — G

N

ORIGINATED BY: / DATE:
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PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

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CHECKED BY:
APPROVED BY:

2241 REGISTERED ARCHITECT
JOHN F. NESHOLM
STATE OF WASHINGTON

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

LMN
801 SECOND AVENUE, SUITE 501 SEATTLE, WA 98104
206.682.3460 FAX 206.343.0388

FINAL DESIGN PARTNERS.

SUBMITTED BY:
DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1/8" = 1'-0"
FILENAME: E335-E21-ANP202
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL SIGNAGE
SURFACE LEVEL - SIGNAGE PLAN - CENTRAL

DRAWING No.: E21-ANP202
LOCATION ID: E21
SHEET No.: 83
REV: 0

XREF LIST:
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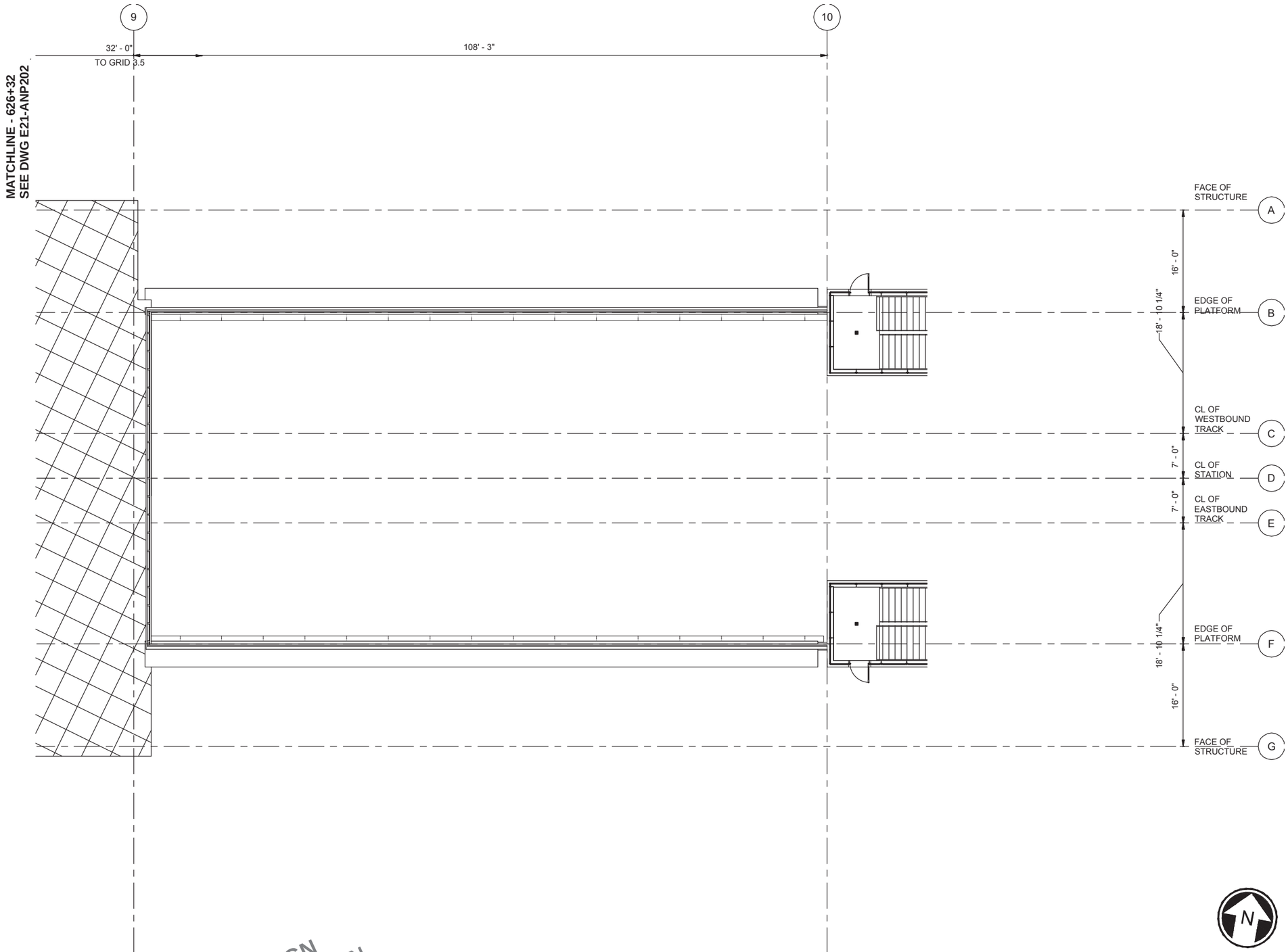
GB-SEAL-JFN2241



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CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
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VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

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CHECKED BY:
APPROVED BY:

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JOHN F. NESHOLM
STATE OF WASHINGTON

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SEATTLE, WA 98104 FAX 206.343.0388

H J H
FINAL DESIGN PARTNERS.

SUBMITTED BY:
DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

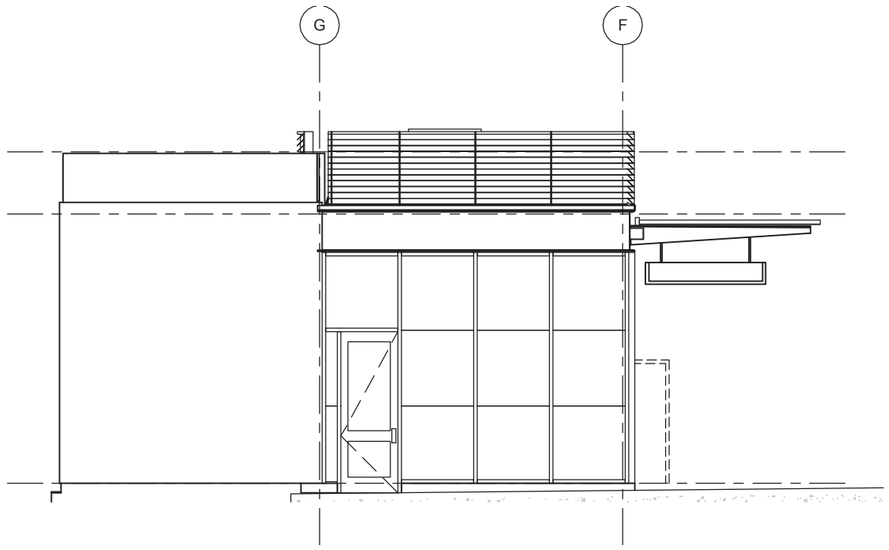
SOUNDTRANSIT

SCALE: 1/8" = 1'-0"
FILENAME: E335-E21-ANP203
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL SIGNAGE
SURFACE LEVEL - SIGNAGE PLAN - EAST

DRAWING No.: E21-ANP203
LOCATION ID: E21
SHEET No.: 84
REV: 0

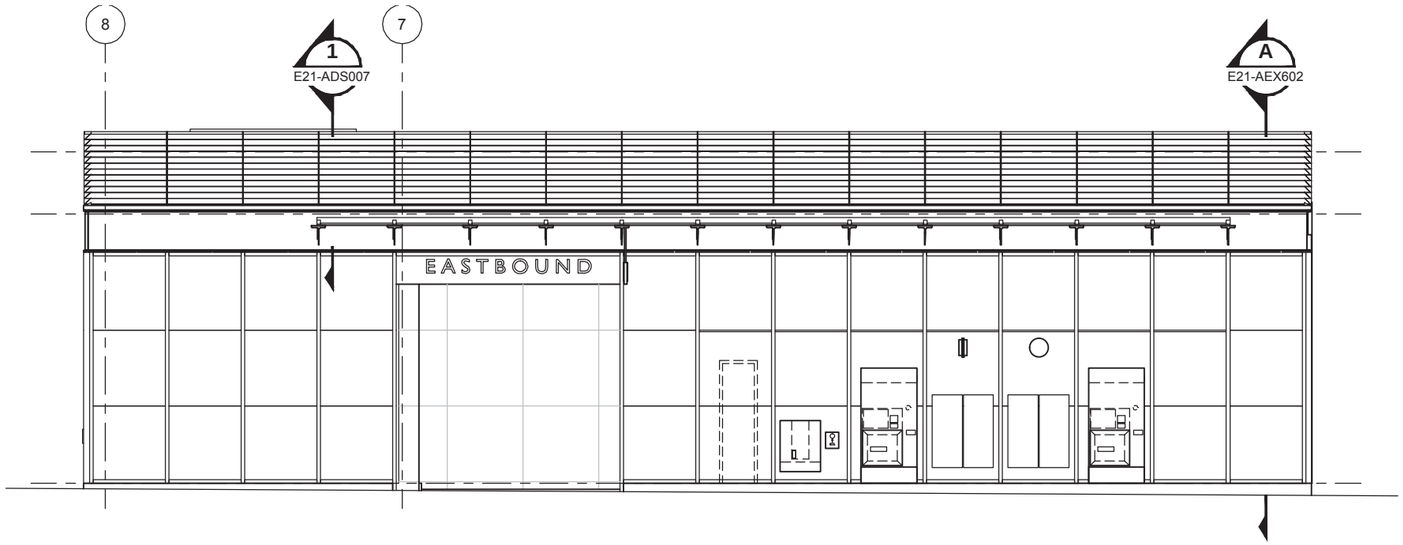
XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241



SOUTH ENTRANCE - EAST ELEVATION 1

SCALE: 1/4" = 1'-0"

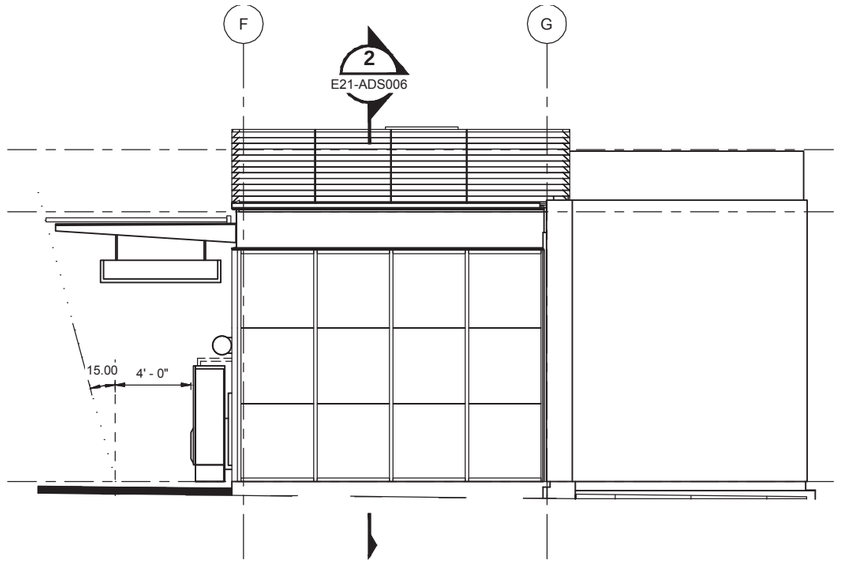
E21-AEE010
STD-AED003



SOUTH ENTRANCE - NORTH ELEVATION 2

SCALE: 1/4" = 1'-0"

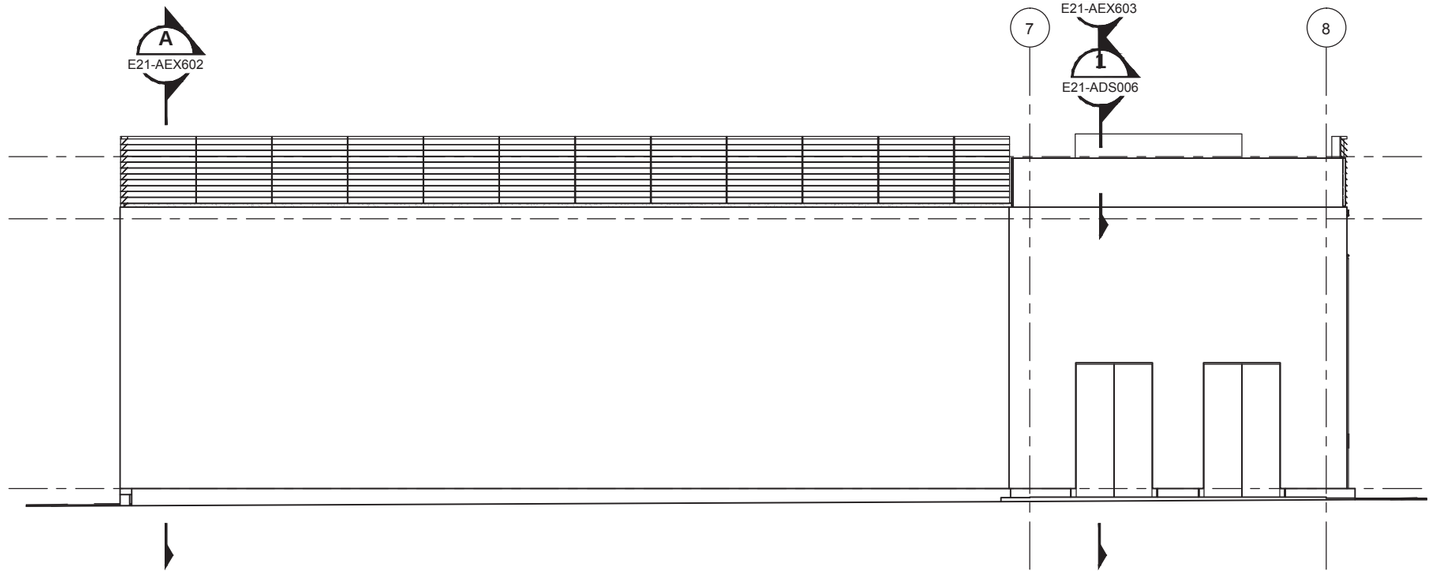
E21-AEE010
E21-AEX100



SOUTH ENTRANCE - WEST ELEVATION 3

SCALE: 1/4" = 1'-0"

E21-AEE010
STD-AED003



SOUTH ENTRANCE - SOUTH ELEVATION 4

SCALE: 1/4" = 1'-0"

E21-AEE010
STD-AED003

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VERIFIED BY: / DATE:

PROGRESS PRINT #1

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APPROVED BY:

2241 REGISTERED ARCHITECT JOHN F. NESHOLM STATE OF WASHINGTON

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

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HJH FINAL DESIGN PARTNERS.

SUBMITTED BY:
DATE:
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DATE:

LINE IS 1" AT FULL SCALE

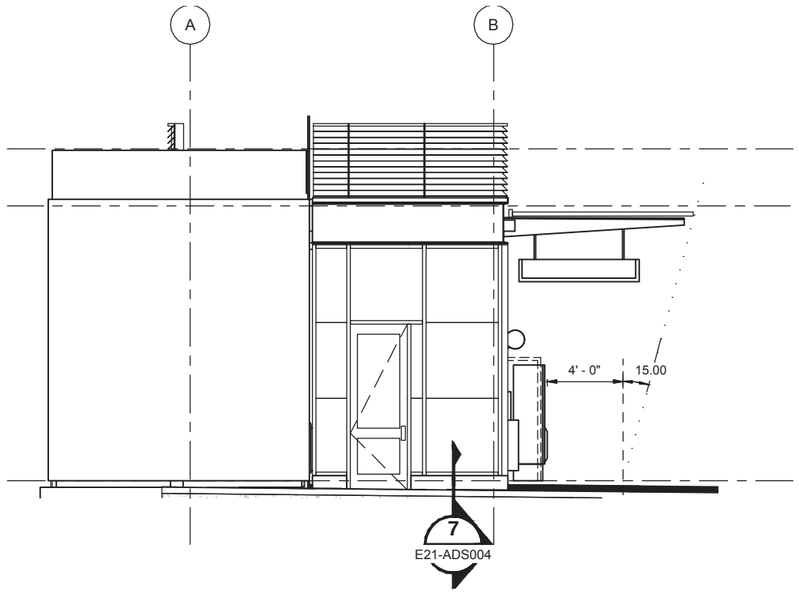
SOUNDTRANSIT

SCALE: 1/8" = 1'-0"
FILENAME: E335-E21-AEE010
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL
EXTERIOR ELEVATIONS
NORTH AND SOUTH STATION ENTRANCE

DRAWING No.: **E21-AEE010**
LOCATION ID: E21
SHEET No.: 85
REV: 0

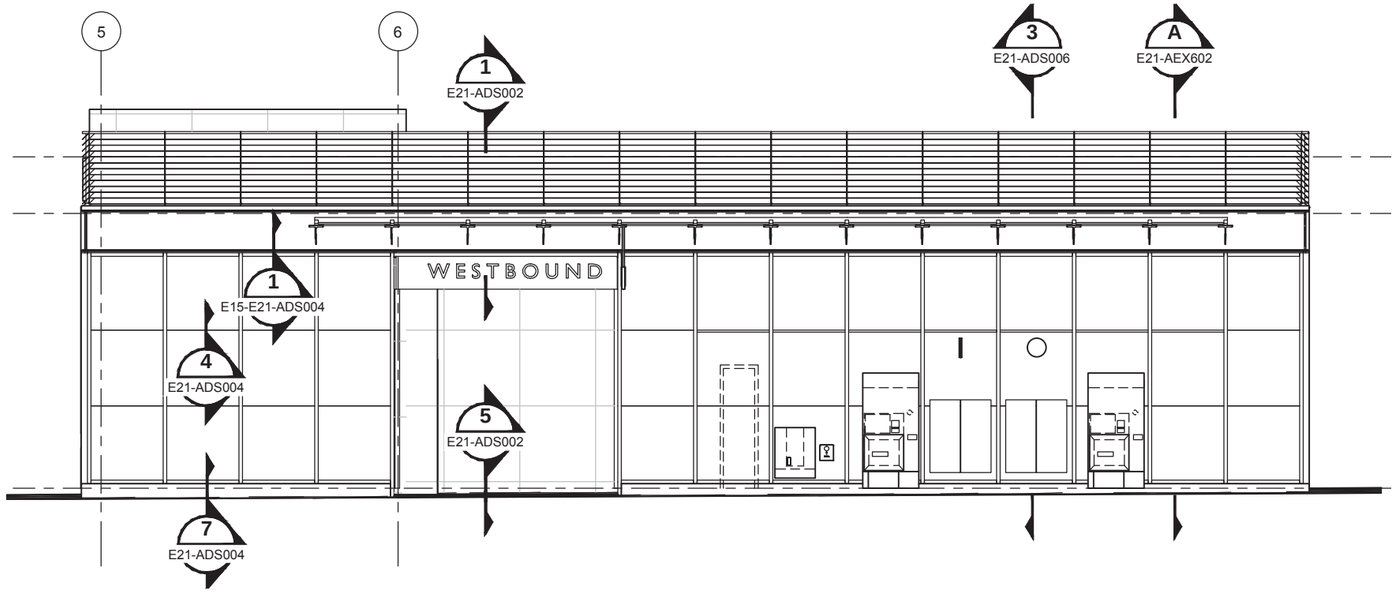
XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241



NORTH ENTRANCE - WEST ELEVATION 1

SCALE: 1/4" = 1'-0"

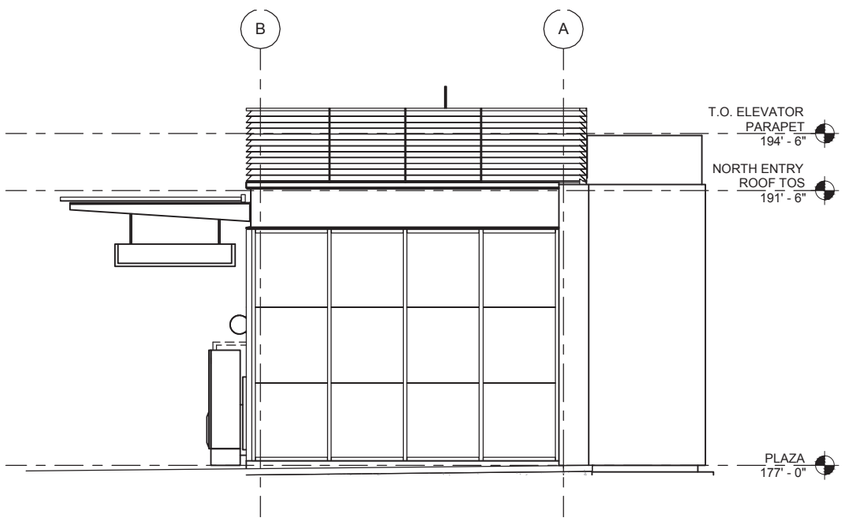
1 / E21-AEE011 / STD-AED003



NORTH ENTRANCE - SOUTH ELEVATION 2

SCALE: 1/4" = 1'-0"

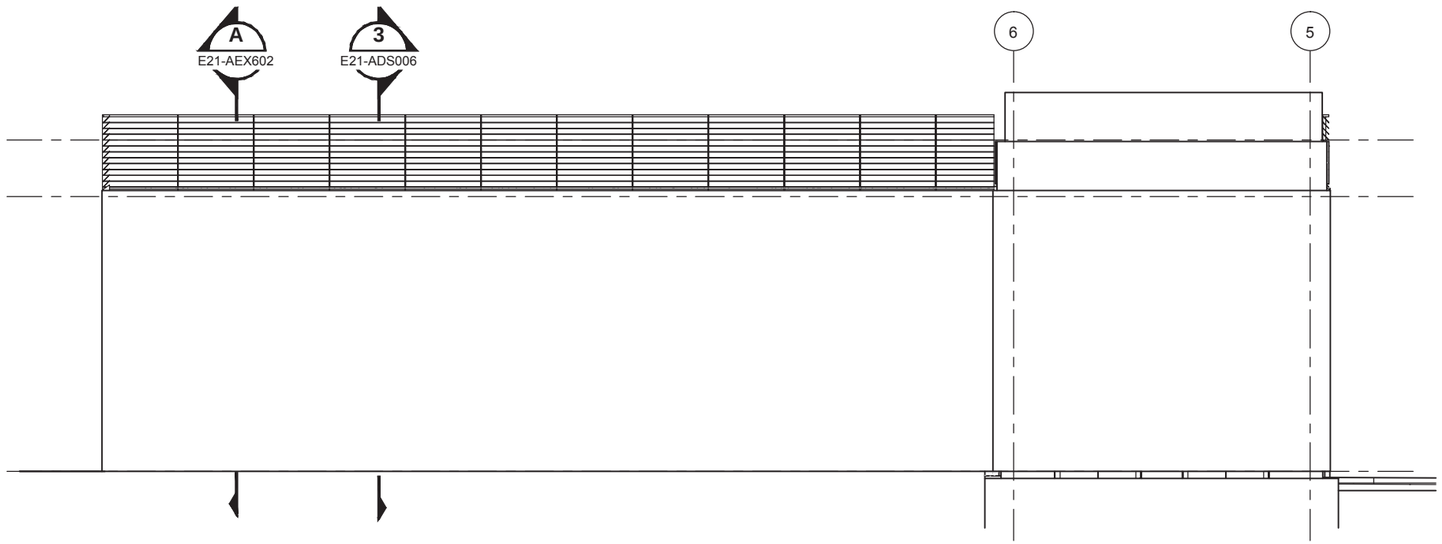
2 / E21-AEE011 / E21-AEX100



NORTH ENTRANCE - EAST ELEVATION

SCALE: 1/4" = 1'-0"

3 / E21-AEE011 / STD-AED003



NORTH ENTRANCE - NORTH ELEVATION

SCALE: 1/4" = 1'-0"

4 / E21-AEE011 / STD-AED003

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PROGRESS PRINT #1

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APPROVED BY:

2241 REGISTERED ARCHITECT JOHN F. NESHOLM STATE OF WASHINGTON

LMN 801 SECOND AVENUE, SUITE 501 SEATTLE, WA 98104 206.682.3460 FAX 206.343.9388

SUBMITTED BY:

HJH FINAL DESIGN PARTNERS.

DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

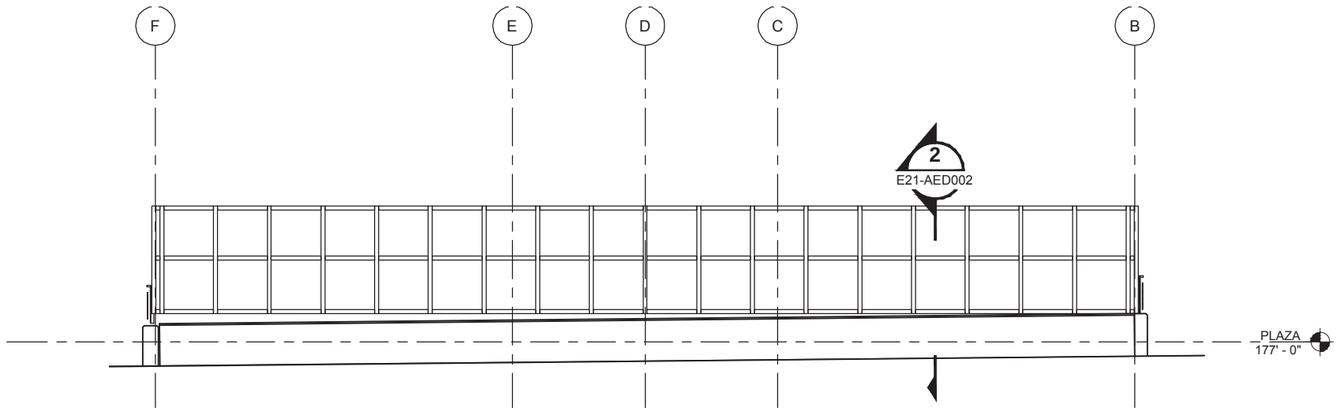
SOUNDTRANSIT

SCALE: 1/8" = 1'-0"
FILENAME: E335-E21-AEE011
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

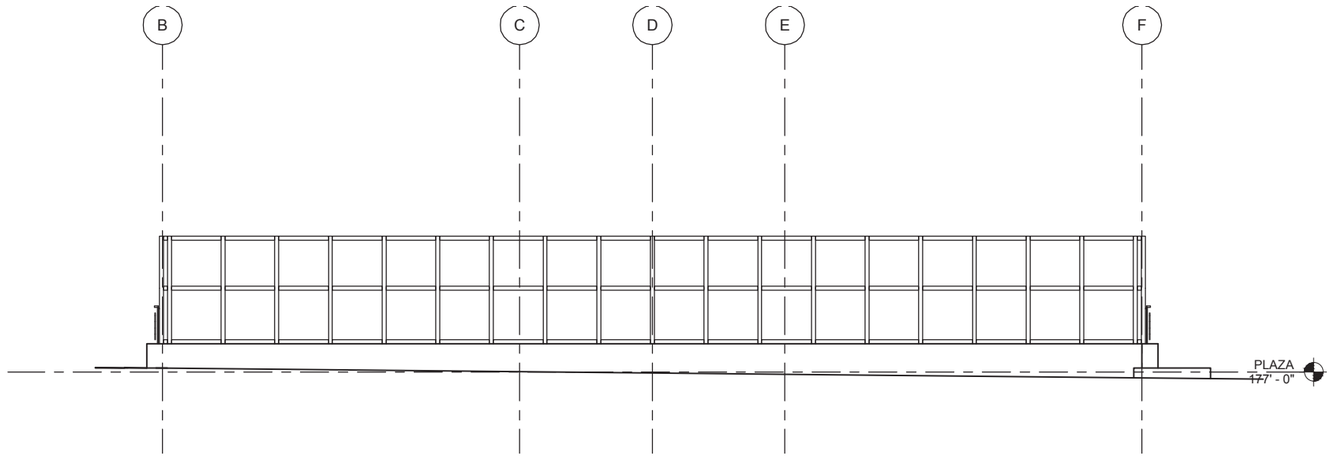
EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL EXTERIOR ELEVATIONS WEST AND EAST STATION ENTRANCE

DRAWING No.: **E21-AEE011**
LOCATION ID: E21
SHEET No.: 86
REV: 0

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241



WEST ELEVATION - STATION ENTRANCE (2 / E21-AEE012 / E21-APP202)
SCALE: 1/4" = 1'-0"



EAST ELEVATION - STATION ENTRANCE (1 / E21-AEE012 / E21-APP202)
SCALE: 1/4" = 1'-0"

ORIGINATED BY: / DATE:
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BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
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PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

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APPROVED BY:

2241 REGISTERED ARCHITECT
JOHN F. NESHOLM
STATE OF WASHINGTON

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801 SECOND AVENUE, SUITE 501 SEATTLE, WA 98104
206.682.3460 FAX 206.343.9388

HJH FINAL DESIGN PARTNERS.

SUBMITTED BY:
DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

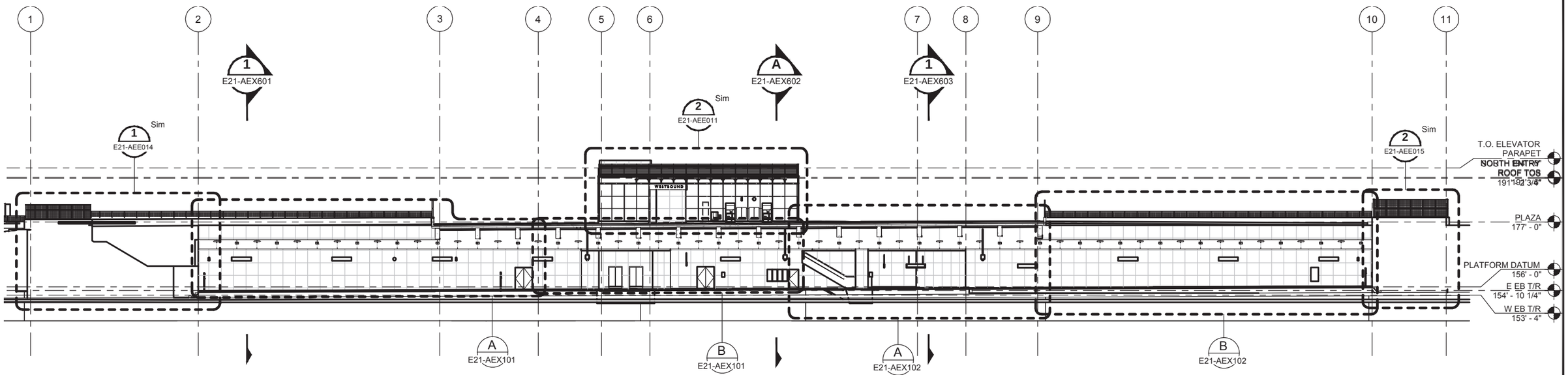
SOUNDTRANSIT

SCALE: 1/4" = 1'-0"
FILENAME: E335-E21-AEE012
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL
EXTERIOR ELEVATIONS
WEST EGRESS STAIRS

DRAWING No.: **E21-AEE012**
LOCATION ID: E21
SHEET No.: 87
REV: 0

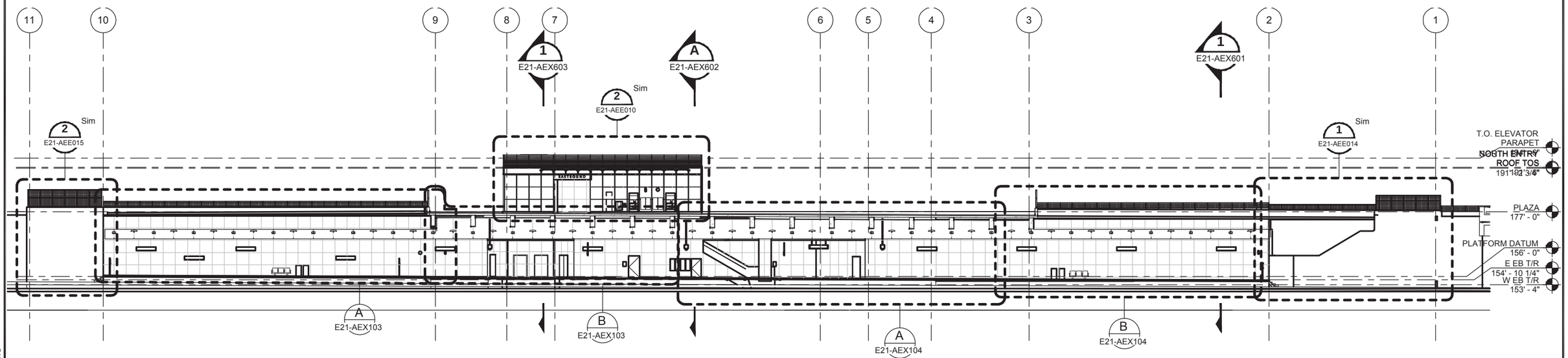
XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241



LONGITUDINAL SECTION 1 - OVERALL - LOOKING NORTH

SCALE: 1/16" = 1'-0"

1
E21-AEX100
E21-AEX601



LONGITUDINAL SECTION 2 - OVERALL - LOOKING SOUTH

SCALE: 1/16" = 1'-0"

2
E21-AEX100
E21-AEX601

ORIGINATED BY: / DATE:
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PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY:
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CHECKED BY:
APPROVED BY:

2241 REGISTERED ARCHITECT
JOHN F. NESHOLM
STATE OF WASHINGTON

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

LMN
801 SECOND AVENUE, SUITE 501 206.682.3460
SEATTLE, WA 98104 FAX 206.343.9388

SUBMITTED BY:

H J H
FINAL DESIGN PARTNERS.

DATE:
REVIEWED BY:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

DATE:

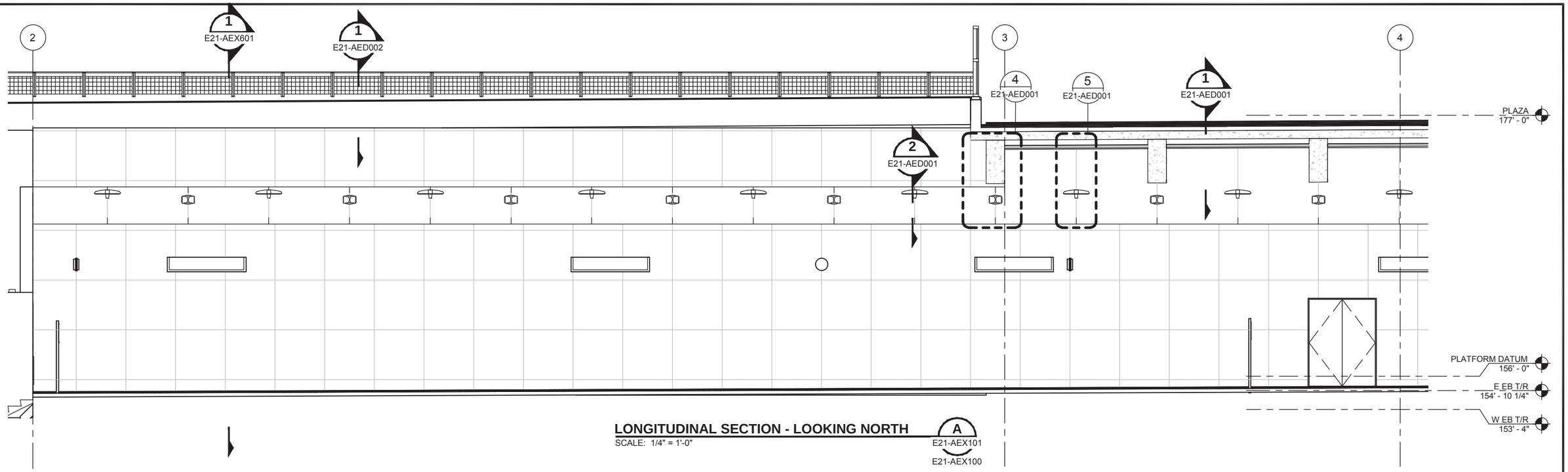
SCALE: 1/16" = 1'-0"
FILENAME: E335-E21-AEX100
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT

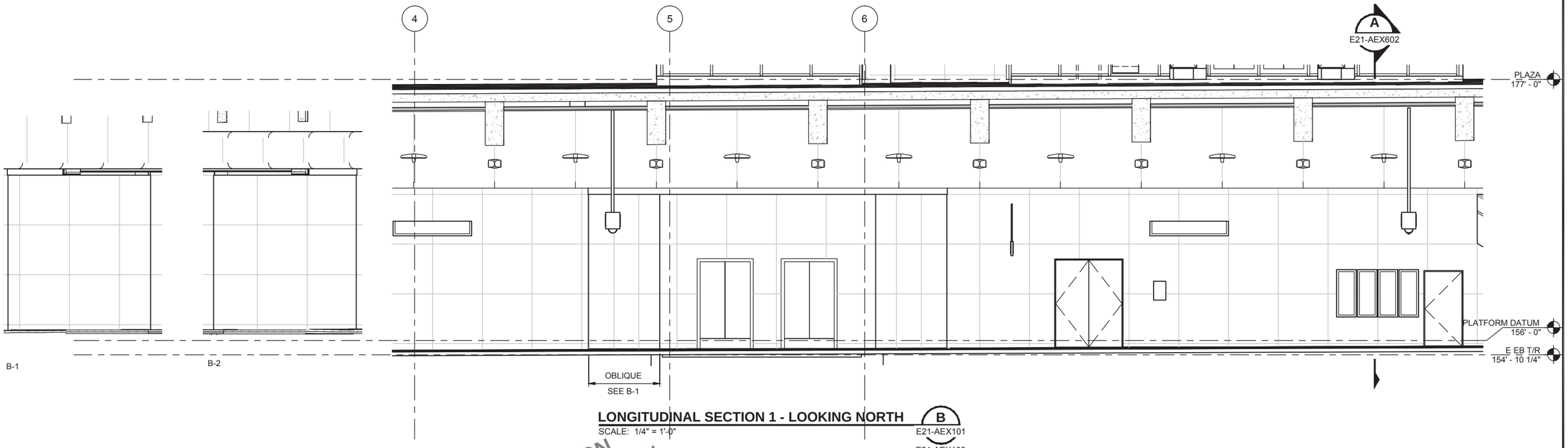
120TH STATION - ARCHITECTURAL
BUILDING SECTIONS
LONGITUDINAL SECTION 1 - OVERALL

DRAWING No.: **E21-AEX100**
LOCATION ID: E21
SHEET No.: 88
REV: 0

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241



LONGITUDINAL SECTION - LOOKING NORTH (A / E21-AEX101 / E21-AEX100)
SCALE: 1/4" = 1'-0"



LONGITUDINAL SECTION 1 - LOOKING NORTH (B / E21-AEX101 / E21-AEX100)
SCALE: 1/4" = 1'-0"

ORIGINATED BY: / DATE:
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BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
VERIFIED BY: / DATE:
01/22/16 | 12:28 PM | CALDWELLJ
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PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

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DRAWN BY:
CHECKED BY:
APPROVED BY:

2241 REGISTERED ARCHITECT JOHN F. NESHOLM STATE OF WASHINGTON

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

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801 SECOND AVENUE, SUITE 501 SEATTLE, WA 98104 206.682.3460 FAX 206.343.9388

FINAL DESIGN PARTNERS.

SUBMITTED BY:
DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

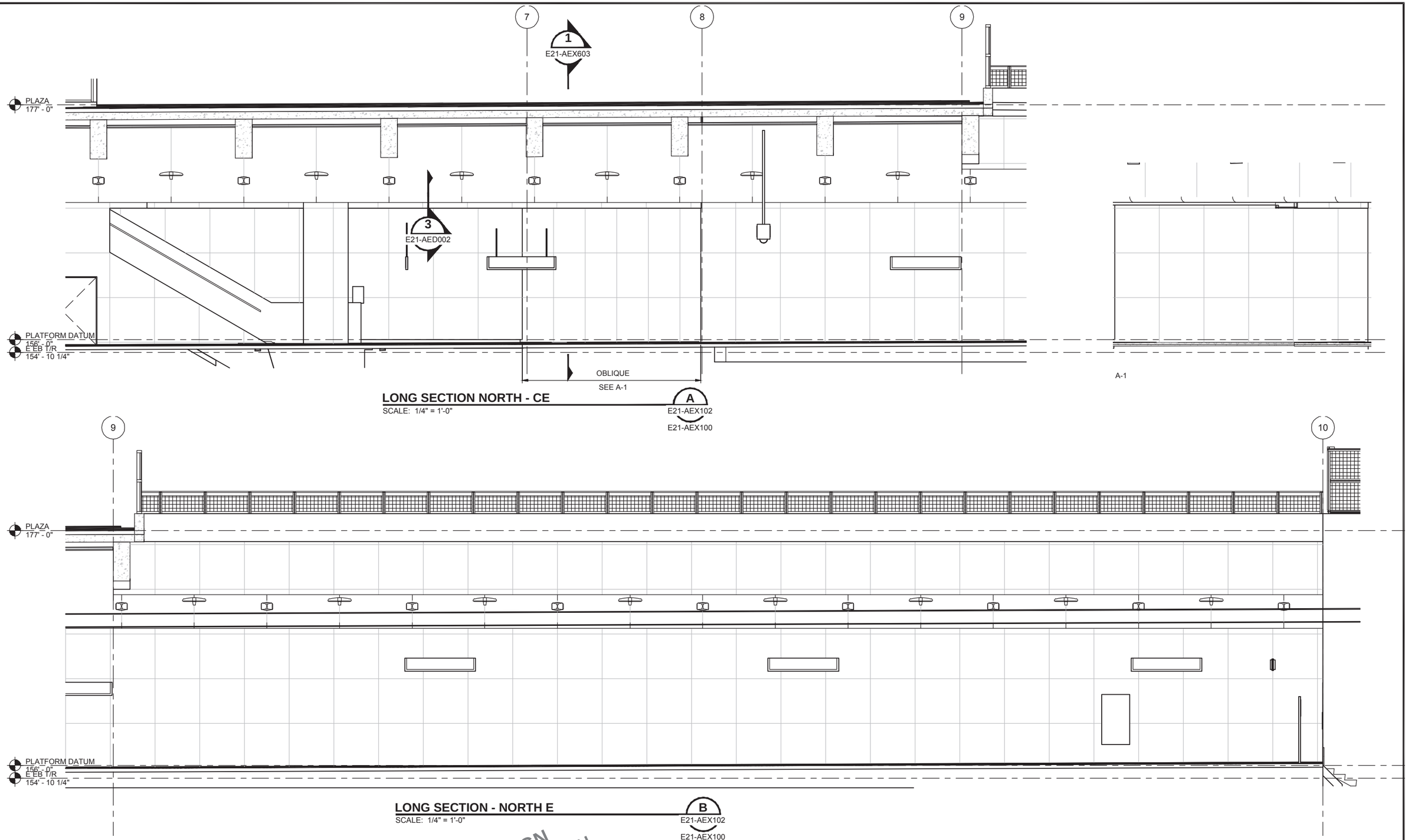
SOUNDTRANSIT

SCALE: 1/8" = 1'-0"
FILENAME: E335-E21-AEX101
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL
BUILDING SECTIONS
LONGITUDINAL SECTION 1 - WEST

DRAWING No.: **E21-AEX101**
LOCATION ID: E21
SHEET No.: 89
REV: 0

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241



LONG SECTION NORTH - CE
SCALE: 1/4" = 1'-0"

A
E21-AEX102
E21-AEX100

LONG SECTION - NORTH E
SCALE: 1/4" = 1'-0"

B
E21-AEX102
E21-AEX100

ORIGINATED BY: / DATE:
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VERIFIED BY: / DATE:

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

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CHECKED BY:
APPROVED BY:

2241 REGISTERED ARCHITECT
JOHN F. NESHOLM
STATE OF WASHINGTON

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

LMN
801 SECOND AVENUE, SUITE 501 SEATTLE, WA 98104 206.682.3460 FAX 206.343.9388

H J H
FINAL DESIGN PARTNERS.

SUBMITTED BY:
DATE:
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DATE:

LINE IS 1" AT FULL SCALE

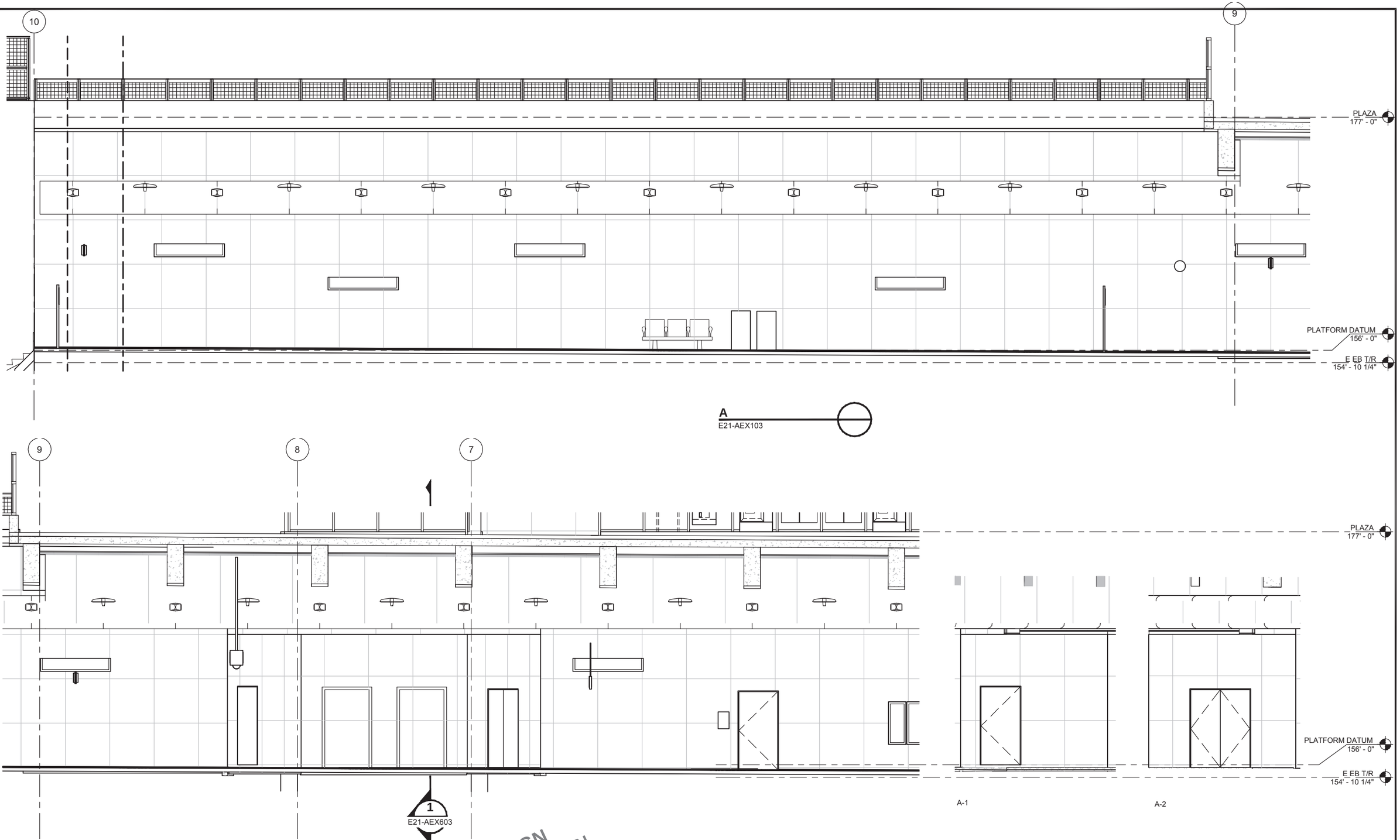
SOUNDTRANSIT

SCALE: 1/8" = 1'-0"
FILENAME: E335-E21-AEX102
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL
BUILDING SECTIONS
LONGITUDINAL SECTION 1 - CENTRAL

DRAWING No.: **E21-AEX102**
LOCATION ID: E21
SHEET No.: 90
REV: 0

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241



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CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
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PROGRESS PRINT #1

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APPROVED BY:

2241 REGISTERED ARCHITECT
JOHN F. NESHOLM
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206.682.3460 FAX 206.343.8388

SUBMITTED BY:

H J H
FINAL DESIGN PARTNERS.

DATE:
REVIEWED BY:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

DATE:

SCALE: 1/8" = 1'-0"
FILENAME: E335-E21-AEX103
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT

120TH STATION - ARCHITECTURAL
BUILDING SECTIONS
LONGITUDINAL SECTION 1 - EAST

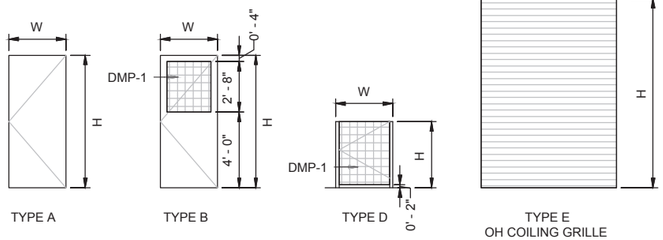
DRAWING No.: **E21-AEX103**
LOCATION ID: E21
SHEET No.: 91
REV: 0

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241

DOOR SCHEDULE

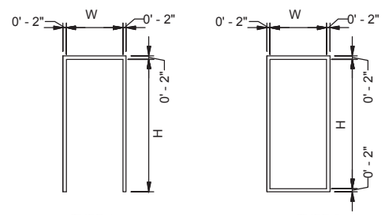
DOOR NO.	FIRE RATING (MINUTES)	DOOR WIDTH	DOOR HEIGHT	DOOR PAIR	DOOR TYPE	DOOR MATERIAL	DOOR FINISH	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	DETAILS HEAD	DETAILS JAMB	DETAILS THRESHOLD	CARD READER	ELEC INTRUSION DETECTION	PANIC HARDWARE	SECURITY GROUP	HARDWARE GROUP	REMARKS
PLATFORM DATUM																			
21P01.A					D										Yes				25
21P01.B					D														25
21P02	90	5' - 4"	7' - 0"	Yes	AA	HM	PNT		HM	-				Yes					
21P03	NR	3' - 6"	7' - 0"		A	HM	PNT		HM	-									
21P04	NR	3' - 6"	7' - 0"		A	HM	PNT		HM	-									
21P05	NR	3' - 6"	7' - 0"		A	HM	PNT		HM	-				Yes					
21P06	NR	3' - 6"	7' - 0"		A	HM	PNT		HM	-				Yes					
21P07	90	5' - 4"	7' - 0"	Yes	AA	HM	PNT			-				Yes					
21P08	45	4' - 4"	7' - 0"	Yes	AA	HM	PNT							Yes					
21P09	NR	4' - 4"	7' - 0"	Yes	AA	HM	PNT							Yes					
21P10	NR	4' - 4"	7' - 0"	Yes	AA	HM	PNT			-				Yes					
21P11	90	3' - 0"	6' - 0"		BB	HM	PNT			-				Yes					CONFIRM CARD READER
21P21.A					D														25
21P21.B					D														25
21P22	90	3' - 6"	7' - 0"		A	HM	PNT		HM	-				Yes					
21P23	NR	3' - 6"	7' - 0"		A	HM	PNT		HM	-									
21P24	NR	3' - 6"	7' - 0"		A	HM	PNT		HM	-				Yes					
21P25	90	3' - 0"	6' - 0"		BB	HM	-			-				Yes					CONFIRM CARD READER
21P26	90	3' - 6"	7' - 0"		A	HM	PNT			-				Yes					
21P27	90	5' - 4"	7' - 0"	Yes	AA	HM	PNT			-				Yes					
21P28	90	3' - 6"	7' - 0"		A	HM	PNT			-				No					
21P29	45	3' - 6"	7' - 0"		A	HM	PNT			-				Yes					
21P30	NR	3' - 6"	7' - 0"		A	HM	PNT			-				Yes					
21STE01.P	NR	3' - 0"	7' - 0"	No	A	HM	PNT			-					Yes				AUDIBLE ALARM?
21STE02.P	NR	3' - 0"	7' - 0"	No	A	HM	PNT			-					Yes				AUDIBLE ALARM?
21STE03.P	NR	3' - 0"	7' - 0"	No	A	HM	PNT			-					Yes				AUDIBLE ALARM?
21STE04.P	NR	3' - 0"	7' - 0"	No	A	HM	PNT			-					Yes				AUDIBLE ALARM?
PLAZA																			
21S01.A	NR	3' - 0"	8' - 9"		J	AL								Yes					
21S01.B	NR	12' - 0"	10' - 6"	No	E	STL			STL			2/ADS002		Yes					OVERHEAD COILING DOOR
21S02	NR	4' - 0"	7' - 0"	Yes	AA	HM	-		HM	-									
21S10.A	NR	3' - 0"	8' - 6"		J	AL								Yes					
21S10.B	NR	12' - 0"	10' - 6"	No	E	STL			STL			2/ADS002		Yes					OVERHEAD COILING DOOR
21STE01.S	NR	3' - 0"	7' - 0"		M	SST				N/A					Yes				AUDIBLE ALARM?
21STE02.S	NR	3' - 0"	7' - 0"		M	SST				N/A					Yes				AUDIBLE ALARM?
21STE03.S	NR	3' - 0"	7' - 0"		M	SST				N/A					Yes				AUDIBLE ALARM?
21STE04.S	NR	3' - 0"	7' - 0"		M	SST				N/A					Yes				AUDIBLE ALARM?

DOOR TYPES



TYPE A | TYPE B | TYPE D | TYPE E OH COILING GRILLE | TYPE F | TYPE J | TYPE K

FRAME TYPES



TYPE 1 | TYPE 2 (TO BE USED FOR DOORS / ACCESS PANELS IN TVM WALLS)

DOOR SCHEDULE NOTES:

1. PROVIDE ASTRAGAL WITH FLUSH BOLTS ON PAIRS OF DOORS, AT INACTIVE LEAF
2. COORDINATE WITH ACCESS CONTRAOL SYSTEMS
3. SEE SHEET E21-JCSXXX FOR INFORMATION ON CARD READER ACCESS
4. SEE SPECIFICATION SECTION 087100 FOR HARDWARE GROUPS
5. DOORS TO CONDITIONED ROOMS SHALL HAVE U-VALUE = 0.600 OR LOWER
6. SEE L86-AED900 SHEET SERIES FOR ADDITIONAL DOOR INFORMATION

ORIGINATED BY: / DATE:
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VERIFIED BY: / DATE:

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PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY:
DRAWN BY:
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APPROVED BY:

2241 REGISTERED ARCHITECT JOHN F. NESHOLM STATE OF WASHINGTON

PRELIMINARY DESIGN NOT FOR CONSTRUCTION

LMN 801 SECOND AVENUE, SUITE 501 SEATTLE, WA 98104 206.682.3460 FAX 206.343.9388

HJH FINAL DESIGN PARTNERS.

SUBMITTED BY:
DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

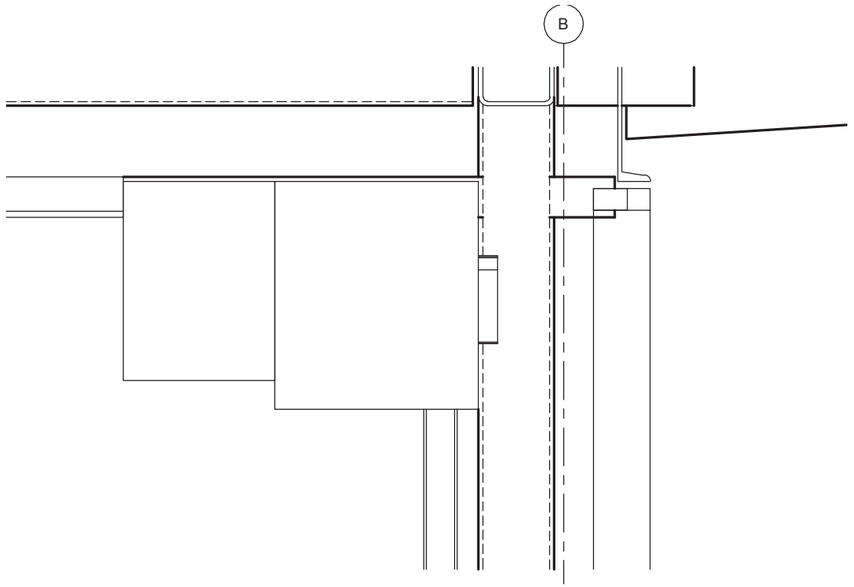
SOUNDTRANSIT

SCALE: NTS
FILENAME: E335-E21-ADS001
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

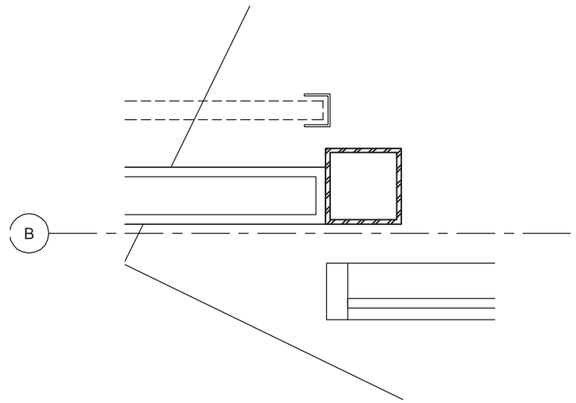
EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL SCHEDULES
DOOR SCHEDULE

DRAWING No.: **E21-ADS001**
LOCATION ID: E21
SHEET No.: 92
REV: 0

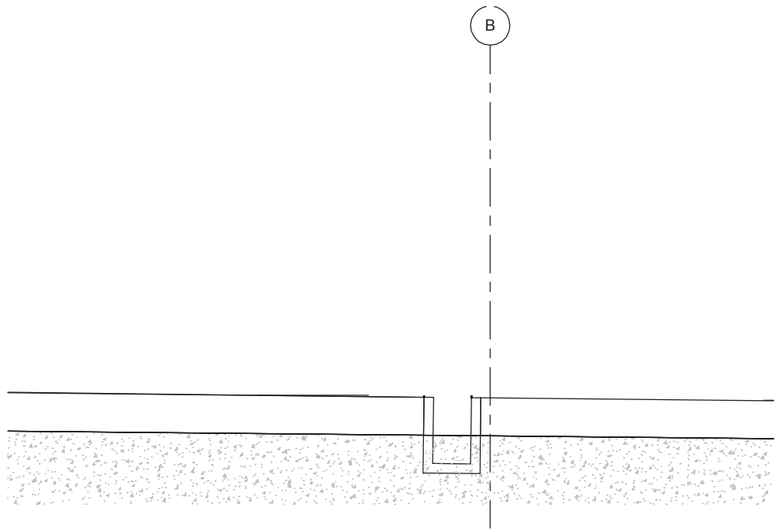
XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241



OVERHEAD DOOR THRESHOLD — 1 — E21-ADS002 / E21-AEE011
SCALE: 1 1/2" = 1'-0"



OVERHEAD DOOR- JAMB — 2 — E21-ADS002 / E21-ATD011
SCALE: 1 1/2" = 1'-0"



OVERHEAD DOOR THRESHOLD — 5 — E21-ADS002 / E21-AEE011
SCALE: 1 1/2" = 1'-0"

ORIGINATED BY: / DATE:
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2241 REGISTERED ARCHITECT
JOHN F. NESHOLM
STATE OF WASHINGTON

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

LMN
801 SECOND AVENUE, SUITE 501 SEATTLE, WA 98104
206.682.3460 FAX 206.343.9388

HJH
FINAL DESIGN PARTNERS.

SUBMITTED BY:
DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

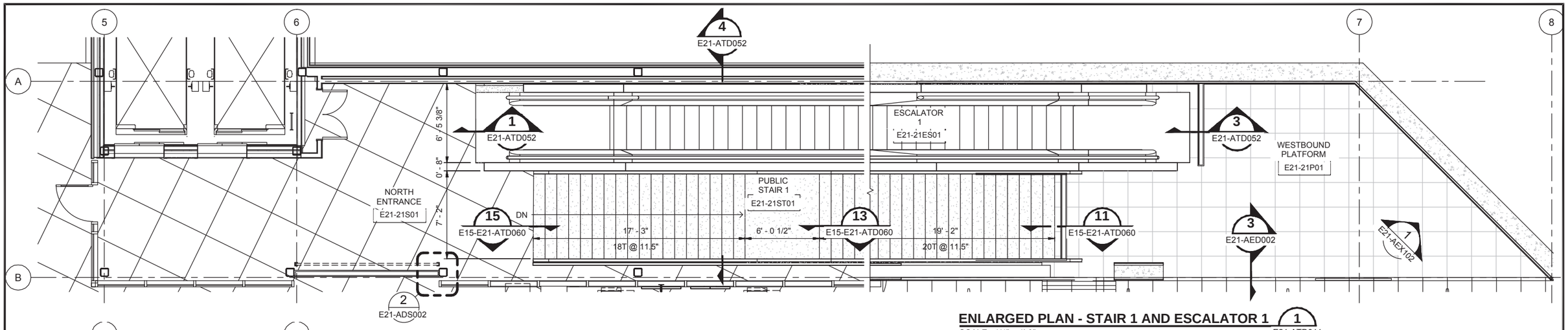
SCALE: NTS
FILENAME: E335-E21-ADS002
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT

120TH STATION - ARCHITECTURAL
MISCELLANEOUS DETAILS
GLAZING SCHEDULE

DRAWING No.: **E21-ADS002**
LOCATION ID: E21
SHEET No.: 93 REV: 0

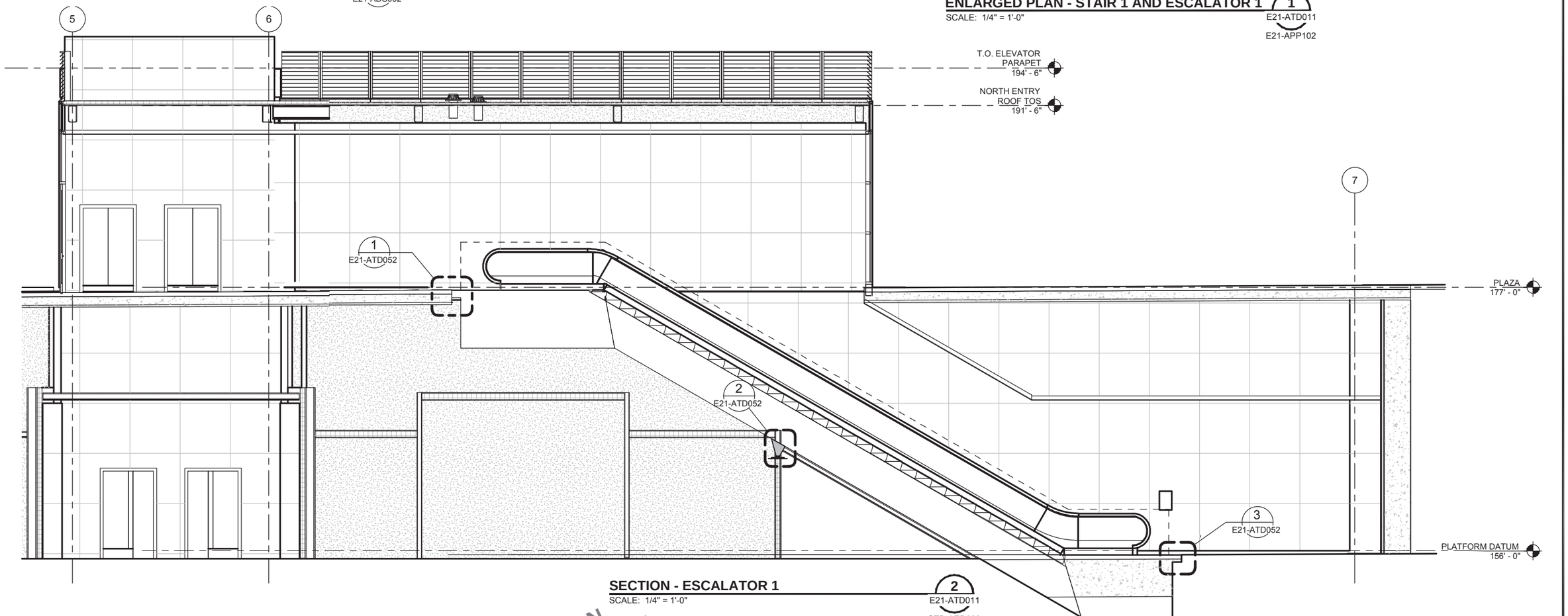
XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241



ENLARGED PLAN - STAIR 1 AND ESCALATOR 1

SCALE: 1/4" = 1'-0"

1 / E21-ATD011 / E21-APP102



SECTION - ESCALATOR 1

SCALE: 1/4" = 1'-0"

2 / E21-ATD011 / STD-AED003

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STATE OF WASHINGTON

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801 SECOND AVENUE, SUITE 501 SEATTLE, WA 98104
206.682.3460 FAX 206.343.0388

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FINAL DESIGN PARTNERS.

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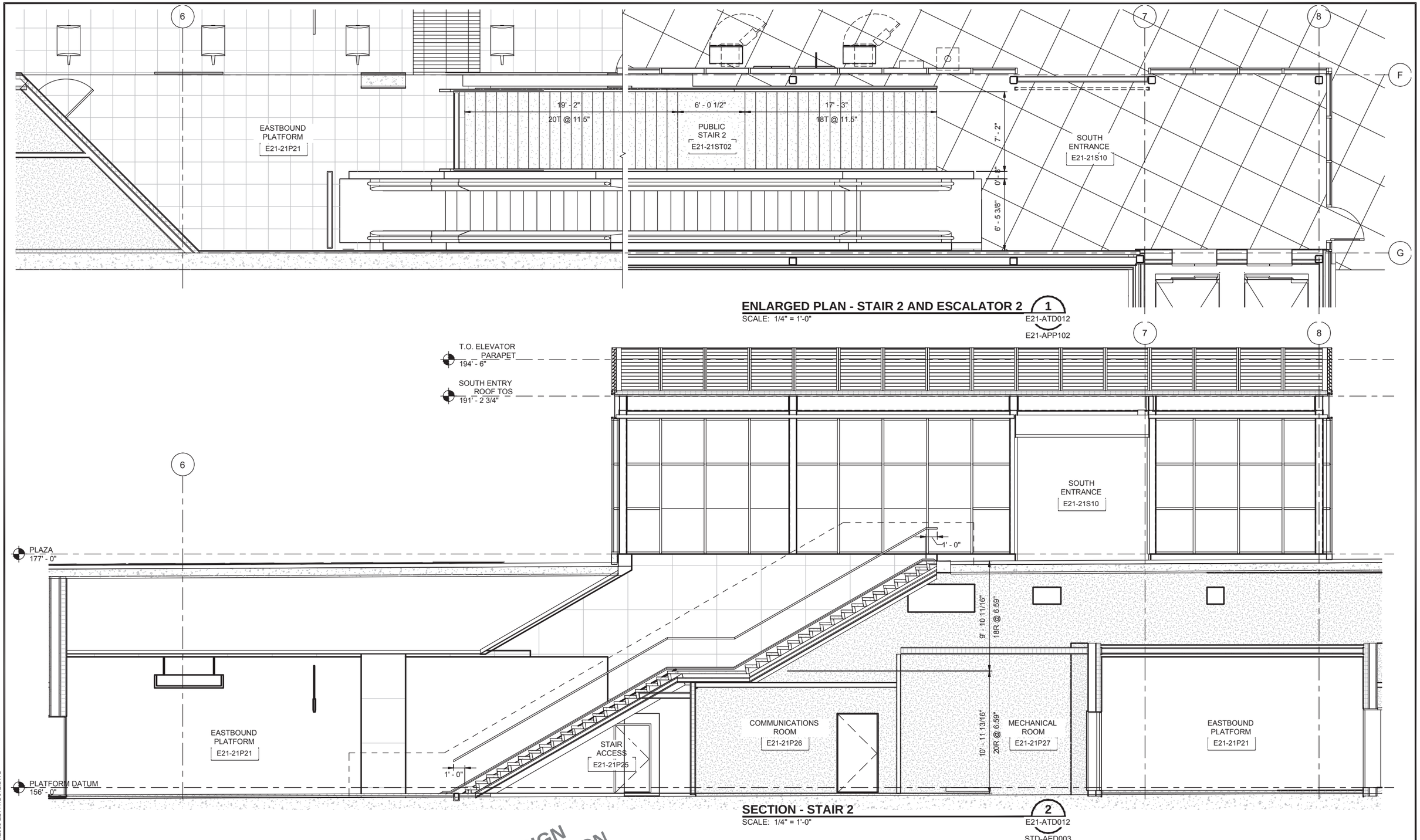
SOUNDTRANSIT

SCALE: 1/4" = 1'-0"
FILENAME: E335-E21-ATD011
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL
STAIR DETAILS
PUBLIC STAIR 1 (North)

DRAWING No.: **E21-ATD011**
LOCATION ID: E21
SHEET No.: 94
REV: 0

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241



ENLARGED PLAN - STAIR 2 AND ESCALATOR 2 (1)

SCALE: 1/4" = 1'-0"

E21-ATD012
E21-APP102

SECTION - STAIR 2 (2)

SCALE: 1/4" = 1'-0"

E21-ATD012
STD-AED003

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STATE OF WASHINGTON

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SUBMITTED BY:
DATE:
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DATE:

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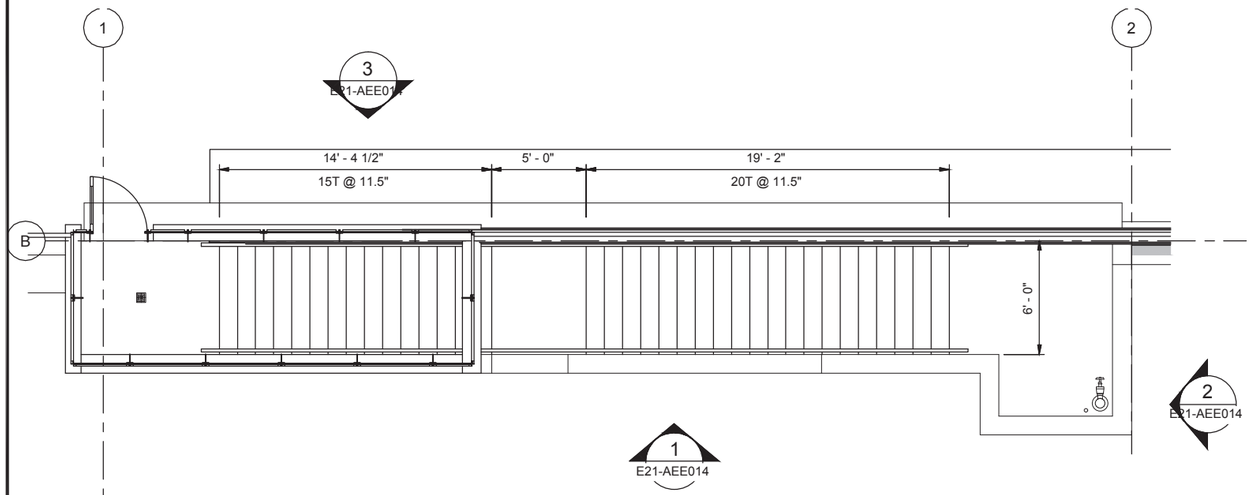
SCALE: 1/4" = 1'-0"
FILENAME: E335-E21-ATD012
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT

120TH STATION - ARCHITECTURAL
STAIR DETAILS
PUBLIC STAIR 1 (South)

DRAWING No.: **E21-ATD012**
LOCATION ID: E21
SHEET No.: 95
REV: 0

XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241

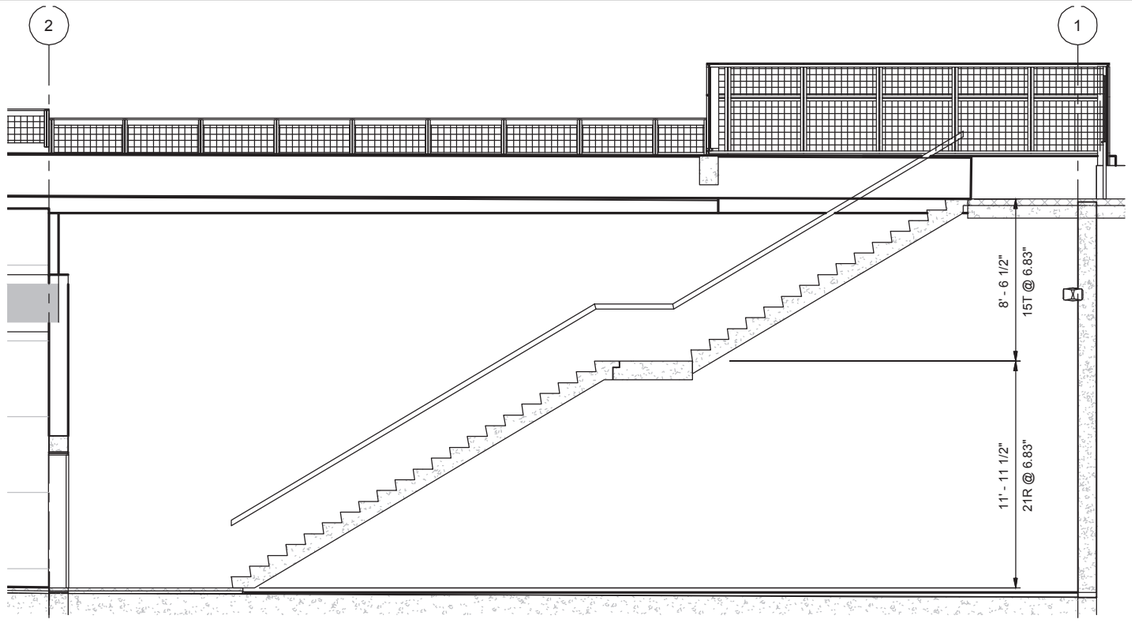


ENLARGED PLAN - SURFACE LEVEL 1

SCALE: 1/4" = 1'-0"

EGRESS STAIR 2 @ OPP SIM

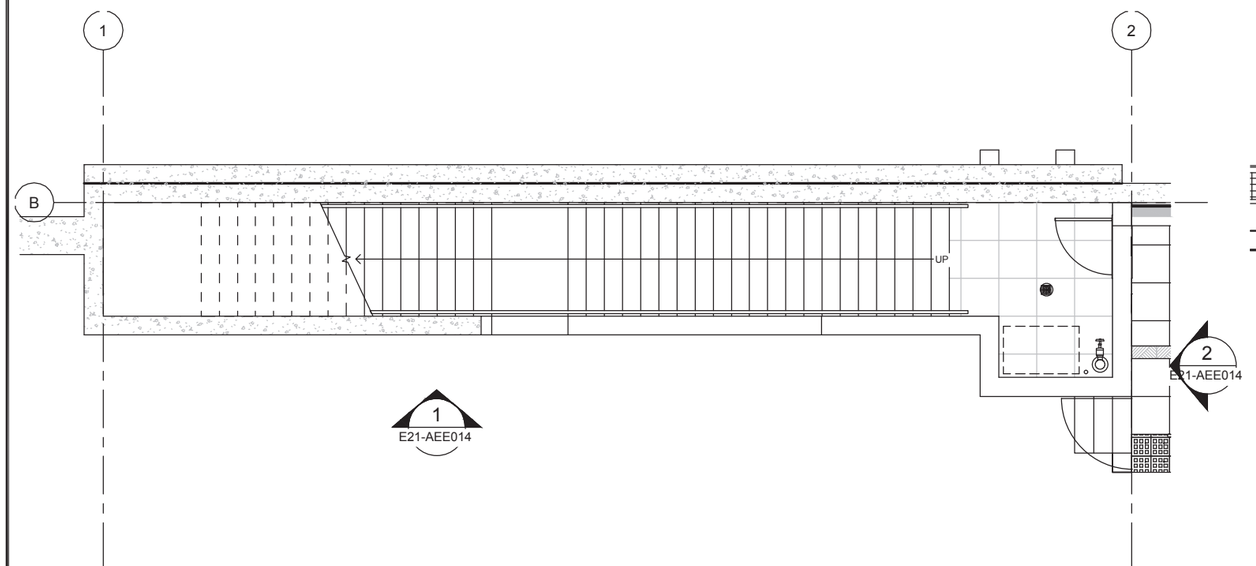
E21-ATD031
E21-APP201



STAIR 2- SECTION LOOKING SOUTH 5

SCALE: 1/4" = 1'-0"

E21-ATD031
STD-AED003

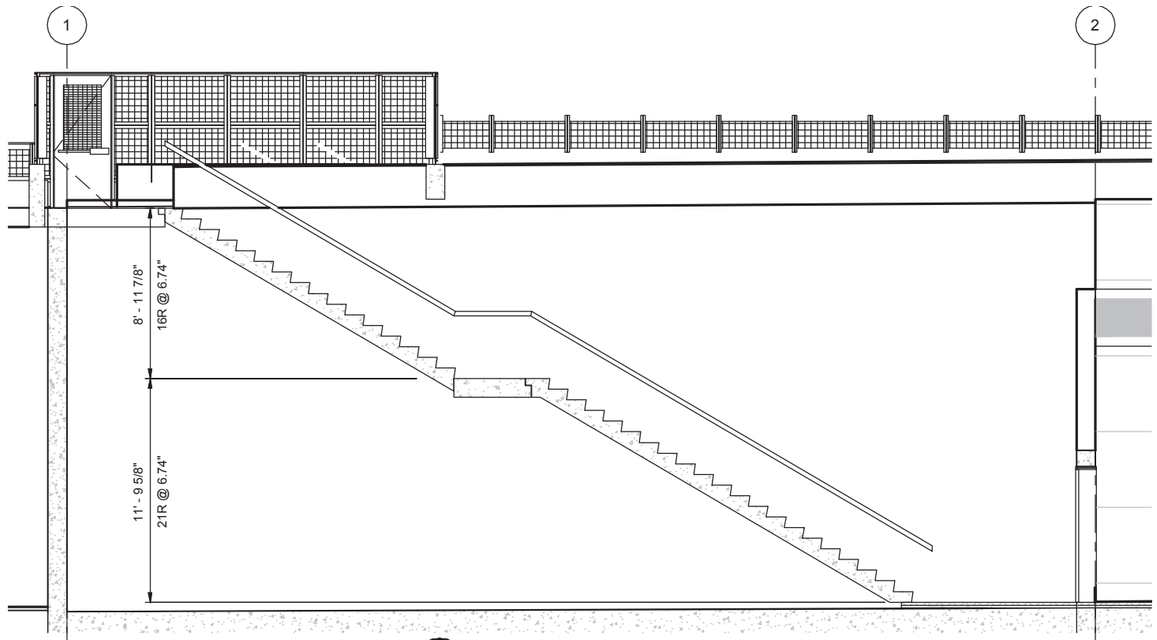


ENLARGED PLAN - PLATFORM LEVEL 6

SCALE: 1/4" = 1'-0"

EGRESS STAIR 2 @ OPP

E21-ATD031
E21-APP101



STAIR 1- SECTION LOOKING NORTH 10

SCALE: 1/4" = 1'-0"

E21-ATD031
STD-AED003

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DATE:

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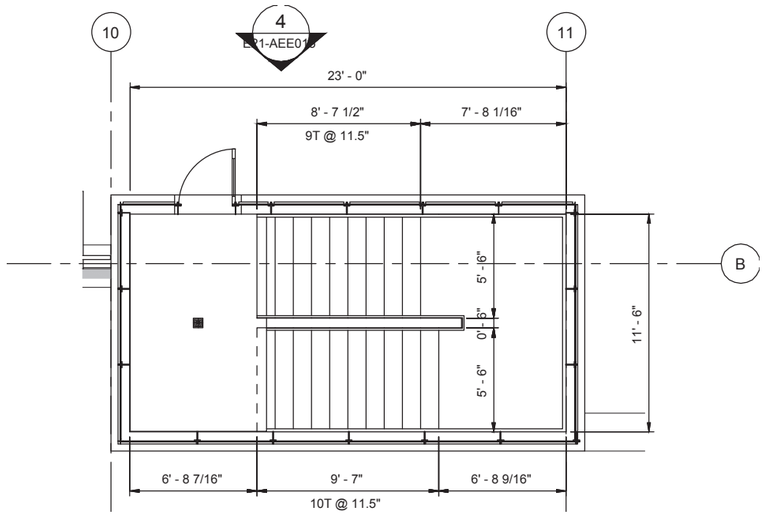
SCALE: 1/4" = 1'-0"
FILENAME: E335-E21-ATD031
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL
STAIR DETAILS
EGRESS STAIR 1

DRAWING No.: **E21-ATD031**
LOCATION ID: E21
SHEET No.: 96
REV: 0

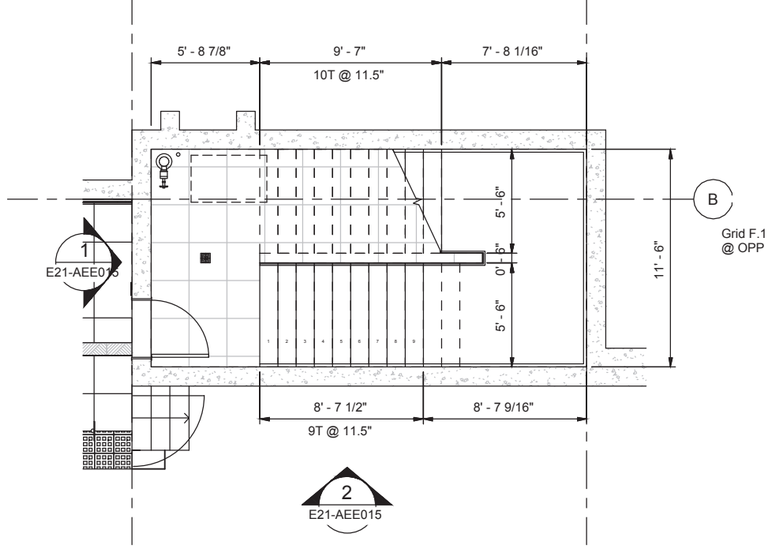
XREF LIST:
xE335-GB-TB22x34
GB-SEAL-JFN2241



ENLARGED PLAN - SURFACE LEVEL 1

SCALE: 1/4" = 1'-0"
EGRESS STAIR 4 @ OPP

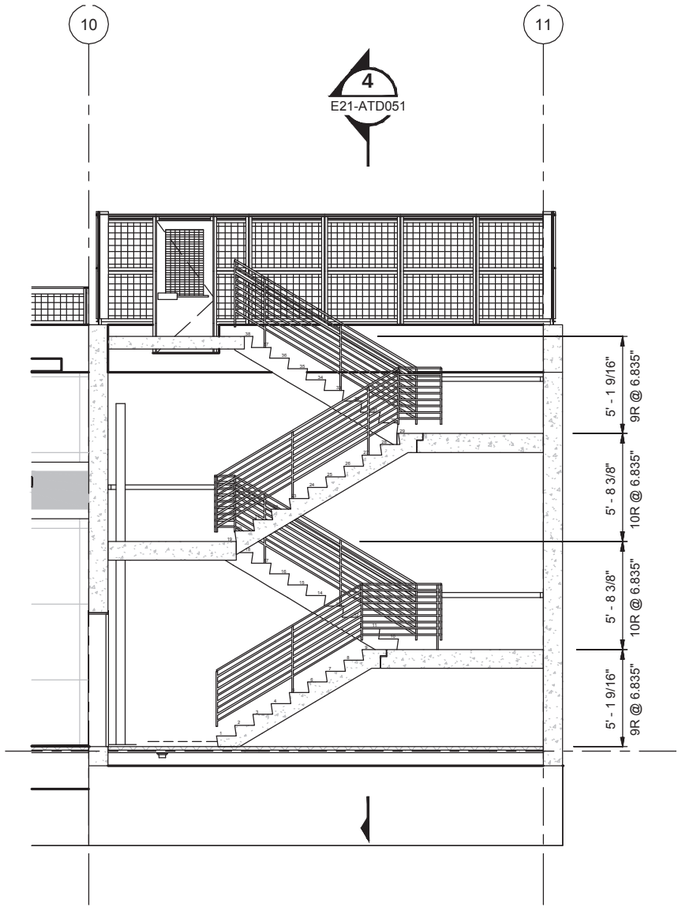
E21-ATD051
E21-APP203



ENLARGED PLAN - PLATFORM LEVEL 2

SCALE: 1/4" = 1'-0"
EGRESS STAIR 4 @ OPP

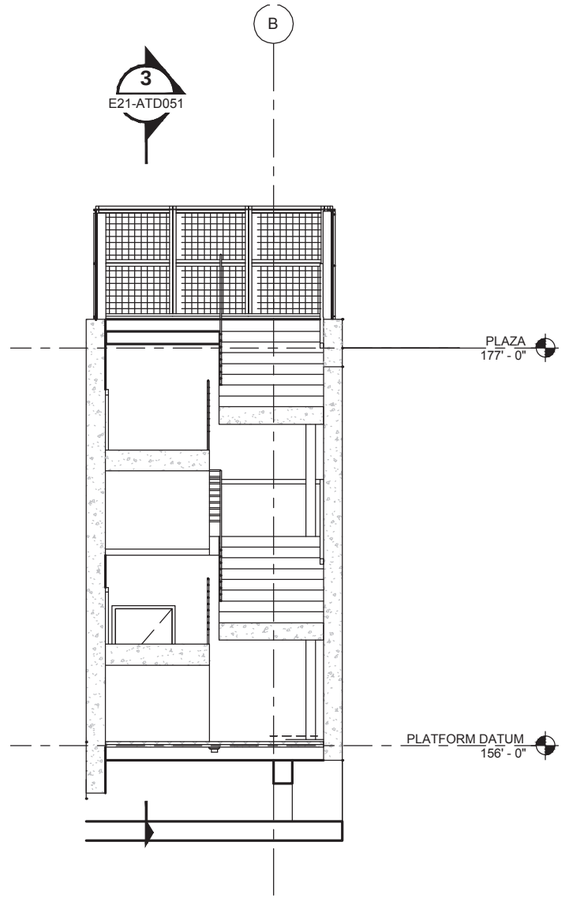
E21-ATD051
E21-APP103



SECTION LOOKING NORTH 3

SCALE: 1/4" = 1'-0"
EGRESS STAIR 4 @ OPP

E21-ATD051
E21-ATD051



SECTION LOOKING SOUTH 4

SCALE: 1/4" = 1'-0"
EGRESS STAIR 4 @ OPP

E21-ATD051
E21-ATD051

ORIGINATED BY: / DATE:
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BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

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PROGRESS PRINT #1

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NOT FOR CONSTRUCTION

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DRAWN BY:
CHECKED BY:
APPROVED BY:

2241 REGISTERED ARCHITECT
JOHN F. NESHOLM
STATE OF WASHINGTON

LMN
801 SECOND AVENUE, SUITE 501 SEATTLE, WA 98104
206.682.3460 FAX 206.343.0388

H J H
FINAL DESIGN PARTNERS.

LINE IS 1" AT FULL SCALE

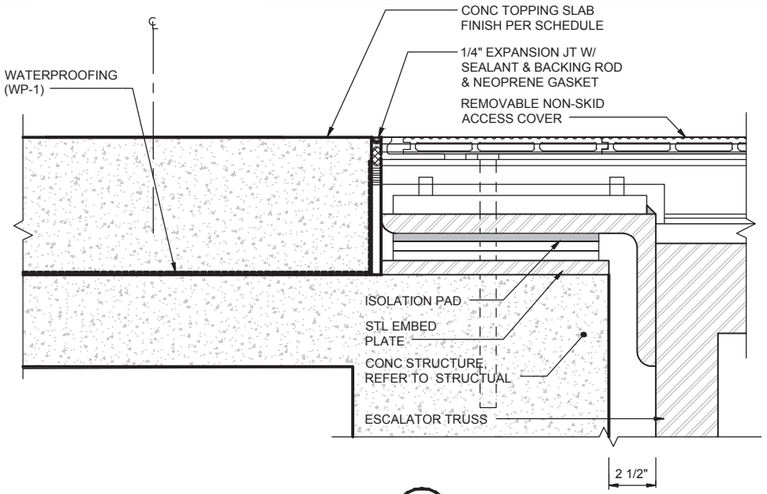
SUBMITTED BY: / DATE:
REVIEWED BY: / DATE:

SOUNDTRANSIT

SCALE: 1/4" = 1'-0"
FILENAME: E335-E21-ATD051
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL
STAIR DETAILS
EGRESS STAIR 2

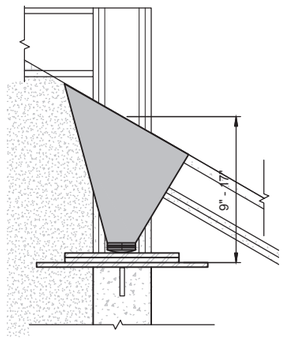
DRAWING No.: **E21-ATD051**
LOCATION ID: E21
SHEET No.: 97
REV: 0



ESCALATOR- UPPER END

SCALE: 3" = 1'-0"

1 — E21-ATD052 / E21-ATD011



ESCALATOR INTERMEDIATE

SCALE: 1 1/2" = 1'-0"

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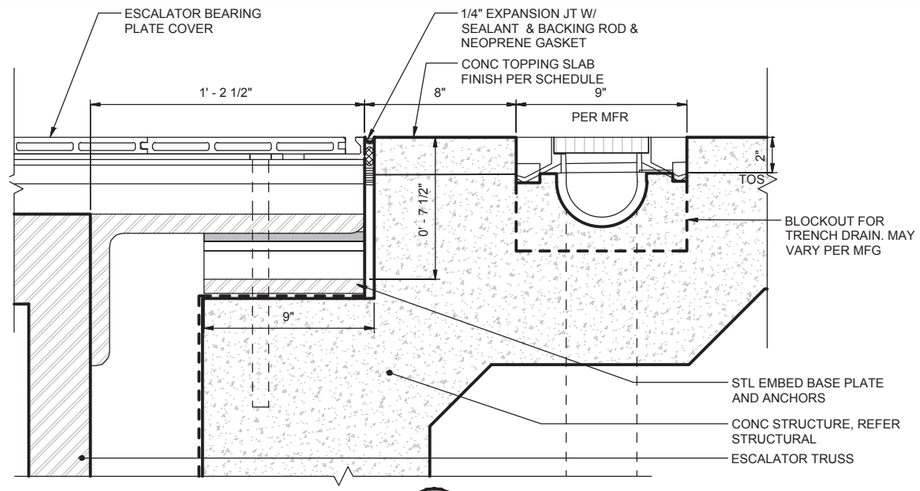
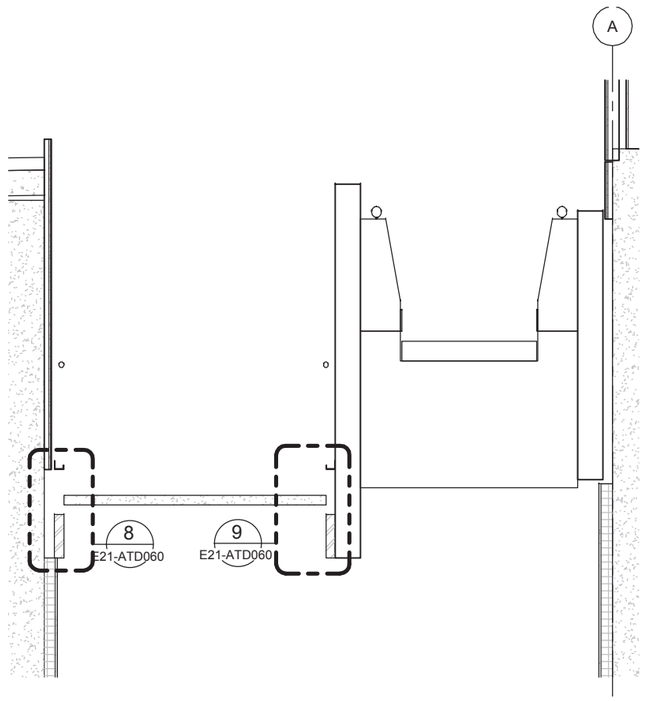


ESCALATOR - LOWER END

SCALE: 3" = 1'-0"

3 — E21-ATD052 / E21-AEX602



STAIR AND ESCALATOR SECTION

SCALE: 1/2" = 1'-0"

4 — E21-ATD052 / E21-ATD011

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CHECKED BY: / DATE:
BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

01/22/16 | 12:31 PM | CALDWELLJ
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PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

2241 REGISTERED ARCHITECT
JOHN F. NESHOLM
STATE OF WASHINGTON

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

LMN
801 SECOND AVENUE, SUITE 501 206.682.3460
SEATTLE, WA 98104 FAX 206.343.0388

SUBMITTED BY:

FINAL DESIGN PARTNERS.

DATE:
REVIEWED BY:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

DATE:

SCALE: 1/4" = 1'-0"
FILENAME: E335-E21-ATD052
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT

120TH STATION - ARCHITECTURAL
STAIR DETAILS
EGRESS STAIR 3

DRAWING No.: **E21-ATD052**
LOCATION ID: E21
SHEET No.: 98
REV: 0

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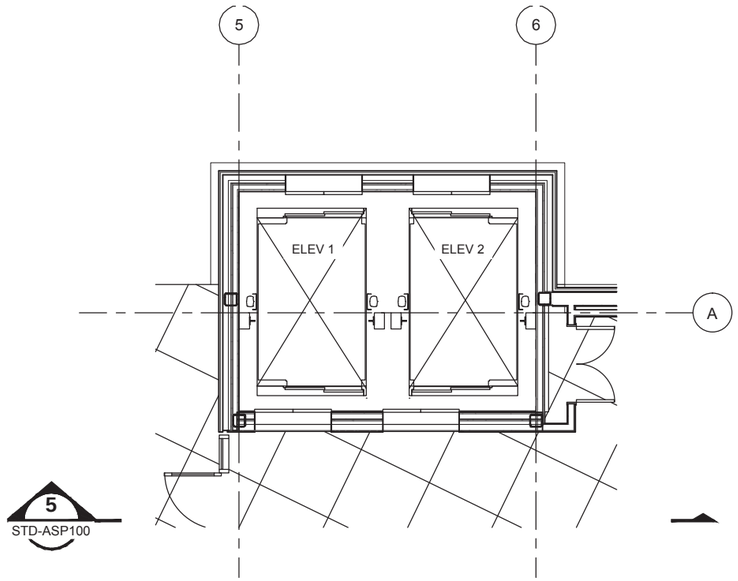
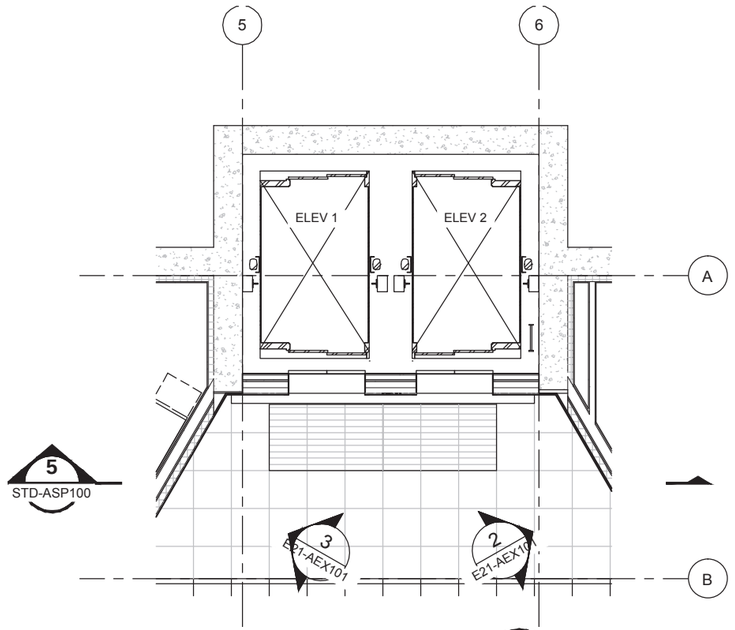
GB-SEAL-JFN2241



ENLARGED PLAN - SURFACE LEVEL 1

SCALE: 1/4" = 1'-0"
ELEVATOR 3-4 @ OPP

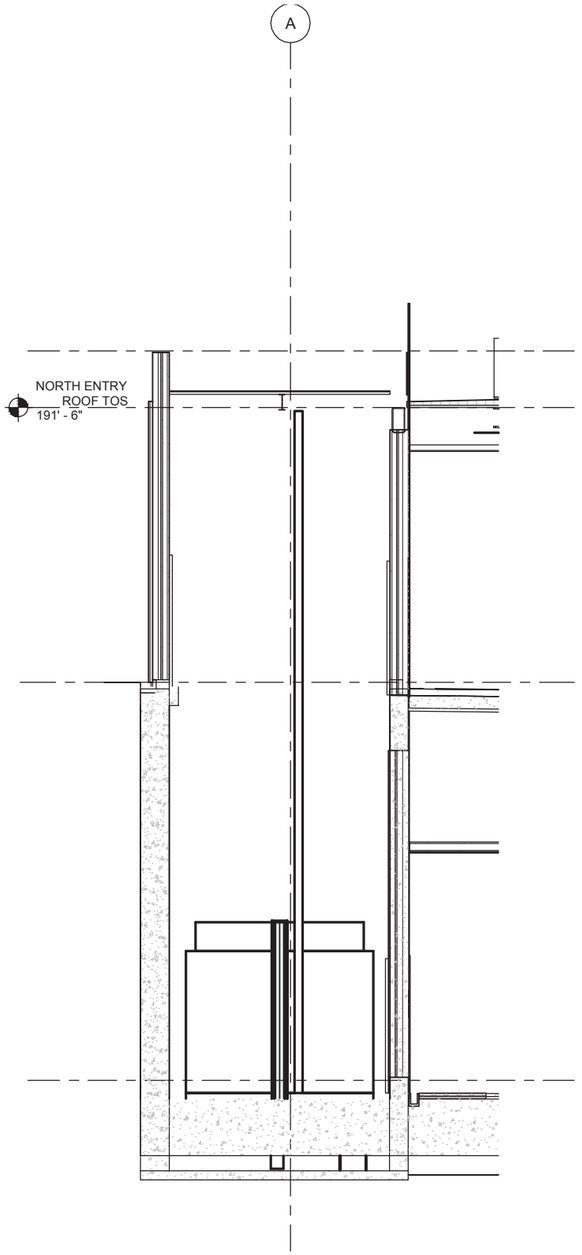
E21-AVD011
E21-APP202



ENLARGED PLAN - PLATFORM LEVEL 2

SCALE: 1/4" = 1'-0"
ELEVATOR 3-4 @ OPP

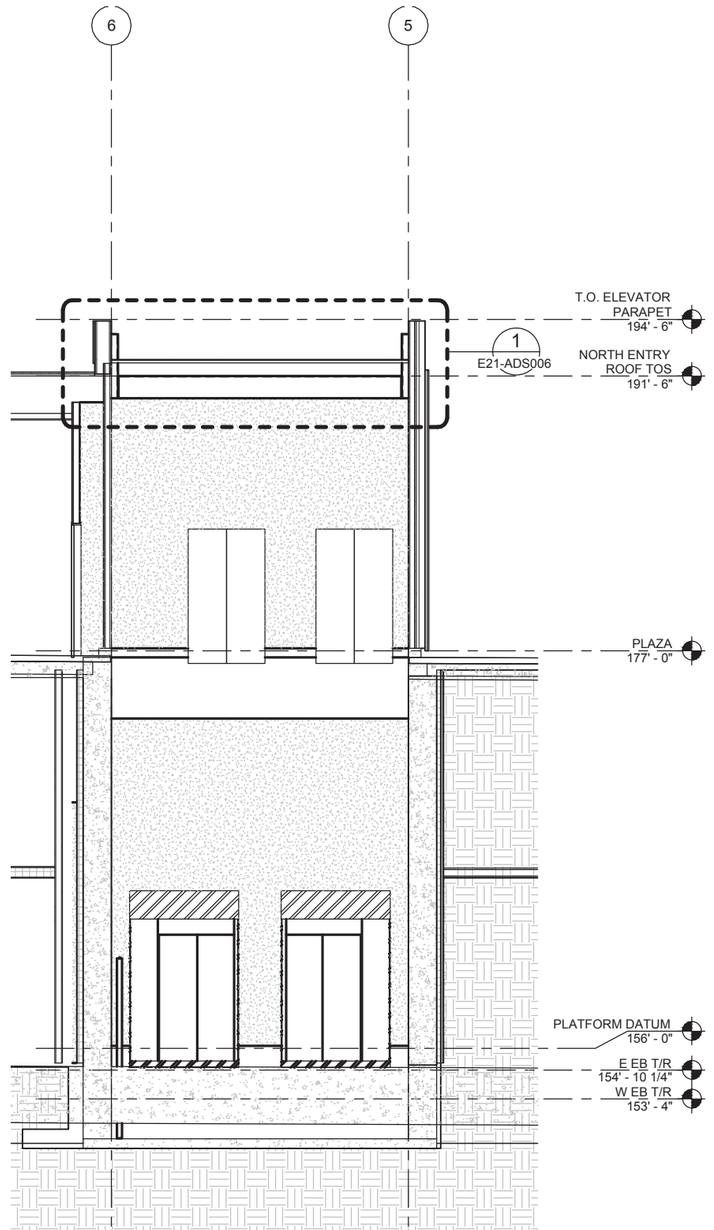
E21-AVD011
E21-APP102



ELEVATOR SECTION LOOKING WEST 3

SCALE: 1/4" = 1'-0"

E21-AVD011
STD-AED003



ELEVATOR SECTION LOOKING SOUTH 4

SCALE: 1/4" = 1'-0"
ELEVATOR 3-4 @ OPP

E21-AVD011
STD-AED003

PROGRESS PRINT #1

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:

2241 REGISTERED ARCHITECT
JOHN F. NESHOLM
STATE OF WASHINGTON

PRELIMINARY DESIGN
NOT FOR CONSTRUCTION

LMN
801 SECOND AVENUE, SUITE 501 SEATTLE, WA 98104 206.682.3460 FAX 206.343.9388

HJH FINAL DESIGN PARTNERS.

SUBMITTED BY:
DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: 1/4" = 1'-0"
FILENAME: E335-E21-AVD011
CONTRACT No.: RTA/CN 0045-14C
DATE: 03/08/2016

EAST LINK EXTENSION
CONTRACT E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
120TH STATION - ARCHITECTURAL
ELEVATOR DETAILS
ELEVATOR 1 & 2

DRAWING No.: **E21-AVD011**
LOCATION ID: E21
SHEET No.: 99
REV: 0

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VERIFIED BY: / DATE:

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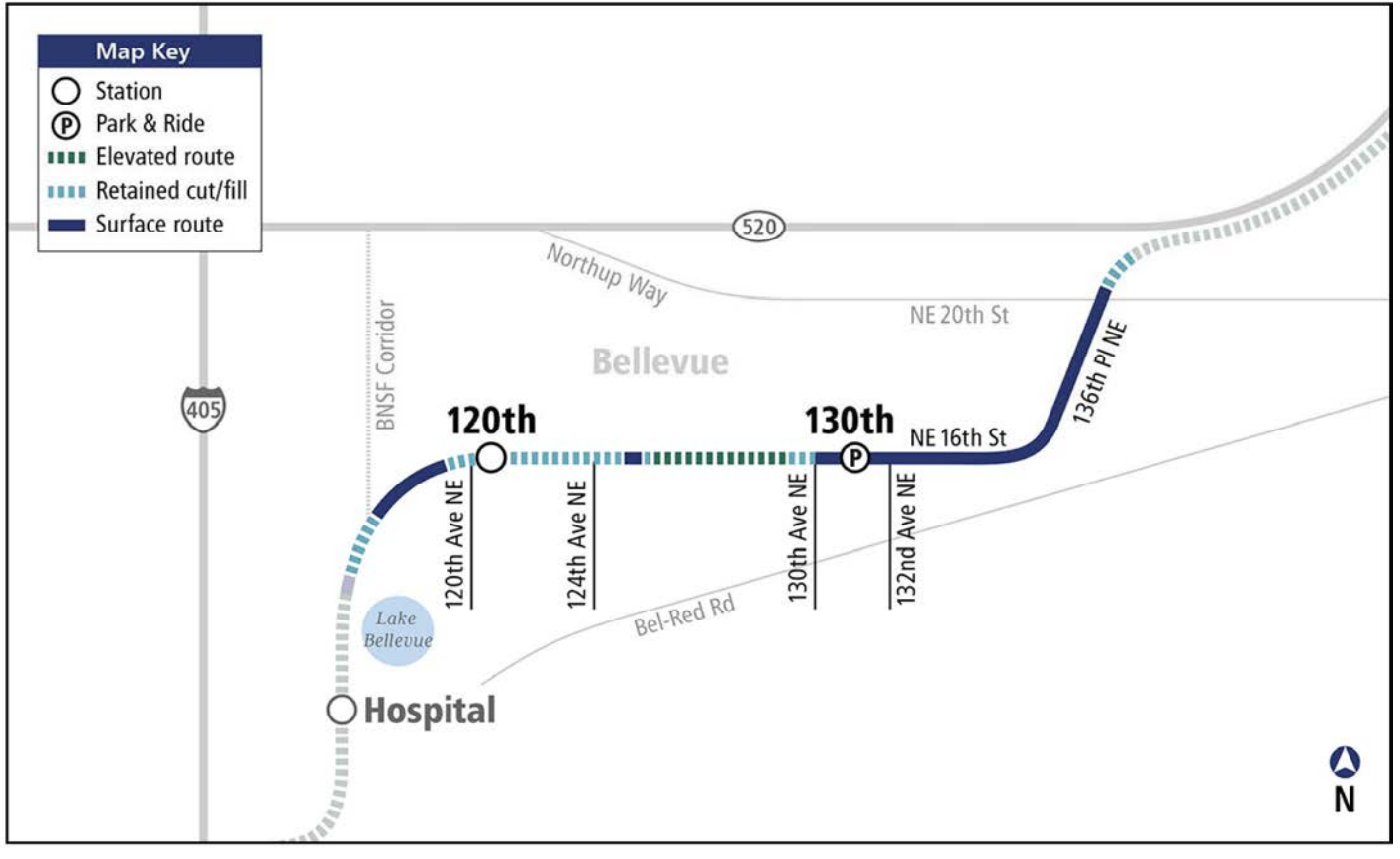
ATTACHMENT N

STATION RENDERINGS

Spring District/120th Station Context

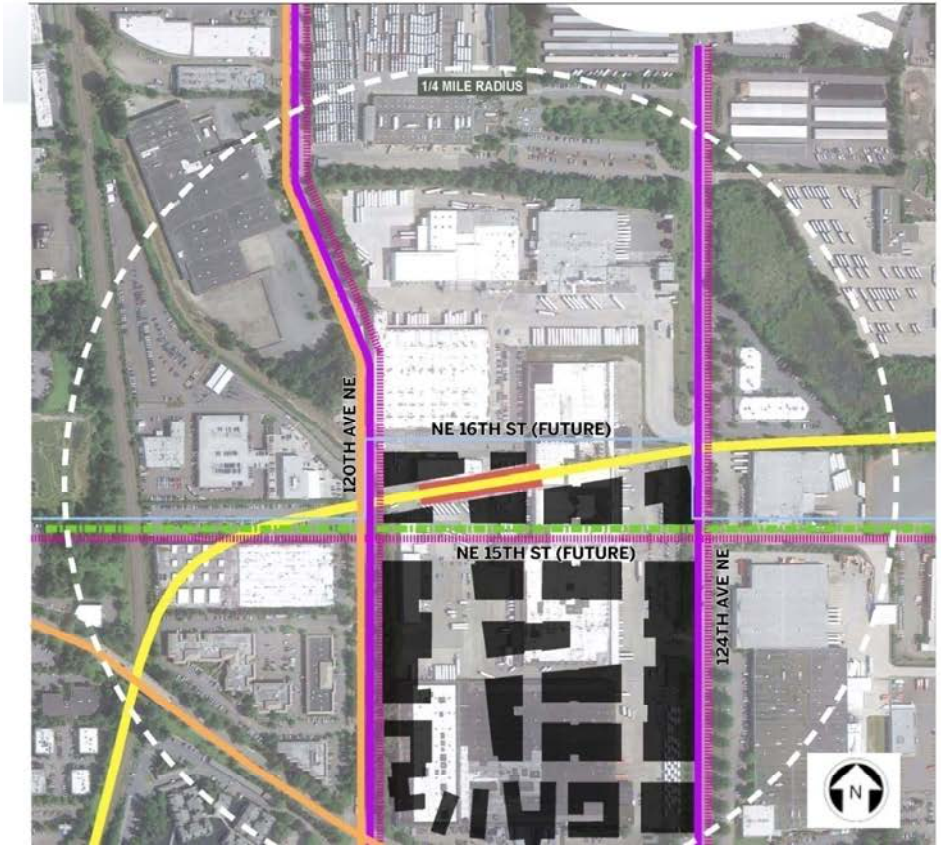
CAC September 16, 2015

Spring District /120th Station Context



BelRed Alignment (2013 Design)

Spring District /120th Station Context



LEGEND

- BUS ROUTE
- BICYCLE ROUTE
- BICYCLE LANE
- OFF STREET PATH
- PROPOSED NEW SIDEWALKS
- LIGHT RAIL TRACKS
- STATION
- PATRON CATCHMENT AREA
- FUTURE DEVELOPMENT

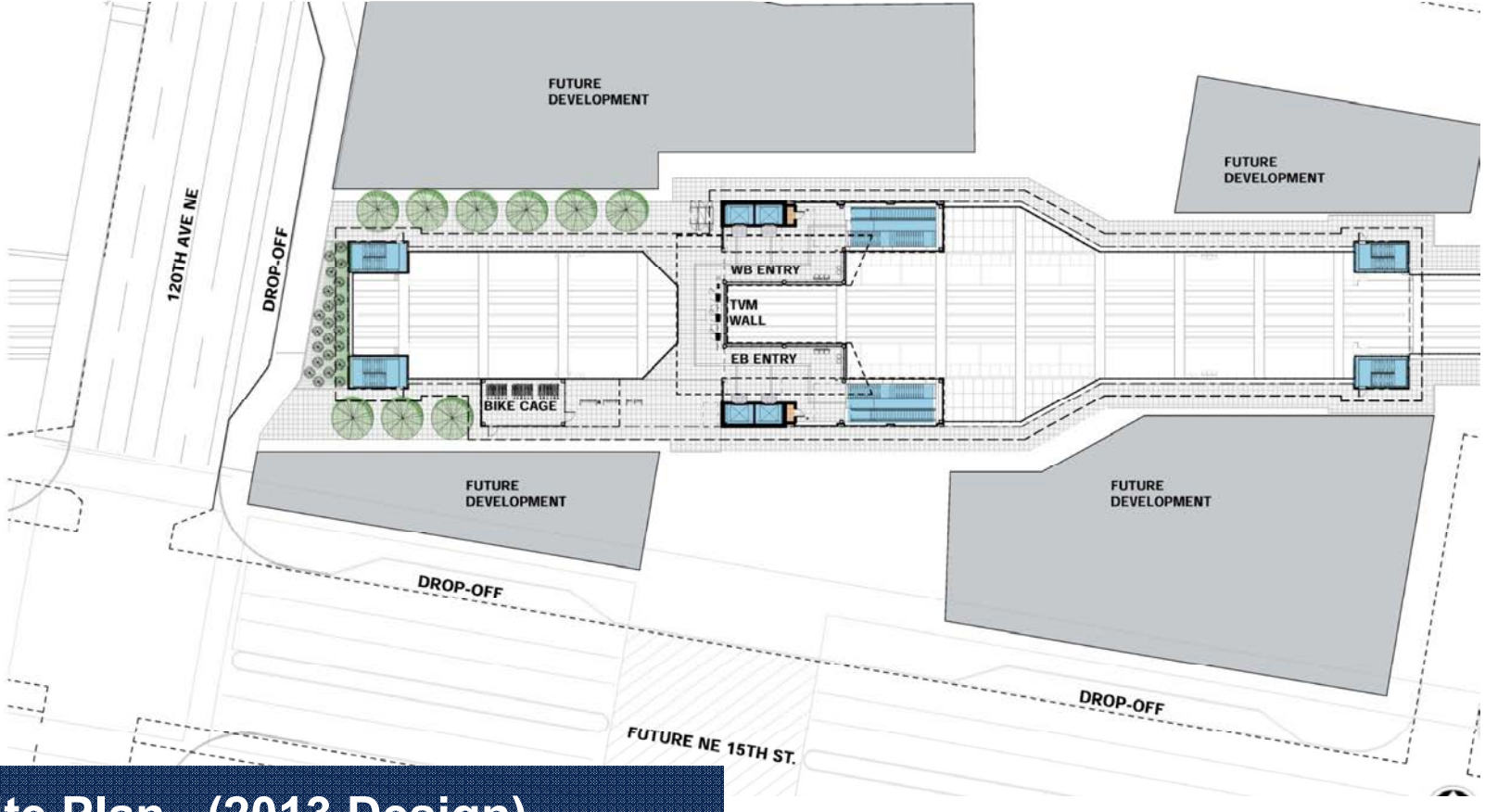
City of Bellevue and Sound Transit planned improvements

Neighborhood Context (2013 Design)

Spring District /120th Station Context

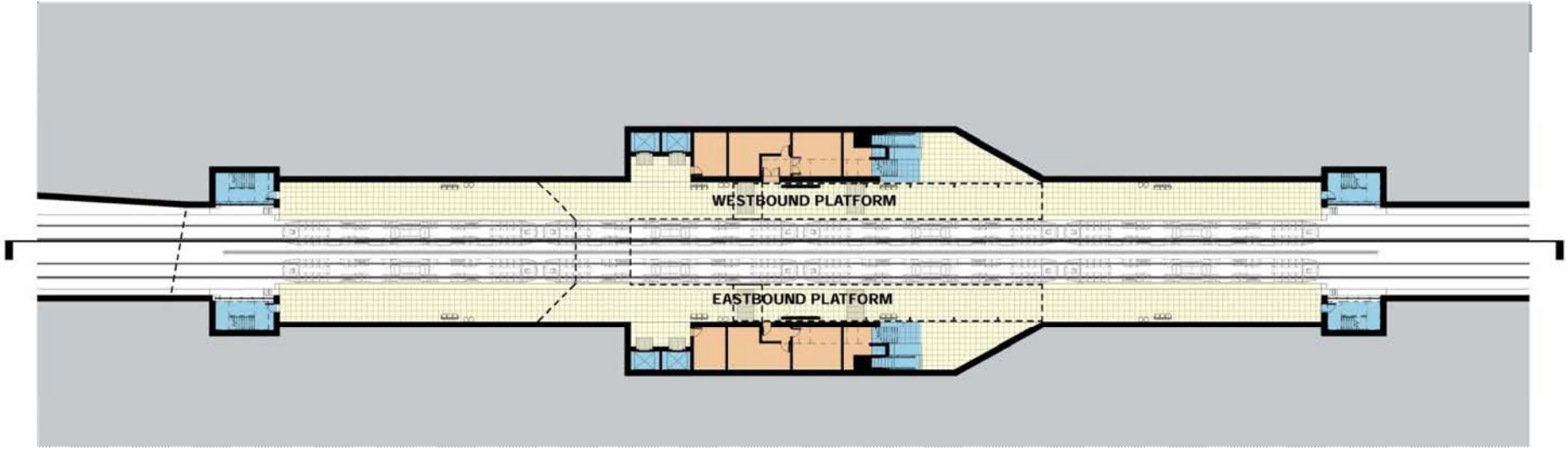
View From 120th Ave NE (2013 Design)

Spring District /120th Station Context



Surface Site Plan (2013 Design)

Spring District /120th Station Context



Platform Level Plan (2013 Design)

Spring District /120th Station Context

View at Platform Level (2013 Design)

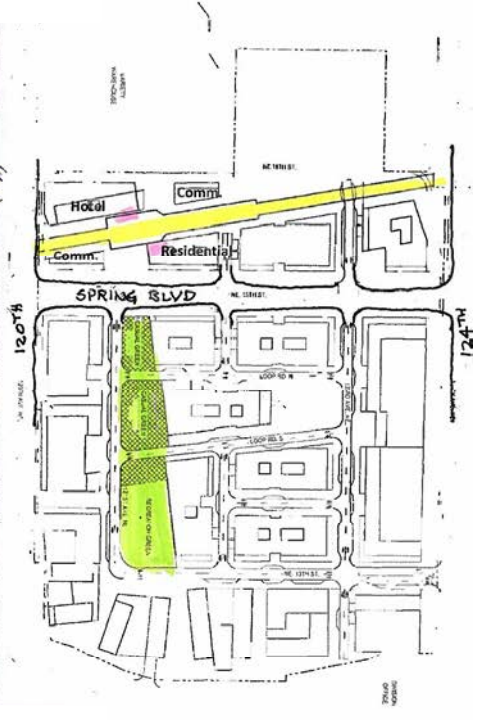
Spring District /120th Station Context

SOUNDTRANSIT RIDE THE WAVE

Station to fit within context of the future development.

Site improvements will accompany construction of adjacent buildings.

Interim pathways to connect station to existing street(s).



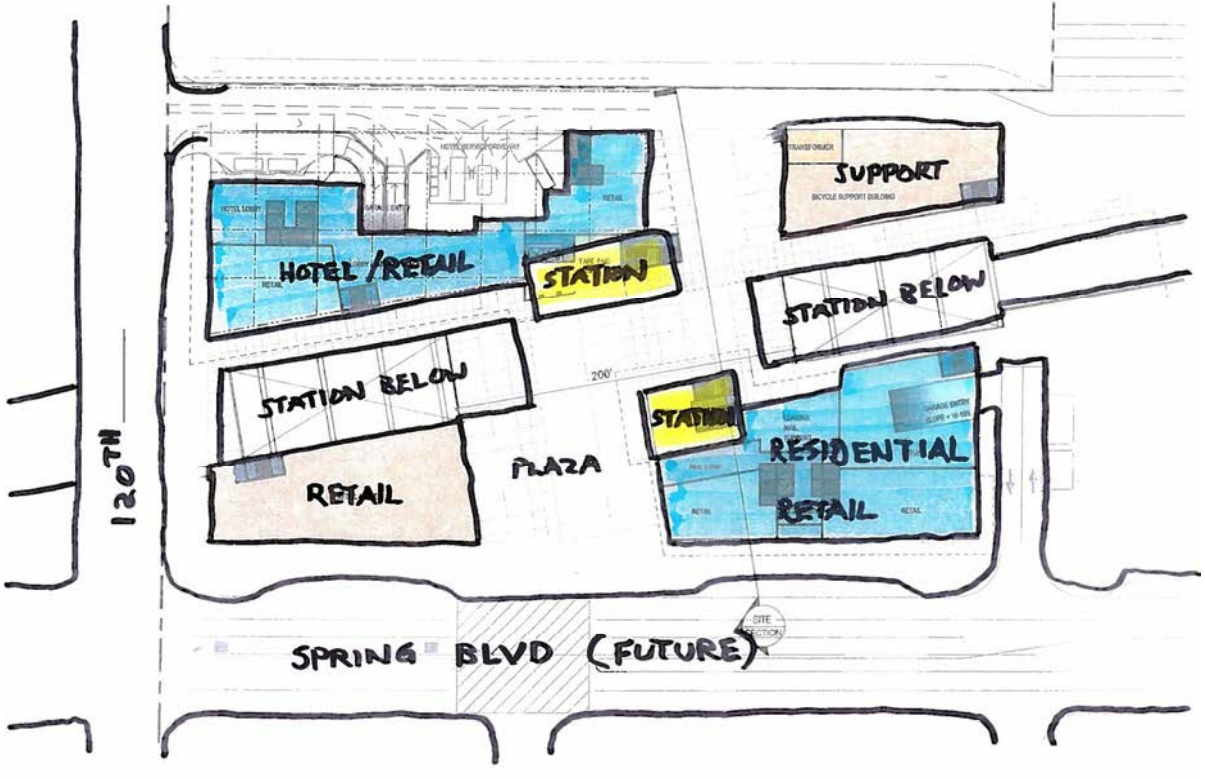
Site Context

2015 Design Program:

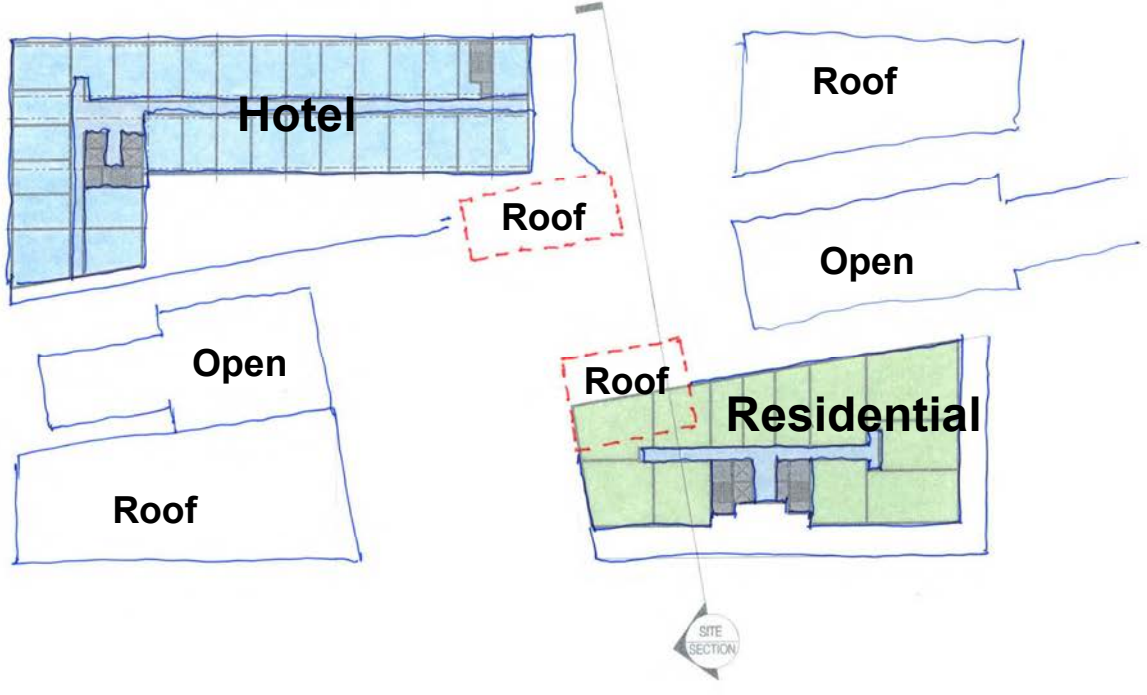
Station entrances “within” future Spring District buildings.

Large plaza spanning station trench – 160 ft -200 ft wide.

Interim site condition until Spring District buildings and Spring Blvd built.



Station Site Plan



STATION VERTICAL CIRCULATION
STATION SUPPORT
PLATFORM & ENTRY
HOTEL & RESIDENTIAL CIRCULATION
HOTEL & RESIDENTIAL CORE
RETAIL , COMMERCIAL
PARKING GARAGE & DRIVE AISLES
RESIDENTIAL SUPPORT
HOTEL GUEST ROOMS
RESIDENTIAL UNITS
PLAZA
OTHER

Station Roof Plan (Spring Dist. Upper Flrs.)

Spring District /120th Station Context

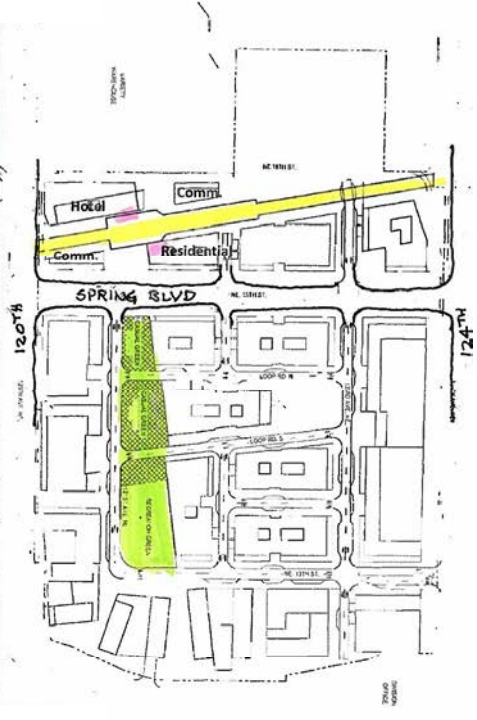
Site Section

Spring District /120th Station Context

Station to fit within context of the future development.

Site improvements will accompany construction of adjacent buildings.

Interim pathways to connect station to existing street(s).

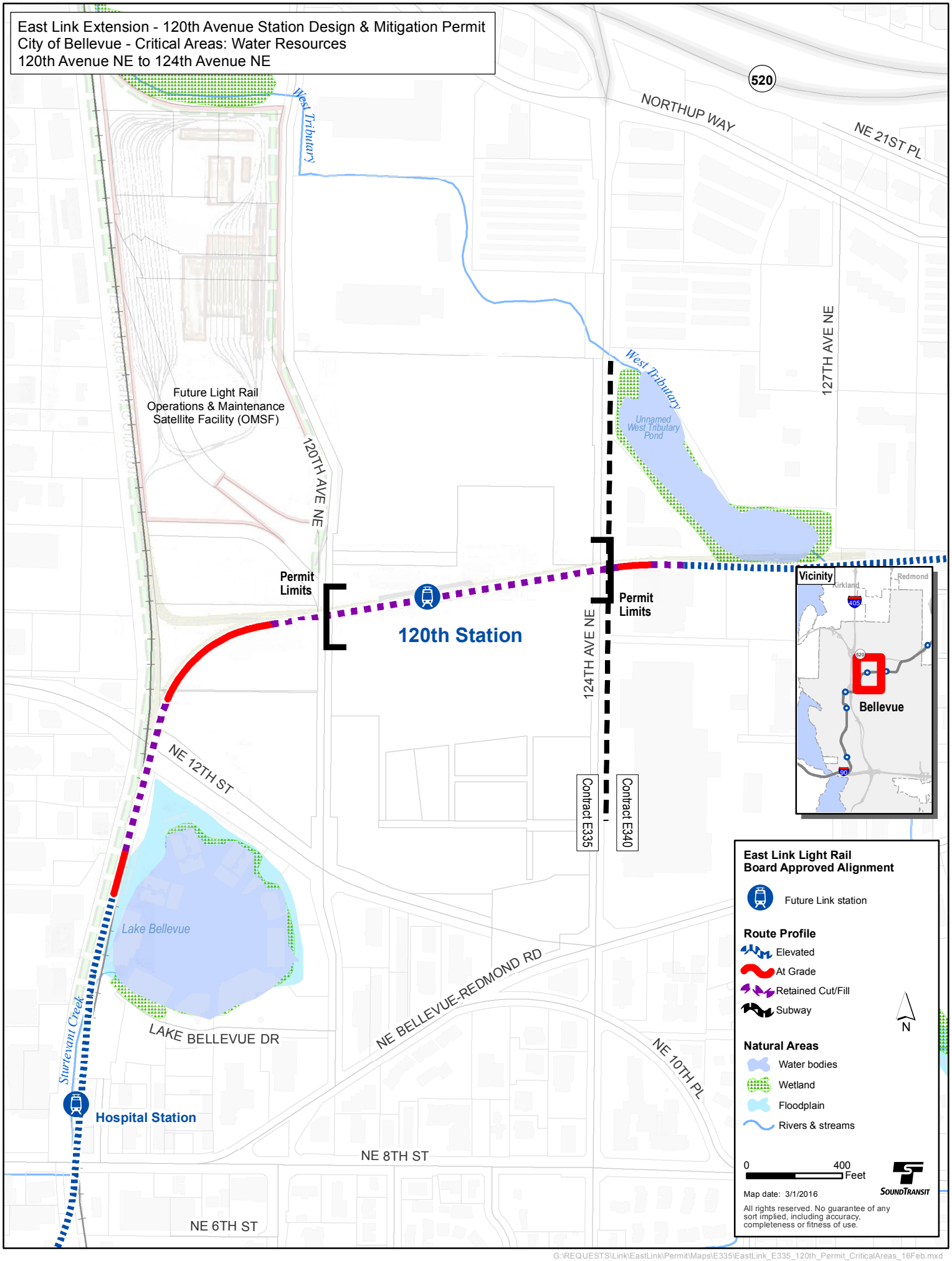


Site Context

Questions

ATTACHMENT O

CITY OF BELLEVUE, 120TH STATION: CRITICAL AREAS AND WATER RESOURCES MAP


East Link Extension - 120th Avenue Station Design & Mitigation Permit
City of Bellevue - Critical Areas: Water Resources
120th Avenue NE to 124th Avenue NE
520
NORTHUP WAY
NE 21ST PL
West Tributary
127TH AVE NE
West Tributary
Unnamed West Tributary Pond
Future Light Rail Operations & Maintenance Satellite Facility (OMSF)
120TH AVE NE
Permit Limits
120th Station
Permit Limits
124TH AVE NE
Vicinity
Redmond
Kirkland
Bellevue
NE 12TH ST
Contract E335
Contract E340
Lake Bellevue
NE BELLEVUE-REDMOND RD
LAKE BELLEVUE DR
NE 10TH PL
Sturtevant Creek
Hospital Station
NE 8TH ST
NE 6TH ST
East Link Light Rail
Board Approved Alignment
Future Link station
Route Profile
Elevated
At Grade
Retained Cut/Fill
Subway
N
Natural Areas
Water bodies
Wetland
Floodplain
Rivers & streams
0
400
Feet
Map date: 3/1/2016
SOUNDTRANSIT
All rights reserved. No guarantee of any sort implied, including accuracy, completeness or fitness of use.
G:\REQUESTS\Link\EastLink\Permit\Maps\E335\EastLink_E335_120th_Permit_CriticalAreas_16Feb.mxd

ATTACHMENT P

EAST LINK LIGHT RAIL EXTENSION CRITICAL AREAS REPORT AND MITIGATION PLAN, JUNE 2015, Rev 1

[intentionally omitted due to lack of critical areas]

ATTACHMENT Q

SYSTEM ACCESS POLICY

SOUND TRANSIT
RESOLUTION NO. R2013-03 – Attachment A

SYSTEM ACCESS POLICY

Sound Transit's mission is to plan, build, and operate regional transit systems and services to improve mobility for central Puget Sound. Sound Transit is committed to wisely managing public funds and facilitating access to its regional high capacity transit system while fulfilling the agency's mission. Sound Transit's responsibility is to provide and operate a high-capacity transit system delivering fast, frequent transit service that connects the region's urban centers. Sound Transit is authorized to use its tax revenues to plan, construct and operate high-capacity transit as defined in its enabling legislation (81.104 RCW).

The System Access Policy establishes a framework for Sound Transit's support and management of, and investment in, infrastructure and facilities to provide customer access to its transit services. Sound Transit will seek to provide or facilitate equitable improvements in access to transit services in cooperation with public and private entities as allowed by applicable laws, regulations, plans and policies. When designing transit facilities and services, Sound Transit will work with partner agencies, jurisdictions and third parties to maximize pedestrian, bike and transit access and provide parking capacity within available resources.

1) PURPOSE

The goals of the System Access Policy and Sound Transit's system access efforts are to:

A. Increase transit ridership

B. Encourage convenient and safe connections to Sound Transit services through all access modes including:

- Connecting transit and ferry services
- Paratransit pick-up and drop-off
- Pedestrian access
- Bicycle access
- Private vehicle pick-up and drop-off
- Vehicles requiring parking

2) SYSTEM ACCESS STRATEGIES

Sound Transit will facilitate access to its transit services on its properties and work cooperatively with local jurisdictions to promote access from surrounding communities.

A. Sound Transit may participate in two types of system access investments:

1. **Transit Facilities:** Transit facility investments include all properties, structures and improvements owned or controlled by Sound Transit. Transit facility investments are made for the purpose of enabling customers to access Sound Transit services.

2. **Access Infrastructure:** Access infrastructure investments include improvements, facilities, signage and systems designed to provide access to Sound Transit facilities from surrounding communities. Access infrastructure investments may be made by Sound Transit or others. Sound Transit may take a lead or a support role in identifying and implementing access infrastructure investments.

B. **Considerations for System Access Investment.** Sound Transit design of transit facilities and investment in access infrastructure will take into consideration the following:

- Ridership
- Total cost of ownership or total lifecycle cost to Sound Transit, including partnership costs for joint projects with third parties
- Sound Transit and local jurisdiction plans and planning documents
- Public input

Sound Transit shall use these criteria to assess and prioritize potential access improvement projects.

C. **Cooperation with Local Jurisdictions.** Sound Transit will work cooperatively and in partnership with local jurisdictions to manage parking demand at and near transit facilities and to encourage pedestrian, bicycle and transit access to facilities, maximizing efficient use of available transit parking resources.

D. **Cooperation with Public Transportation Partners.** Sound Transit will work cooperatively with other providers of public transportation services and parking facilities to identify appropriate methods of responding to changing parking demands and usage patterns resulting from Sound Transit actions.

E. **Bicycle-related Infrastructure, Equipment and Services.** Sound Transit may encourage and support bicycle usage at its stations and facilities through bicycle-related infrastructure, equipment, services, usage fees and agreements with outside parties.

3) PARKING MANAGEMENT

A. **Parking for Transit Use Only.** Parking provided by Sound Transit is intended for and restricted to customers of transit services at the facility. Sound Transit may allow exceptions for other purposes including:

- Security or service vehicles or other Sound Transit purposes
- Vending, community or other incidental facility uses as permitted by Sound Transit
- Vanshare or public shuttle vehicles under an agreement between Sound Transit and a public agency
- Carshare or private-provider shuttle vehicles under an agreement between Sound Transit and a third party
- Parking that is provided through a joint-use, lease, or other agreement with a third party for shared transit and non-transit uses
- Parking for commuters forming carpools or vanpools, when specifically allowed and posted by Sound Transit at parking facilities with sufficient unused capacity and without denying parking access to transit users

- Temporary use for non-transit purposes as authorized by Sound Transit at facilities with sufficient unused capacity and at such times as will not deny parking access to transit users

B. **Parking Management Tools**

1. Sound Transit may implement parking management tools to increase ridership, ensure parking availability for transit users and efficient use of parking facilities, support transit and facility operations, and support transit access improvements:

   - Designated parking for high-occupancy vehicles and vanpool vehicles
   - Designated parking for transit parking permit holders
   - Parking validation systems
   - Parking fees
   - Parking management technology, including electronic signage, parking management systems, parking space availability monitoring and reporting systems, or other technical components for efficient management of parking

2. All fees and pricing require Board approval.

C. **Customer Parking Rules and Regulations.** Administrative policies and procedures for customer use of Sound Transit parking facilities shall be maintained and posted by Sound Transit.

D. **Enforcement Actions.** Where authorized by applicable law, Sound Transit may implement the following penalties for activities prohibited by Sound Transit rules governing use of parking facilities:

1. Written warnings;

2. Parking infractions, citations or fee notices for monetary penalty;

3. Attaching a device to a vehicle's wheel to prevent it from being moved until a monetary penalty or release fee is paid;

4. Towing a vehicle at owner's risk and expense.

E. **Contracting of Management and Enforcement.** Sound Transit may contract any portion of its parking management responsibilities to a third party.

F. **Parking Lot Ownership.** Generally, Sound Transit's policies will only apply to parking facilities that it owns, has a leasehold interest in or controls. To the extent that facilities are co-owned and operated, an interlocal agreement will identify a lead agency whose policies will apply.

ATTACHMENT R

CITIZENS ADVISORY COMMITTEE COMMENT RESPONSES

CAC Pre-Development CAC Advisory Document Excerpt:

3. ADDITIONAL GENERAL DESIGN GUIDELINES

Little additional advice regarding general design guidelines is provided at this time due to the revised station concept which will provide entrances into the station from within future buildings developed with the Spring District. If standalone station entrances are required due to the timing of future building construction, the CAC will have advisory authority over any surface elements of the station design. The CAC recommends the following advice regarding general design guidelines:

- *The CAC recommends that the issue of lighting be uncoupled from the issue of meeting the needs of those with disabilities and that both audio and visual cues be included in station design.*

- *The CAC recommends that variable seating heights be provided at all light rail stations in Bellevue.*

Sound Transit anticipates there will be a period of time (duration unknown) after station construction is complete prior to the construction of the adjacent buildings and street network. Sound Transit will have easement access across the adjacent property to connect the station with the existing public right of way at 120th Avenue NE as well as across future plazas and sidewalks constructed by the Spring District developer.

Both audio and visual cues will be included in the station design.
Sound transit will provide seating in compliance with ADA required heights.

ATTACHMENT S

REQUESTED ADMINISTRATIVE MODIFICATIONS EXHIBITS [intentionally omitted]

ATTACHMENT T

NOISE IMPACT ASSESSMENT USING BELLEVUE CITY CODE

DECEMBER 22, 2014

East Link | South Bellevue to Overlake Transit Center

Contract No. RTA/AE 0143-11

Contract E335
Noise, Vibration and Groundborne Noise Report
90% Submittal

December 22, 2014

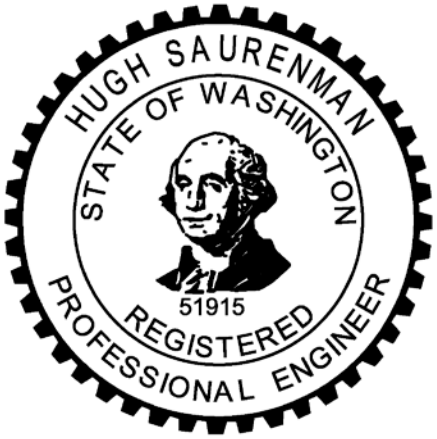
Prepared for:

SOUNDTRANSIT

Prepared by:

FINAL DESIGN PARTNERS.

Contract E335
Noise, Vibration and Groundborne Noise Report



This report was prepared by:

Shannon McKenna
Steven Wolf
ATS Consulting
215 N Marengo Avenue Suite 100
Pasadena CA 91101

ATSConsulting
acoustics, transportation + strategy

TABLE OF CONTENTS

APPENDICES

TABLES

FIGURES

ACRONYMS AND ABBREVIATIONS

AWD	Audible Warning Device
dBA	A-weighted decibel
AVCP	Acoustical vermiculite cement plaster
DCM	Design Criteria Manual
DBT	Downtown Bellevue Tunnel
DF	Direct Fixation
EDNA	Environmental designation for noise abatement
EIS	Environmental Impact Statement
FDL	Force Density Level
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
Ldn	24-hr day-night sound level
Hertz	Frequency in cycles per second
Leq	Equivalent sound level
Lmax	Maximum sound level
LRT	Light Rail Transit
LRV	Light Rail Vehicle
LSTM	Line Source Transfer Mobility
MFR	Multi-Family Residence
MOA	Memorandum of Agreement
mph	Miles per hour
NR	Noise reduction
ROD	Record of Decision
SEL	Sound Exposure Level
SFR	Single-Family Residence
TNM	Traffic Noise Model
TPSS	Traction Power Substation
VdB	Vibration decibel with reference to 1 µin/sec

1.0 INTRODUCTION

This Noise and Vibration Report for Contract E335 presents the results of the Federal Transit Administration (FTA) noise and vibration impact assessment and the train noise impact assessment using Bellevue City Code (BCC). It includes the recommended final design mitigation measures for sensitive receivers located within the contract limits in compliance with the FTA noise impact thresholds and the Bellevue City Code maximum permissible sound levels. The FTA noise and vibration impact assessment is presented in Sections 4.0 through 6.0. The BCC train noise impact assessment is presented in Section 7.0 and the BCC noise assessment for stationary sources such as traction power substations, public address systems, condenser units, and electrical transformers operating at stations is presented in Sections 5.6 and 5.8.

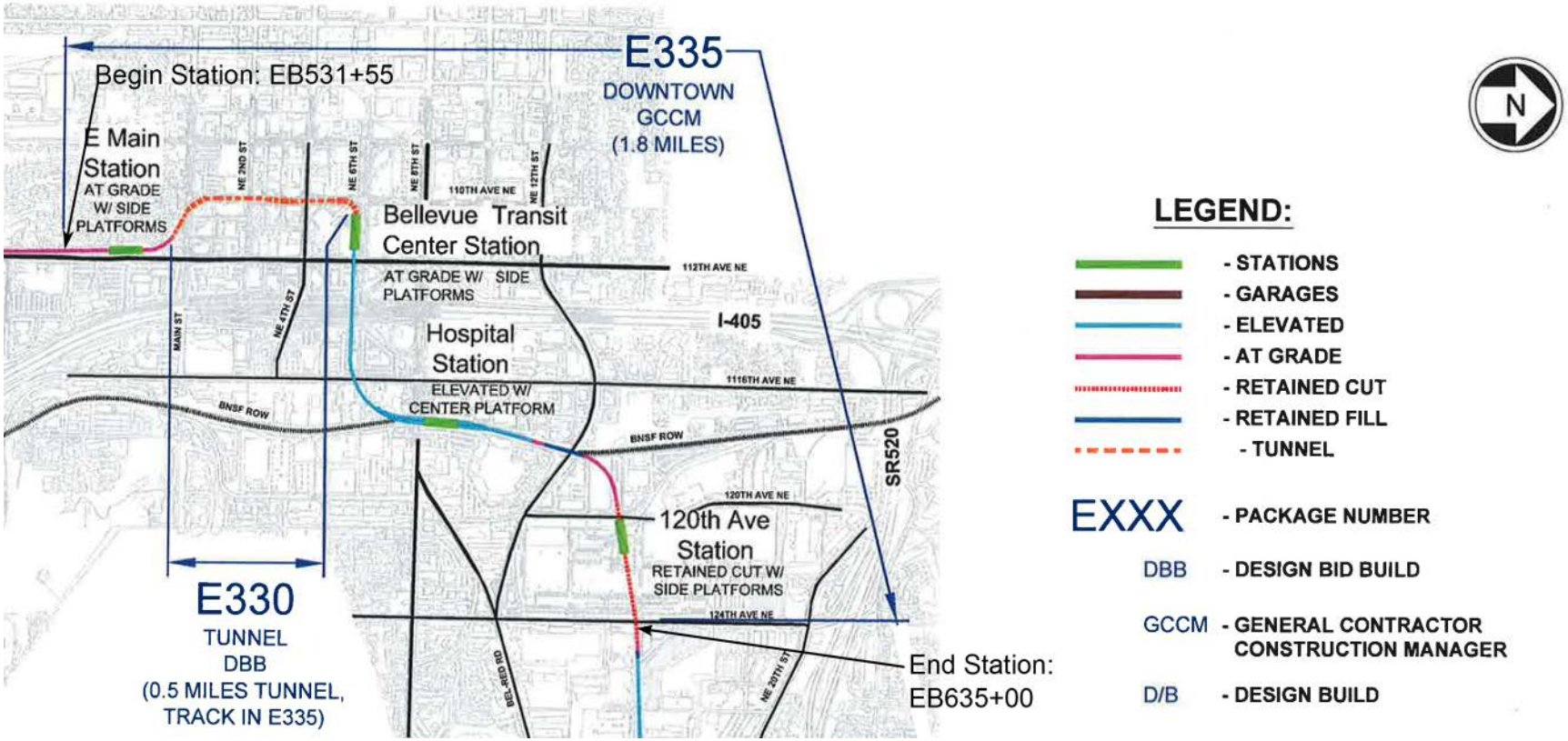
Contract E335 begins south of the East Main Station at EB STA 531+55 and ends east of 124th Avenue NE at EB STA 635+00. The package includes the East Main Station, South Portal Electrical Power Building, finishes and equipment in the Downtown Bellevue Tunnel (DBT), the Mid-Tunnel Access Shaft Headhouse, Bellevue Transit Center Station, the aerial structure over the I-405 freeway, elevated guideway, Hospital Station, a guideway trestle structure, and at-grade, retained fill, and retained cut track structure north of the Hospital Station, and the 120th Avenue NE Station. Figure 1-1 shows a site map of the East Link project within the contract limits. Note that Contract E330 will build the initial phase of the Downtown Bellevue Tunnel. All finishing work on the tunnel is part of Contract E335 therefore, the tunnel is included in this Contract E335 Operational Noise and Vibration report. No operational noise and vibration report will be prepared for Contract E330.

This report includes a noise impact assessment of operation of light-rail transit including noise from light-rail vehicles, traction power substation (TPSS) units, station acoustics, emergency ventilation fans, ancillary equipment at stations, public address (PA) announcements at stations, and warning bell noise used during the operation of the light rail vehicles. The information in this report is an update to the noise and vibration impact assessment presented in the East Link Project Final Environmental Impact Statement (EIS), Appendix H2: Noise and Vibration Technical Report (July 2011). The recommendations in this report are based on additional measurement and analyses, including assessment of existing Sound Transit LRT operations, performed by ATS Consulting from March through September of 2013.

The noise and vibration impact assessment presented in this report is consistent with the guidelines and methodology presented in the following documents:

- FTA's Transit Noise and Vibration Impact Assessment guidance manual (referred to in this report as the FTA guidance manual);
- Sound Transit's Link Noise Mitigation Policy, February 2004;
- The East Link Project Final Environmental Impact Statement, July 2011; and
- City of Bellevue's Noise Control Code, Chapter 9.18 Bellevue City Code.

Figure 1-1: East Link Site Map



2.0 EXECUTIVE SUMMARY

2.1 FTA Noise Impact Assessment

This report presents a detailed noise analysis and mitigation recommendations for noise sensitive receivers where predicted noise levels approach or exceed the FTA moderate noise impact threshold. The mitigation measures considered are construction of sound walls, residential sound insulation, track lubrication system for tight-radius curves, and "low-impact frogs" for crossovers and turnouts.

The recommended sound wall lengths and heights within the Contract E335 limits are summarized in Table 2-1. Table 2-1 includes the start and end stationing for the walls, wall heights, wall lengths, and wall locations. Additional mitigation recommendations include:

- Mitigation measures for station noise at East Main Station include reducing the level of the PA announcements from 10 dB to 5 dB above the ambient noise during nighttime and early morning hours (10 p.m. to 7 a.m.).
- At East Main Station pedestrian crossings providing adjustable level audible warning devices (AWD). The AWDs would be set to a lower level during nighttime and early morning hours (10 p.m. to 7 a.m.) when the ambient noise levels are lower.
- Mitigation measures for station noise at Bellevue Transit Center Station include reducing the level of the PA announcements from 10 dB to 5 dB above the ambient noise during nighttime and early morning hours (10 p.m. to 7 a.m.) and enclosing the condenser units.

Noise impact is predicted at the Coast Bellevue Hotel (parcel EL242). A three foot high sound wall above top of rail would be needed on the aerial structure to mitigate the train noise at the exterior of the Hotel.

Noise sensitive receivers near special track work include: (1) Meydenbauer Center (parcel EL240) near a crossover and (2) Lake Bellevue Condominiums (parcel EL261) near a turnout. Figure 5-2 shows the location of the Meydenbauer Center and Figure 5-4 shows the location of the Lake Bellevue Condominiums with respect to the special trackwork. No noise impact is predicted at the Meydenbauer Center and a sound wall is recommended at the Lake Bellevue Condominiums that reduces the noise level to below the moderate impact threshold. Therefore, no "low-impact" frogs are included in the mitigation recommendations.

Installation of lubricators is recommended to minimize wheel squeal at low radius curves. The DCM commits the project to installation of lubricators on curves with a radius less than 600 ft. On curves of 600- to 1,250-foot radius, the project will be designed to accommodate a lubrication system if wheel squeal occurs during operations. Low-radius curves within the Contract E335 limits where lubricators are recommended include:

- The curve north of East Main Station as the tracks transition into the DBT. Lubricators are recommended for both the eastbound and westbound track.

- The curve west of Bellevue Transit Center Station as the tracks transition from 110th Avenue NE onto NE 6th Street. Lubricators are recommended for both the eastbound and westbound track.
- The curve east of I-405 as the tracks transition into the BNSF ROW. Installation of lubricators is recommended for both the eastbound and westbound track, even though the EB track has a curve with radius 715.75 feet. We recommend the design for the EB track include a lubrication system even though the curve radius is greater than 600 ft because of the proximity to a noise sensitive receiver and because the WB track will include a lubrication system (the radius of the WB curve is less than 600 ft).

The predicted emergency ventilation fan operations noise are compared to the Sound Transit Design Criteria of Lmax=85 dBA for fan rooms, noise criteria of Lmax=75 dBA for station platforms, and the National Fire Protection Association (NFPA) Standard 130 noise limits for in tunnel operations. The Sound Transit fan noise criteria and the NFPA Standard 130 noise limits will be exceeded. Acoustical vermiculite cement plaster (AVCP) shall be applied to the ceiling and wall surfaces of the fan room and the ceiling and walls of the fan niche in accordance with E335 Specification Section 09 82 19, Sprayed Acoustic Insulation.

The acoustical design of the East Main Station, Bellevue Transit Center Station, Hospital Station, and 120th Avenue NE Station were assessed based on the Sound Transit Design Criteria of a reverberation time goal of 1.2 seconds. The East Main Station, Bellevue Transit Center Station, and Hospital Station are not fully enclosed but are open to the outside area. Due to the large area of the station ceiling and side walls that are open to the outside area the station acoustics will not exceed the Sound Transit reverberation time goal of 1.2 seconds and will not need any acoustical treatment. The 120th Avenue NE Station is a partially enclosed space that is located in a retained cut section of the alignment. More than half of the ceiling area is open to the outside area. The remaining ceiling surfaces are either perforated metal canopies located over the platform area and perforated metal ceilings at the underside of the slab above the station. Due to the large area of the station ceiling and side walls that are open to the outside area the station acoustics will not exceed the Sound Transit reverberation time goal of 1.2 seconds and will not need any acoustical treatment.

This report also presents a detailed vibration analysis. The detailed vibration analysis included vibration propagation tests at seven of the sensitive receivers and vibration measurements of the existing Sound Transit Central Link line to ensure the validity of analyses. Vibration impact was not identified at any sensitive receivers within the Contract E335 limits. No vibration mitigation is recommended.

Table 2-1 Recommended Sound Wall Lengths and Heights

Wall	Start Station	End Station	Wall Length	Wall Height	Wall Location	Comments
1	WB531+55	EB540+15 South Tunnel Portal	860 ft	6 ft above ground level at ROW line	Along WB right-of-way line	Near south tunnel portal, wall is to be a continuation of the E320 Sound Wall 4.
2	EB577+00	EB583+00	600 ft	3 ft above top of rail	Along east edge of EB guideway	Mitigation for Coast Bellevue Hotel
3	EB601+50	EB609+50	800 ft	6 ft above top-of-rail	Along east edge of EB guideway and at-grade trackway	Mitigation for the Lake Bellevue Condominiums

2.2 Bellevue City Code Noise Impact Assessment

The predicted nighttime noise levels of train operations with the noise mitigation required by the Record of Decision at the EDNA Class A parcels within Contract E335 are compared to the maximum permissible noise levels defined in the Bellevue City Code (BCC). Predicted nighttime noise levels do not exceed the BCC maximum permissible noise level at any of the EDNA Class A parcels.

There are two Traction Power Substations (TPSS) units located within the Contract E335 limits. One TPSS unit will be located near the DBT south portal in Downtown Bellevue near STA 540+00, east of the tracks. The nearest sensitive receiver is parcel EL206, a residence, located west of the tracks. The other TPSS unit is located adjacent to the storage track west of 120th Avenue NE. The nearest receiver is EL278, a commercial land use. TPSS noise is regulated by the City of Bellevue noise code. The predicted noise does not exceed the allowable noise levels. No noise mitigation is recommended for the TPSS units.

3.0 ROD COMMITMENTS

The impact analysis and mitigation recommendations presented in this report are consistent with the ROD commitments. The noise and vibration ROD commitments applicable to the final design are:

1. Noise mitigation measures would be provided that is consistent with Sound Transit's Light Rail Noise Mitigation Policy (Motion No. M2004-08). The FTA manual also defines when mitigation is needed and bases this on the impact's severity, with severe impacts requiring the most consideration. During final design, all predicted impacts and mitigation measures will be reviewed for verification. During final design, if it is discovered that equivalent mitigation can be achieved by a less costly means or if the detailed analysis show no impact, then the mitigation measure may be eliminated or modified. Prior FTA approval is required for any elimination or substantial modification

to mitigation measures. The potential mitigation options available for noise from transit operations on the East Link Project are primarily sound walls, special track work, lubricated curves, and residential building sound insulation. Sound walls are proposed where feasible and reasonable, as determined by Sound Transit (and the Federal Transit Administration, at its discretion) based on specific site conditions. Sound walls would be located on the ground for at-grade profiles and on the guideway structure for elevated profiles. Sound walls are preferred because they are effective at reducing noise. For locations where there is a potential for traffic noise to be reflected off the sound walls, Sound Transit will include where feasible the use of absorptive treatments to remedy this issue. A crossover track uses a frog (a rail-crossing structure) to allow the train to either cross over to another track or continue moving on the same track. A gap is provided on top of the frog so that vehicle wheels can pass regardless of which track is in use. With typical frogs, noise and vibration are generated when the wheels pass over the gap. Special track work, such as movable point or spring rail frogs, eliminates the gap between tracks at crossovers that causes noise and vibration at these locations and will be used where feasible. Sound Transit is currently investigating the use of non-audible warnings for gated and ungated at-grade crossings. If non-audible warning devices are found to be viable, this option could be used to reduce or eliminate bell noise at specific crossings. Where practical, grade separation of at-grade light rail crossings would also be considered to eliminate the need for bells or other audible warning devices. If bells are used at gated crossings, the bells would be set at the minimum noise level that maintains a safe crossing. Finally, the use of acoustic bell shrouds would be examined during final design; the shrouds would direct the bell noise at gated crossings to the intersection. When source mitigation measures or sound walls are infeasible or not entirely effective at reducing noise levels below the FTA impact criteria, then residential sound insulation would be evaluated and implemented at impacted properties where the existing building does not already achieve a sufficient exterior-to-interior reduction of noise levels. Many newer buildings, particularly in Downtown Bellevue, have good interior noise reduction and additional sound insulation may not be necessary. While the mitigation provided herein is based on predicted impacts, noise mitigation shall be provided if, after operations commence, noise impacts occur for which mitigation is deemed necessary and appropriate under FTA noise standards.

2. Traffic noise impacts will be mitigated by sound walls, where determined to be reasonable. For locations with residual traffic noise impacts caused by the project, residential sound insulation might also be considered by Sound Transit.

3. Wheel Squeal: For curves of 600-foot radius or less, a trackside or vehicle-mounted lubrication system will be used to mitigate wheel squeal noise. For curves of 600- to

1,250[1]-foot radius, the project will be designed to accommodate a lubrication system if wheel squeal occurs during operations.

4. Vibration and groundborne noise impacts that exceed FTA criteria warrant and will receive from Sound Transit effective mitigation measures, as described below, when determined to be reasonable and feasible. The locations requiring mitigation will be refined during final design and will be included, where needed, in the project's final design specifications. At some locations, however, light rail trackways or guideways could be within 20 feet of buildings and vibration mitigation may not be effective at reducing the vibration level to below the FTA criteria. At these locations, project design modification and additional information on affected buildings could eliminate these impacts. For instance, the type of building foundation might reduce vibration impacts and therefore, these residual impacts might be eliminated. In addition, each building will need to be examined in detail to determine where the vibration-sensitive uses are located. For example, the side of a building nearest the proposed alternative might be a vibration-sensitive use. Buildings that are mixed use might not have sensitive uses on lower floors where impacts are predicted to occur, and the vibration is not predicted to be noticeable by the time it reached higher floors with sensitive uses, such as sleeping quarters. Outdoor-to-indoor vibration testing, which tests how the vibration changes from the soil outside to a sensitive space inside a building, would also help to refine the vibration projections at these locations. Vibration mitigation measures will be employed at those areas where vibration impacts have not been anticipated but are shown evident after operations commence. Options for mitigating vibration impacts include the following:

    - Ballast mats, which consist of a pad made of rubber or rubberlike material placed on an asphalt or concrete base with the normal ballast, ties, and rail on top. The reduction in groundborne vibration provided by a ballast mat is strongly dependent on the vibration frequency content and the design and support of the mat.
    - Resilient fasteners to provide vibration isolation between rails and concrete slabs for direct fixation track, typically on elevated structures or in tunnels. These fasteners include a soft, resilient element between the rail and concrete to provide greater vibration isolation than standard rail fasteners.
    - Tire-derived aggregate (TDA), which consists of shredded tires wrapped with filter fabric that is added to the base below the track ties.
    - Special trackwork, such as movable point or spring rail frogs, to eliminate the gap between tracks at crossovers that causes noise and vibration at these locations.

[1] The ROD says curves of 600 to 1,000 feet should be designed to accommodate a lubrication system, but the Design Criteria Manual (DCM V-3) states lubrication systems shall be accommodated within the track design on all curves less than 1,250 feet except bored tunnels. The ROD text in this section has been modified to be consistent with the DCM.

- Floating slabs, which consist of thick concrete slabs supported by resilient pads on a concrete foundation; the tracks are mounted on top of the floating slab. Although floating slabs are designed to reduce vibration at lower frequencies than ballast mats, they are extremely expensive and are rarely used, except in the most extreme situations. Most successful floating slab installations are in subways, and their use for at-grade track is less common and often not reasonable.

The mitigation recommendations in this report meet the ROD commitments.

4.0 IMPACT ASSESSMENT METHODOLOGY

4.1 Noise Impact Thresholds and Noise Limits

4.1.1 FTA Impact Thresholds

This report includes a noise impact assessment using the prediction methodology and impact thresholds set forth in the FTA guidance manual. The FTA noise impact thresholds apply only to land uses defined as noise sensitive in the FTA guidance manual. The FTA guidance manual defines three categories of noise sensitive land uses:

- Category 1: Tracts of land where quiet is an essential element in their intended purpose. This category includes lands set aside for serenity and quiet. Included are outdoor amphitheaters, recording studios, and concert halls.
- Category 2: Residences and buildings where people normally sleep. This category includes homes, hospitals and hotels where nighttime sensitivity to noise is assumed to be of utmost importance.
- Category 3: Institutional land uses with primarily daytime and evening use. This category includes schools, libraries, theaters and churches where it is important to avoid interference with such activities as speech, meditation, and concentration on reading material.

Category 2 land uses within the Contract E335 limits include residences and the Red Lion Hotel near East Main Station, the Bravern Condominiums near BTC Station, Lake Bellevue Condominiums north of Hospital Station, and the Coast Bellevue Hotel. Category 3, or institutional land uses, within the Contract E335 limits include the Meydenbauer Theater and Mercer Education, a tutoring facility. Noise predictions using the FTA noise impact thresholds are presented for these sensitive receivers. The noise impact thresholds are presented graphically in Table 3-1 of the FTA guidance manual.

4.1.2 Bellevue City Code Noise Limits

Chapter 9.18 of the Bellevue City Code (BCC) addresses noise control. The chapter includes maximum permissible noise levels and exemptions to those noise limits. The BCC applies to stationary noise sources associated with the Project and to nighttime train operations in Class A EDNAs. The stationary noise sources within Contract E335 are

PA announcements and transformer noise at stations and noise from TPSS units. Noise from these stationary sources are assessed for impact using the maximum permissible noise levels presented in BCC 9.18.030.B. Those maximum permissible noise levels are summarized in Table 4-1. The BCC noise impact assessment of nighttime train operations at Class A EDNA properties is presented in Section 7.0.

Table 4-1: Applicable Maximum Permissible Sound Levels, Bellevue City Code

EDNA of Noise Source	EDNA Of Receiving Property	
	Class A	Class B
Class A	55 dBA	57 dBA
Class B	57 dBA	60 dBA

Source: Bellevue City Code Chapter 9.18

Noise from train and wayside warning devices such as bells and horns are exempt from the BCC maximum permissible sound levels as safety warning devices.

4.2 Vibration Impact Thresholds

This report includes a vibration impact assessment using the using the prediction methodology and impact thresholds set forth in the FTA guidance manual. The FTA vibration impact thresholds apply only to land uses defined as vibration sensitive in the FTA guidance manual. The FTA guidance manual defines three categories of vibration sensitive land uses:

- Category 1: Buildings where vibration would interfere with interior operations. This includes spaces with vibration sensitive equipment.
- Category 2: Residences and buildings where people normally sleep.
- Category 3: Institutional land uses with primarily daytime use.

There are some buildings that are vibration sensitive, but do not fit into the above categories which include theaters and concert halls. Groundborne vibration and groundborne noise criteria for these special buildings are presented in Table 8-2 of the FTA guidance manual. The groundborne vibration and groundborne noise criteria for a detailed analysis for the other vibration sensitive land uses are shown in Figure 8-1 of the FTA guidance manual.

There are no vibration limits presented in the Bellevue City Code. Therefore, potential for vibration impact is assessed using only the FTA methodology and criteria.

4.3 Airborne Noise

4.3.1 Wheel/Rail Noise from Light-Rail Vehicles

The FTA detailed noise analysis procedure and the BCC noise impact assessment procedure for predicting noise from light-rail vehicles (LRVs) is a spreadsheet model using formulas presented in the FTA guidance manual. The formulas take into account the following specific operating characteristics of the Sound Transit system:

- Measured reference sound level of existing Sound Transit LRVs,

- the train operating schedule,
- train speed, and
- track structure

ATS Consulting took reference sound level measurements on the existing Sound Transit Central Link light-rail system in August 2014[2]. Measurements were taken on at-grade, ballast-and-tie track and aerial structure direct fixation track. The measurements were made using a 3-car train consist travelling at controlled speeds during non-revenue service hours and measurements of 2-car train consists during regular revenue service hours. The results of the noise measurements showed that the noise levels on the Central Link system are about 2 decibels higher than the FTA reference noise level for LRVs. The reference sound exposure level (SEL) used for the predictions in this analysis is 84 dBA at 50 ft for a one-car train traveling at 50 mph for ballast-and-tie track (2 decibels higher than the FTA reference level of 82 dBA). The measured reference levels for ballast-and-tie track and direct fixation track are shown in Table 4-2.

Table 4-2: Measured SEL Reference Levels

Track-type	SEL Reference Level, dBA1
Ballast-and-Tie (at-grade)	84
Direct Fixation (aerial structure)	88

[1]SEL reference level is for a one-car train traveling at 50 mph at 50 ft.

The train schedule from Sound Transit's Revised 2035 Light Rail Operation Plans, shown in Table 4-3, was used for the noise predictions. Note that the revised 2035 operating schedule is different than the assumptions used in the Final EIS predictions. The revised operating schedule assumes 8 minute peak headways and 4-car train consists, while the Final EIS schedule assumed 7-minute peak headways and 3-car train consists. In addition to the operations shown in Table 4-3 there will be early morning non-revenue trains operating through the E335 alignment. The increase in the 24-hour Ldn noise level due to these two trains will be negligible and will not change the mitigation recommended in this report. The operating speeds and track structure type assumed in the predictions are based on the information in the design drawings dated December 20, 2013.

[2] The sound level measurements of the existing Sound Transit Central Link light rail system are documented in the report: *Noise Measurements of Existing Sound Transit Trains* dated August 21, 2014.

Table 4-3: East Link Operating Plan

Hours	Headway (minutes)	Total train cars (assuming 4-car trains)
5-6 a.m.	15	16
6-7 a.m.	8	30
7-8:30 a.m.	8	45
8:30 a.m.-3:00 p.m.	10	156
3-6:30 p.m.	8	105
6:30-10 p.m.	10	84
10 p.m.-1:00 a.m.	15	48
1-5 a.m.	0	0

In addition to the operating characteristics of the system, the noise formulas also account for distance from the sensitive receiver, ground absorption effects, and noise from bells. The methodology for the analysis in this report follows the procedures in the FTA guidance manual and the Final EIS. The exception is that the analysis in this report includes a ground absorption factor in some areas and the Final EIS does not. In the Final EIS, the ground absorption was assumed to be 0 for all areas to standardize predictions. A ground absorption factor, which results in a lower predicted noise level, is included in the predictions in this report where it is clear that there is soft ground between the receiver and the source. Applying a ground absorption factor to areas with soft ground is consistent with the FTA guidance manual.

The assumptions used for bell predictions are based on the Sound Transit bell policy. Included in the predictions are noise from the warning bells on the light-rail vehicles and audible warning devices at crossings. The assumptions for the different types of bells are:

- Trains will have a high bell, low bell, and horn. The horn is for emergency situations only and is not used in the noise analysis. Consistent with the practice on the Central Link line, the train-mounted bell will be sounded two to three times as a train approaches and passes through an at-grade crossing and for arrivals and departures at a station. The high bell has a sound pressure level of 80 dBA at 50 feet and is used during the daytime hours from 6 a.m. to 10 p.m. The low bell has a sound pressure level of 72 dBA at 50 feet and is used during the nighttime hours from 10 p.m. to 6 a.m.
- Wayside pedestrian audible warning devices (AWDs) located at the at-grade crossings will operate at 10 decibels above the ambient noise levels. The predictions assume the AWDs have an Lmax of 77 dBA at 15 feet and will sound for approximately 40 seconds per train. The noise analysis does not assume that the noise levels of the audible warning devices would be reduced during nighttime hours (a worst case assumption).

4.3.2 TPSS Noise

The primary noise sources on TPSS units are the air conditioning units. The noise levels from the TPSS units were predicted using the manufacturer's measured sound levels for the Bard wall mounted package air conditioner model W38A1. The manufacturer's measured noise level at a distance of 50 feet from the unit is 50 dBA, which is consistent with a noise measurement ATS Consulting performed at a TPSS unit from the Gold Line, an LRT system in Los Angeles, CA. The predictions for this analysis assume that the air conditioner unit would be operating continuously, which is a worst-case assumption. The noise of the TPSS units is compared to the noise limits in the Bellevue City Code to determine potential impacts. The noise level at the nearest receiving property is predicted using the following equation:

$$Leq(1hr) = Leq_{ref} - 20*\log(dist/50)$$

4.3.3 Station Acoustics

In an enclosed environment such as a transit station sound can continue to reflect for a period of time after a source has stopped emitting sound. This prolongation of the sound is called reverberation. Reverberation time (RT_{60}) is defined as the time required, in seconds, for the average sound in a room to decrease by 60 decibels after a source stops generating sound. Reverberation time is the primary descriptor of an acoustic environment.

Reverberation time is affected by the size of the space and the amount of reflective or absorptive surfaces within the space. A space with highly absorptive surfaces will absorb the sound and stop it from reflecting back into the space. This would yield a space with a short reverberation time. In general, larger spaces have longer reverberation times than smaller spaces. Therefore, a large space will require more absorption to achieve the same reverberation time as a smaller space.

Reverberation time for the transit stations are calculated using the Sabine Formula:

$$RT_{60} = 0.049*V/a$$

where V is the volume of the space (ft^3) and *a* is the total room absorption at a given frequency in sabins. It is important to note that the absorption and surface area must be considered for every material within a space in order to calculate sabins. The number of sabins is determined by multiplying the noise reduction coefficients of different surfaces within the station by the surface area of that material.

This calculation method is used to determine if the design of a transit station will achieve the Sound Transit Design Criteria goal of a reverberation time of 1.2 seconds in station platform areas, and 1.0 seconds in enclosed public spaces, and other areas where transit patrons rely on the PA system for information and directions. The FTA and

BCC do not have noise criteria relating to station reverberation time. The Sound Transit Design Criteria are the only criteria that apply to the acoustical design of stations.

4.3.4 Station Equipment Noise

Stationary noise sources associated with the LRT stations are the operation of electrical transformers, condenser units, and PA announcements. Noise from these sources are subject to the limits in the BCC.

75 KVA transformers will be used at the stations. Manufacturer's sound level data of a transformer between 51 KVA and 150 KVA is 50 dBA at 3 feet. The noise level at the nearest receiving property is predicted using the following equation:

$$Leq(1hr) = Leq_{ref} - 20*\log(dist/3)$$

where Leq_{ref} is the reference noise level of 55 dBA at 3 feet and *dist* is the distance from the transformer to the property line of the receiving property. Note that this prediction methodology assumes the transformer operates continuously.

The Bellevue Transit Center Stations will use two 4 ton condenser units as part of their HVAC system. The manufacturer's sound level data for the condenser units are a sound power level (Lw) of 85 dBA per unit. This data was used to predict the operating noise level at the nearest receiving properties based on the following equations:

$$Leq(1hr) = Lw_{ref} - 20*\log(dist)-11$$

The PA speakers at the station will operate at 10 dB above the ambient noise level at a distance of 10 feet from the speaker. The noise level from the PA announcements at the nearest receiving property is predicted using the following equation:

$$Leq(1hr) = L_{ref} + 10*\log(duration) - 20*\log(dist/10)$$

where L_{ref} is the reference noise level of 10 dB above the ambient, *duration* is the total duration in seconds of announcements over one hour, and *dist* is the distance from the speaker to the property line of the receiving property. The noise limits from the BCC is used to assess noise impact from the PA system.

4.3.5 Emergency Ventilation Noise

There will be emergency ventilation fans located in mid-tunnel fan room and in fan niches inside the DBT. The Sound Transit Design Criteria Manual specifies noise limits for fan noise inside mechanical equipment rooms and on the station platforms. There are no limits for fan noise inside of the tunnel included in the DCM; however, emergency ventilation fan noise in the tunnel may interfere with speech communication during an emergency evacuation and may approach noise levels that present a risk of hearing damage. The National Fire Protection Association (NFPA) Standard 130: Standard for Fixed Guideway Transit and Passenger Rail Systems limits noise exposure to 115 dBA for

a few seconds and 92 dBA for the remainder of the exposure. The NFPA Standard 130 is used as the noise limit for emergency ventilation noise inside the tunnel.

The emergency ventilation fan noise is predicted using the methodology and formulas presented in Chapter 10 of the Urban Handbook of Noise and Vibration Control[3] The fan noise inside the mid-tunnel fan room and in the fan niches inside the tunnel was predicted using the equation:

$$Lp = Lw + 10*\log(24.8*T/V)$$

where:

Lp = Sound pressure level,
Lw = Sound power level of the fans,
T = Reverberation time in seconds, and
V = Volume of the room in m^3.

Fans located in the fan room are limited to Lmax = 85 dBA. Fan noise on the station platforms are limited by the Sound Transit DCM to an Lmax of 75 dBA. The intent of the criteria is to ensure that during an emergency the PA announcements are intelligible.

4.4 Groundborne Vibration and Groundborne Noise

Perceptible groundborne vibration is when building occupants feel the vibration of the floor or other building surfaces. The vibration of room surfaces will radiate sound waves that may be audible to humans; this is referred to as groundborne noise. When audible groundborne noise occurs, it usually sounds like a low frequency rumble. For a surface rail systems, the groundborne noise is usually masked by the normal airborne noise radiated from the transit vehicle. Therefore, impact from groundborne noise is only assessed for those receivers adjacent to the tunnel section of the project, where the airborne noise is blocked by the tunnel.

The FTA detailed vibration analysis procedure is an empirical method based on testing of the vibration propagation characteristics of the soil near sensitive receivers and measurements of the vibration characteristics of a similar LRV. The vibration propagation test is used to determine the line source transfer mobility (LSTM). The LSTM quantifies how easily vibration travels through the earth. A high transfer mobility indicates that there is relatively little attenuation as vibration travels through the earth. The vibration characteristics of the LRV are quantified by the force density level (FDL). The basic relationship used for the vibration predictions is:

Lv = LSTM + FDL + Train Length Adjustment + Safety Factor

where:

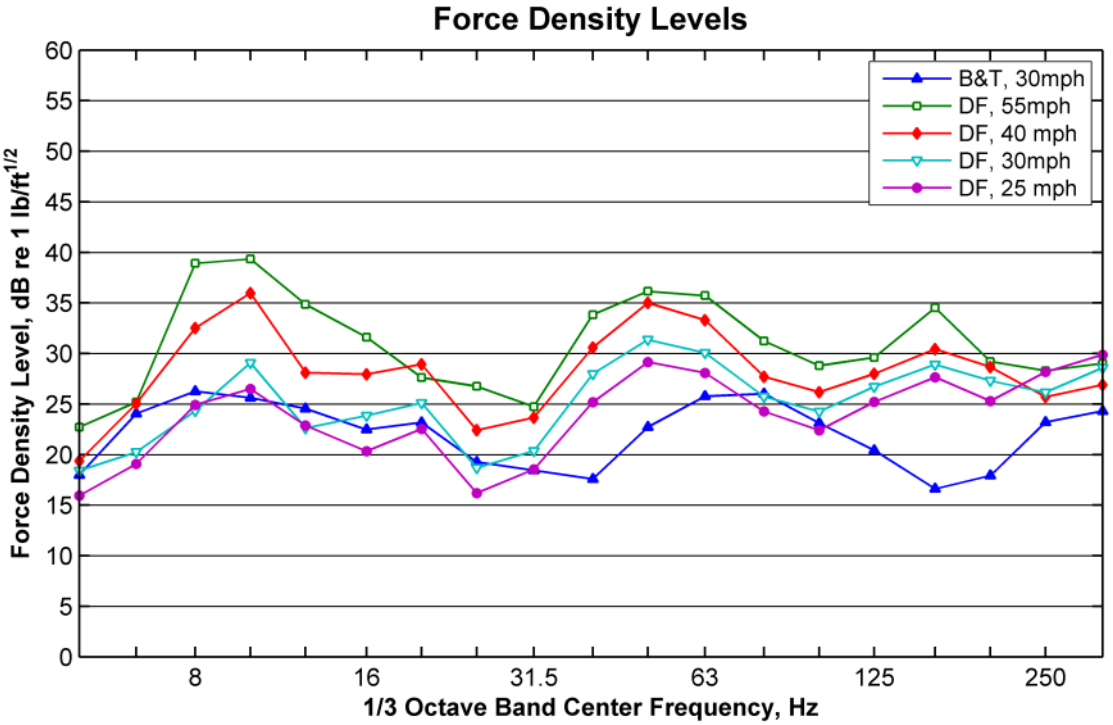
[3] Handbook of Urban Rail Noise and Vibration Control. Report No. UMTA-MA-06-0099-82-1. October 1982.

Lv	Predicted train vibration velocity
LSTM	Measured line source transfer mobility that characterizes the vibration propagation through the soil
FDL	Measured force density level that characterizes the vibration forces generated by the train and the track
Train Length Adjustment	A+0.5 dB adjustment to account for a 4-car train consist
Safety Factor	+3 dB adjustment to account for uncertainty in the measurement results

Vibration propagation tests were conducted near the vibration sensitive receivers located within the Contract E335 limits. The results from the tests are presented in Section 6.0.

ATS Consulting measured the FDL on the existing Sound Transit Central Link light rail system in April 2013. Measurements were taken on at-grade track, direct fixation track in a retained cut, and on an aerial structure with DF track to determine the FDL for different track types. The FDL of DF track in retained cut is representative of DF track in tunnel. The FDL measurements were made using a 3-car train consist. The FDL results are documented in the report: Vibration Measurements of Existing Sound Transit Trains, August 20, 2014. The FDLs for the different track types and train speeds used in the analysis are shown in Figure 4-1.

Figure 4-1: Force Density Levels used for Vibration Predictions

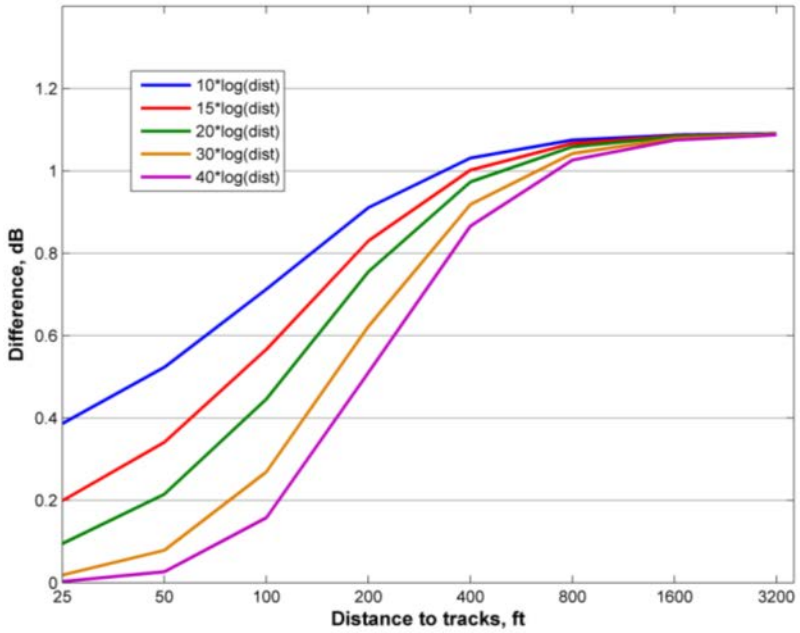


The current East Link operating plan calls for four-car trains. A train length adjustment is included in the predictions to account for the fact that the FDL measurement test was conducted with a three-car train. The train length adjustment was derived using a spreadsheet model. The effect of train length on vibration levels at a sensitive receiver will depend on the vibration propagation characteristics of the soil at the receiver and the distance from the tracks to the receiver. Therefore, the effect of train length varies depending on site specific conditions.

Figure 4-2 shows the expected vibration difference for four car trains compared to three car trains. The horizontal axis is the distance from the tracks and the vertical axis is the expected increase in vibration levels for a four-car train compared to a three-car train. The different lines on the plot represent different soil propagation characteristics. For example, the blue line represents soil where vibration travels very efficiently and the pink line represents soil where vibration does not travel very efficiently.

The train length adjustment used for the predictions is a +0.5 dB adjustment applied to all frequency bands and to receivers at all distances. This adjustment was chosen because the +0.5 dB adjustment is conservative (most likely an overestimate) for receivers closer than 100 ft to the tracks and all sensitive receivers identified with potential for impact in the Final EIS are located closer than 100 ft to the tracks.

Figure 4-2: Expected Vibration Difference for a 4-Car Train Compared to a 3-Car Train



The relationship between the predicted groundborne vibration, Lv, and the predicted groundborne noise, La, is:

$$La = Lv + Ka\text{-}wt + Krad,$$

where Ka-wt is the A-weighting adjustment at the 1/3 octave band center frequency and Krad is an adjustment to account for the conversion from vibration velocity level to sound pressure level such as any acoustical absorption in the room. The FTA guidance manual recommends a Krad value of zero for typical residential rooms although recent research indicates the average Krad for residential construction is closer to -5 dBA. The analysis in this report assumes a Krad of 0, which is a conservative assumption to ensure predicted groundborne noise levels are not underestimated.

5.0 OPERATIONAL NOISE IMPACT ASSESSMENT

This section presents a detailed noise impact analysis of LRT operations, a noise impact analysis of proposed TPSS sites, emergency ventilation jet fans, ancillary equipment at stations, and station acoustical design. There are no Sound Transit park-and-ride garages within the Contract E335 limits. Where noise impact is predicted, mitigation measures are proposed. The noise predictions reference noise sensitive receivers by parcel number. Appendix B includes a table that lists all parcel numbers included in this report and their corresponding street address.

5.1 Existing Noise Levels

Determining the existing noise exposure at sensitive receivers is an important step in the noise impact assessment because the thresholds for noise impacts are based on existing noise. The noise impact thresholds are higher for areas with high existing noise and lower for areas with low existing noise. ATS Consulting performed additional noise measurements at sensitive receivers throughout the project area to better evaluate the existing noise exposure. The measurement data was used in conjunction with the measurement results reported in the Final EIS to determine the existing noise exposure at the sensitive receivers within the package limits.

Table 5-1 shows the existing noise levels measured by ATS Consulting in 2013. The measurements conducted were long-term (24-hour) unattended noise measurements. Appendix C presents aerial photographs showing the measurement locations.

Table 5-1: Existing Noise Measurement Results

Parcel	Address	Measured Noise Level, Ldn (dBA)
EL206	11102 SE 1st Pl	65
EL236	Bravern Condominiums 688 110th Avenue NE	71
EL242	Coast Bellevue Hotel 625 116th Avenue NE	70
EL261	Lake Bellevue condominiums 4 Lake Bellevue Drive	56

5.2 EB STA 531+55 to EB STA 540+00: East Main Station and South Tunnel Portal

This section presents the noise impact assessment for the area north of the East Main Station up to the DBT south portal. The sensitive receivers in this area are the residences west of 112th Avenue SE and the Red Lion Hotel located at the southeast corner of 112th Avenue SE and Main Street. Once the LRVs enter the tunnel, all sensitive receivers will be shielded from noise. Therefore, sensitive receivers located in Downtown Bellevue above the tunnel are not included in the detailed noise analysis, but are assessed for operational vibration and groundborne noise impact. Figure 5-1 shows the location of the parcels assessed in this section. Note that residences south of parcel EL187 are included in the noise impact analysis for Contract E320.

Table 5-2 shows the existing noise level, impact threshold, and predicted level for sensitive receivers. All sensitive receivers in this area are Category 2, or residential land uses, and all noise levels in the table are the Ldn, or day-night sound level. Key notes on the prediction assumptions for this area include:

- The existing noise level was measured at parcel EL206 in May 2013 and at parcel EL196 as part of the Final EIS study. The existing noise level at EL199 (the Red Lion Hotel) is based on the noise level measured at Hotel Bellevue in May 2013. Hotel Bellevue is located about 800 ft south of the Red Lion Hotel, also on 112th Avenue SE. The measured noise level at Hotel Bellevue was adjusted for distance to 112th Avenue SE to estimate the existing noise level at Red Lion Hotel because Red Lion Hotel is located closer to the street and traffic noise is the dominant existing noise source at the Red Lion Hotel.
- We have assumed a shielding factor of -2 dB at the Red Lion Hotel due to the 10 foot high concrete masonry unit (CMU) wall on the eastside of the alignment that extends from the South Portal of the tunnel south past the TPSS. The wall will provide partial shielding between the LRT tracks and the Bellevue Red Lion Hotel (EL199).
- There is direct fixation track in the retained cut near the Downtown Bellevue Tunnel South Portal beginning at the north end of the East Main Station at EB STA 536+55. The predicted level for parcels L195 and EL206 assume a reference noise level for direct fixation track. The predicted level for parcels EL187 to EL194 assume a reference noise level for ballast-and-tie track.
- Ground absorption is included for the residences west of 112th Avenue SE, because the project will include a landscaped buffer area. Ground absorption was not included for the Red Lion Hotel (EL199) because there is generally paved ground between the tracks and the receiver.
- Audible warning devices for pedestrian crossings and train bell noise associated with the East Main Station are included in the predictions for all receivers in Table 5-2.
- Train speeds will be generally slow as the LRVs enter and exit the East Main Station, and as they enter or exit the curve north of the station. The train speeds assumed for the predictions are shown in Table 5-2.
- Wheel squeal from the curve north of the station is not included in the predictions because the Project is committed to the installation of lubricators on curves with a radius of less than 600 feet. The curves in both the eastbound and westbound track have a radius less than 600 feet.
- Noise at the tunnel portal may be up to 3 dB higher than train noise in an open area due to reflections off of the hard surfaces of the tunnel and the portal wall. However, noise from the tunnel portal will be very localized and will diminish at distances of 50 feet or more from the portal. There are no sensitive receivers within 100 ft of the tunnel portal therefore any increase in train noise due to the tunnel is not included in the predicted levels for any of the sensitive receivers.

As shown in Table 5-2, noise impact is predicted at the residential parcels located west of 112th Avenue SE. The predicted noise level for parcel EL199 (the Red Lion Hotel) does not exceed the moderate noise impact threshold. The locations of the parcels are shown in Figure 5-1.

The recommended mitigation for the residential parcels west of 112th Avenue SE is a sound wall. The sound wall is a continuation of the wall recommended in the Contract E320 Noise and Vibration Report. The sound wall for Contract E335 begins at STA 531+55. There should be no gap or space between the end of the wall in Contract E320 and the beginning of the wall in Contract E335. The location of the sound wall presented in Table 5-3 and shown in Figure 5-1. The sound wall generally follows the right-of-way boundary and extends to the DBT South Portal.

Table 5-2: Predicted Noise Levels at Parcels near South Tunnel Portal

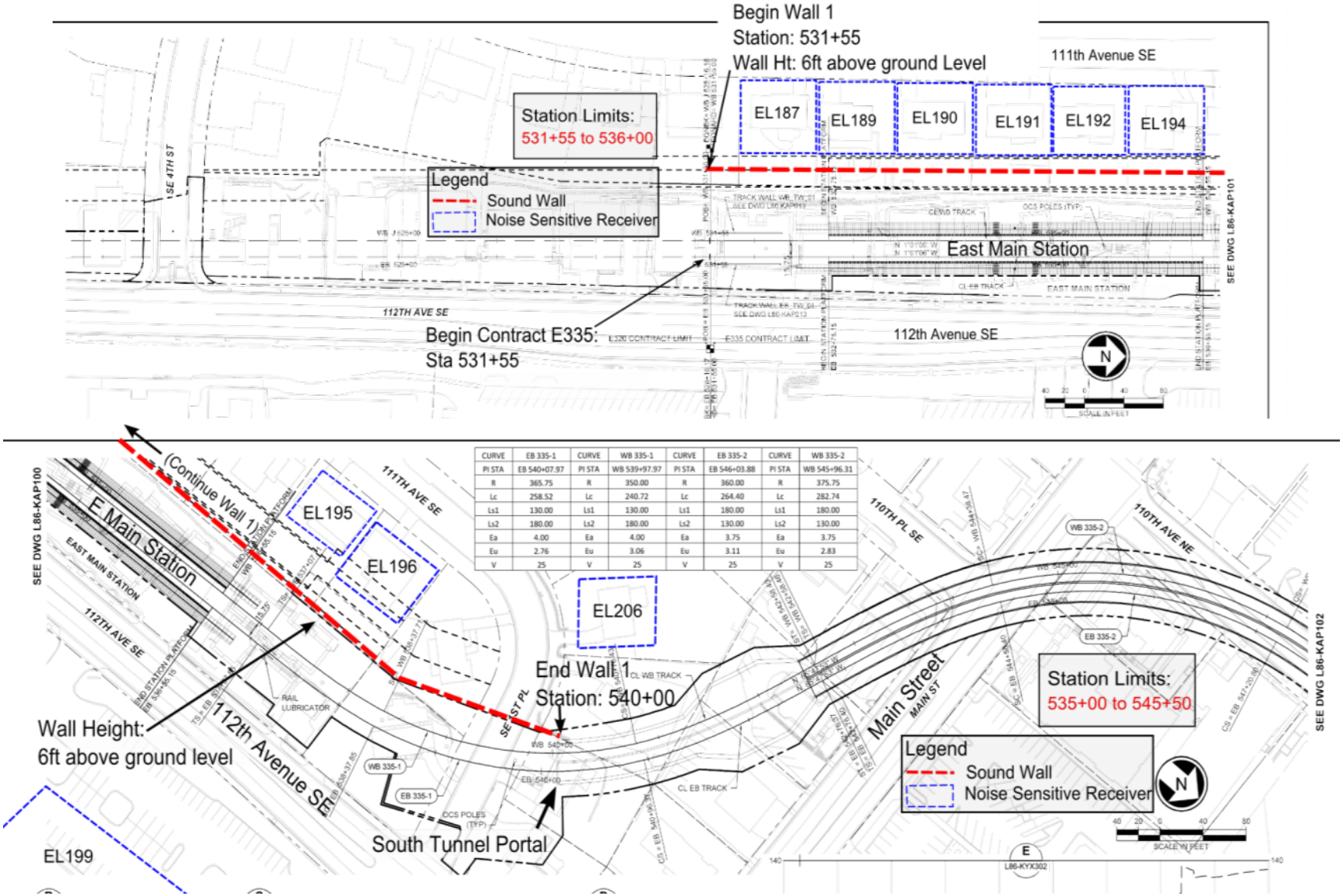
Parcel	Distance to WB track, ft	Speed (mph)	Ground Absorption, dB	Bell Noise, Ldn dBA	Existing Noise Level, Ldn dBA	Impact Threshold[1], Ldn dBA		Predicted Level, Ldn dBA	Amount Exceeds Moderate	Mitigated Level, Ldn dBA
						Mod-erate	Severe			
EL187	106	35	2.8	58	63	60	66	62	2	45
EL189	93	35	2.5	59	64	61	66	63	2	46
EL190	96	25	2.5	59	64	61	66	61	0	44
EL191	100	25	2.6	58	64	61	66	61	0	44
EL192	97	25	2.5	58	64	61	66	61	0	44
EL194	93	25	2.4	59	64	61	66	62	1	46
EL195	105	25	2.6	58	64	61	66	63	2	47
EL196	75	25	1.6	61	64	61	66	66	5	50
EL199 (Red Lion Hotel)	200 (Dist. to EB track)	25	--	53	64	61	65	60	-1	--
EL206	115	25	3	57	65	61	67	63	2	47

[1] ***Noise Impact Thresholds are based on Table 3-1 of the FTA 2006 Guidance Manual.***

Table 5-3: Recommended Sound Wall Height and Length near East Main Station

Wall	Start Station	End Station	Wall Length	Wall Height
1	531+55	540+15 (DBT South Portal)	860 ft	~6 ft above ground level at ROW line

Figure 5-1: Recommended Sound Wall for Parcels EL187-EL196, EL199 (the Red Lion Hotel), and EL206



CURVE	EB 335-1	CURVE	WB 335-1	CURVE	EB 335-2	CURVE	WB 335-2
PI STA	EB 540+07.97	PI STA	WB 539+97.97	PI STA	EB 546+03.88	PI STA	WB 545+96.31
R	365.75	R	350.00	R	360.00	R	375.75
Lc	258.52	Lc	240.72	Lc	264.40	Lc	282.74
Ls1	130.00	Ls1	130.00	Ls1	180.00	Ls1	180.00
Ls2	180.00	Ls2	180.00	Ls2	130.00	Ls2	130.00
Ea	4.00	Ea	4.00	Ea	3.75	Ea	3.75
Eu	2.76	Eu	3.06	Eu	3.11	Eu	2.83
V	25	V	25	V	25	V	25

5.3 EB STA 564+00 to EB STA 570+00: North Tunnel Portal

This section presents the noise impact assessment for the noise sensitive receivers located near the north portal of the DBT. The noise sensitive receivers in this area are the Bravern Condominiums (parcel EL236) and the Meydenbauer Center (parcel EL240), which is a convention center that also houses a theater. In this area, the tracks transition from the tunnel through the Bellevue Transit Center (BTC) Station onto an aerial structure. The track type is direct fixation. Figure 5-2 shows the noise sensitive receivers and track plan.

There is no noise impact assessment for receivers located between EB STA 540+00 and EB STA 564+00 because the LRVs will be traveling in the DBT and all noise will be shielded by the tunnel structure. The sensitive receivers located near the tunnel are included in the groundborne vibration and ground noise impact assessment in Section 6.0.

Table 5-4 shows the existing noise level, impact threshold, and predicted level for sensitive receivers near the DBT north portal. Key notes on the prediction assumptions for this area include:

- The Meydenbauer Center is assumed to be a Category 3 land use because it houses a theater. The FTA defines a Category 3 land use as institutional land uses with primarily daytime and evening use which includes schools, libraries, and theaters. The Bravern Condominiums are a Category 2 (residential) land use.
- Existing noise levels were measured at the Bravern Condominiums in April 2013. The existing noise level used in the analysis for the Meydenbauer Center is the peak hour measured at the Bravern Condominiums.
- Ground absorption is not included in the predictions because the ground between the tracks and the sensitive receivers is paved.
- A train speed of 25 mph is assumed as LRVs pass the Bravern Condominiums. The trains will travel relatively slowly as they enter and exit the BTC station and as they navigate the curve from 110th Avenue NE onto NE 6th Street. A train speed of 40 mph is assumed as the LRVs pass the Meydenbauer Center. Assuming an acceleration of 3 mph/sec, the LRV will reach a speed of 40 mph in 190 ft, which is about half the length of a four-car train.
- We assume a shielding factor of -3 dB for both the Meydenbauer Center and the Bravern Condominiums. The shielding factor is assumed because the train will be partially in the tunnel as it passes by the receivers and to account for the shielding from the station platform and other architectural features of the station.
- The predictions for both the Meydenbauer Center and the Bravern Condominiums include noise from the train bells that are sounded as LRVs enter and exit the station.
- A crossover is located 300 feet from the Meydenbauer Center. The crossover was assumed to add 10 decibels to the train noise at 35 feet and to decay with distance with

a rate of 10*log(distance/35). This is consistent with the methodology used in the Final EIS and is based on measurements of crossovers on the existing Central Link System.

- Wheel squeal from the curve west of the station is not included in the predictions because the Project is committed to the installation of lubricators on curves with a radius of less than 600 feet. The curves in both the eastbound and westbound track have a radius less than 600 feet.
- Noise at the tunnel portal may be up to 3 dB higher than train noise in an open area due to reflections off of the hard surfaces of the tunnel and portal wall. However, noise from the tunnel portal will be very localized and will diminish at distances beyond 50 feet from the portal. There are no sensitive receivers within 100 ft of the tunnel portal therefore any increase in train noise due to the tunnel is not included in the predicted levels for any of the sensitive receivers.

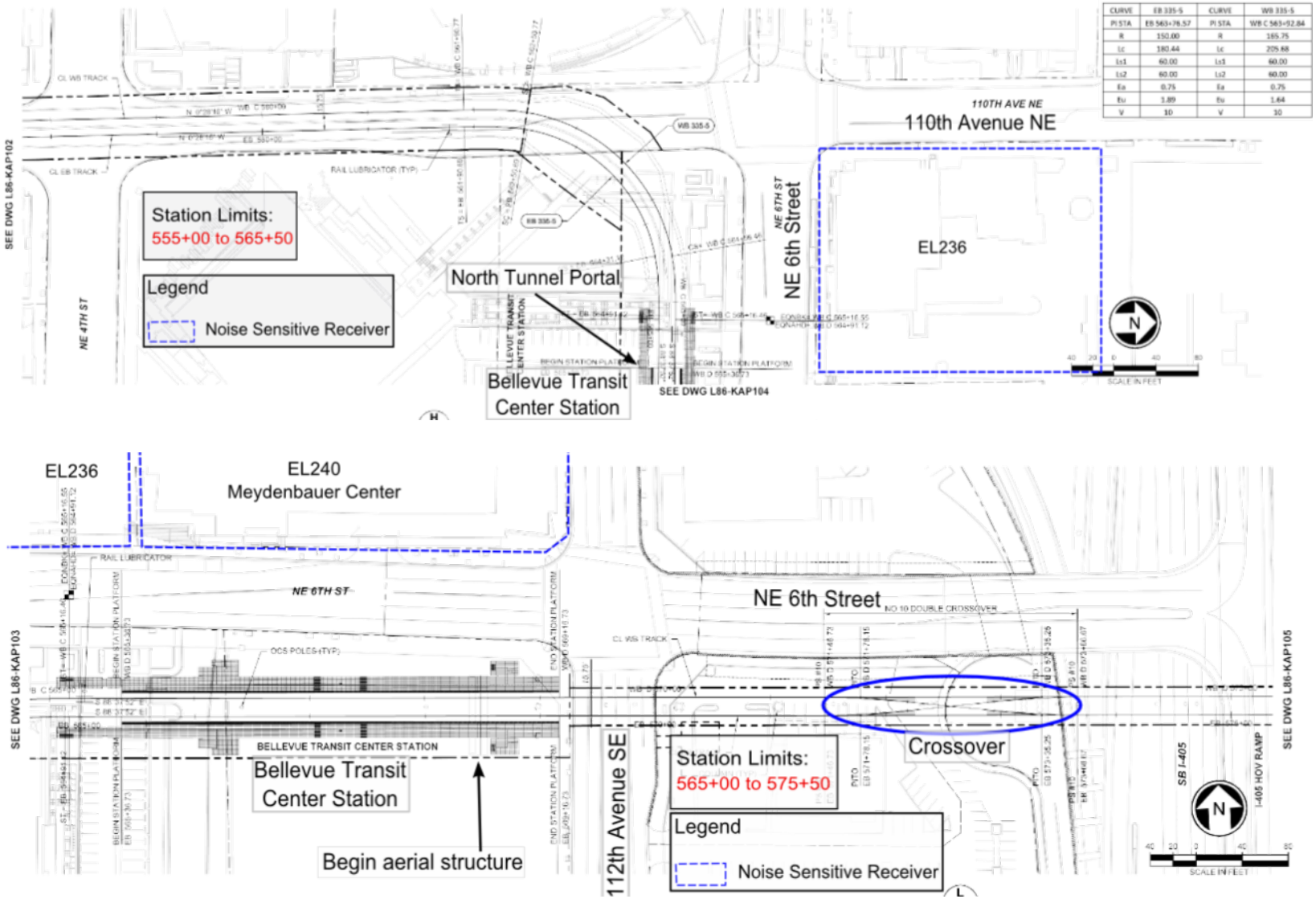
The predicted noise levels at the Bravern Condominiums and the Meydenbauer Center do not exceed the moderate noise impact threshold. Therefore, no noise mitigation is recommended.

Table 5-4: Predicted Noise Levels at Parcels EL236 (Bravern Condominiums) and EL240 (Meydenbauer Center)

Parcel	Distance to WB track, ft	Speed (mph)	Bell Noise, dBA	Existing Noise Level, dBA	Impact Threshold[1], dBA		Predicted Level, Ldn dBA	Amount Exceeds Moderate
					Moderate	Severe		
EL236	145	25	53 (Ldn)	71 (Ldn)	66 (Ldn)	71 (Ldn)	63 (Ldn)	-3
EL240	125	40	54 (Leq)	69 (Leq)	69 (Leq)	75 (Leq)	64 (Leq)	-5

[1] ***Noise Impact Thresholds are based on Table 3-1 of the FTA 2006 Guidance Manual.***

Figure 5-2: Parcels EL236 (Bravern Condominiums) and EL240 (Meydenbauer Center)



5.4 EB STA 570+00 to EB STA 592+00: Aerial Structure Over I-405 Freeway to South of Hospital Station

This section presents the noise impact assessment for the noise sensitive receivers located near the aerial structure from EB STA 570+00 to EB STA 592+00, just south of Hospital Station. The aerial structure begins on NE 6th Street just east of the Meydenbauer Center, then passes over the I-405 freeway, and curves north into the BNSF ROW east of 116th Avenue NE. The only noise sensitive receiver in this area is the Coast Bellevue Hotel (parcel EL242). The location of the parcel is shown in Figure 5-3.

Table 5-5 shows the existing noise level, impact threshold, and predicted noise level for the Coast Bellevue Hotel. Key notes for the prediction assumptions in this area include:

- The existing noise level at the Coast Bellevue Hotel was measured in April, 2013.
- There will be direct fixation track on the aerial structure.
- No ground absorption is included in the model.
- The WB track has a radius curve of 500 feet as the tracks approach Hospital Station. The EB track has a curve with radius curve of 715.75 feet in this same area. Sound Transit's Design Criteria Manual (DCM) requires a lubrication system on curves of 600 ft radius or less to mitigate wheel squeal and requires design curves to accommodate a lubrication system if they have a radius of 600 to 1,250 ft. In this area, the WB will include a lubrication system and we also recommend that the EB curve include a lubrication system in the design because of the proximity to a sensitive receiver. Since both curves will include a lubrication system wheel squeal is not included in the predictions.
- Assume a speed of 45 mph. The design speed for the curve east of the hotel is 35 mph and the design speed for the tangent track west of the hotel is 55 mph.

As shown in Table 5-5, the predicted noise level at the Coast Bellevue Hotel (EL242) is 2 decibels above the moderate impact threshold. A sound wall 3 foot above top of rail on the aerial structure would be needed to mitigate the train noise. The sound wall would extend from EB STA 577+00 to EB STA 583+00 approximately 600 feet long (Table 5-6 and Figure 5-3).

Table 5-5: Predicted Noise Levels at Coast Bellevue Hotel (Parcel EL242)

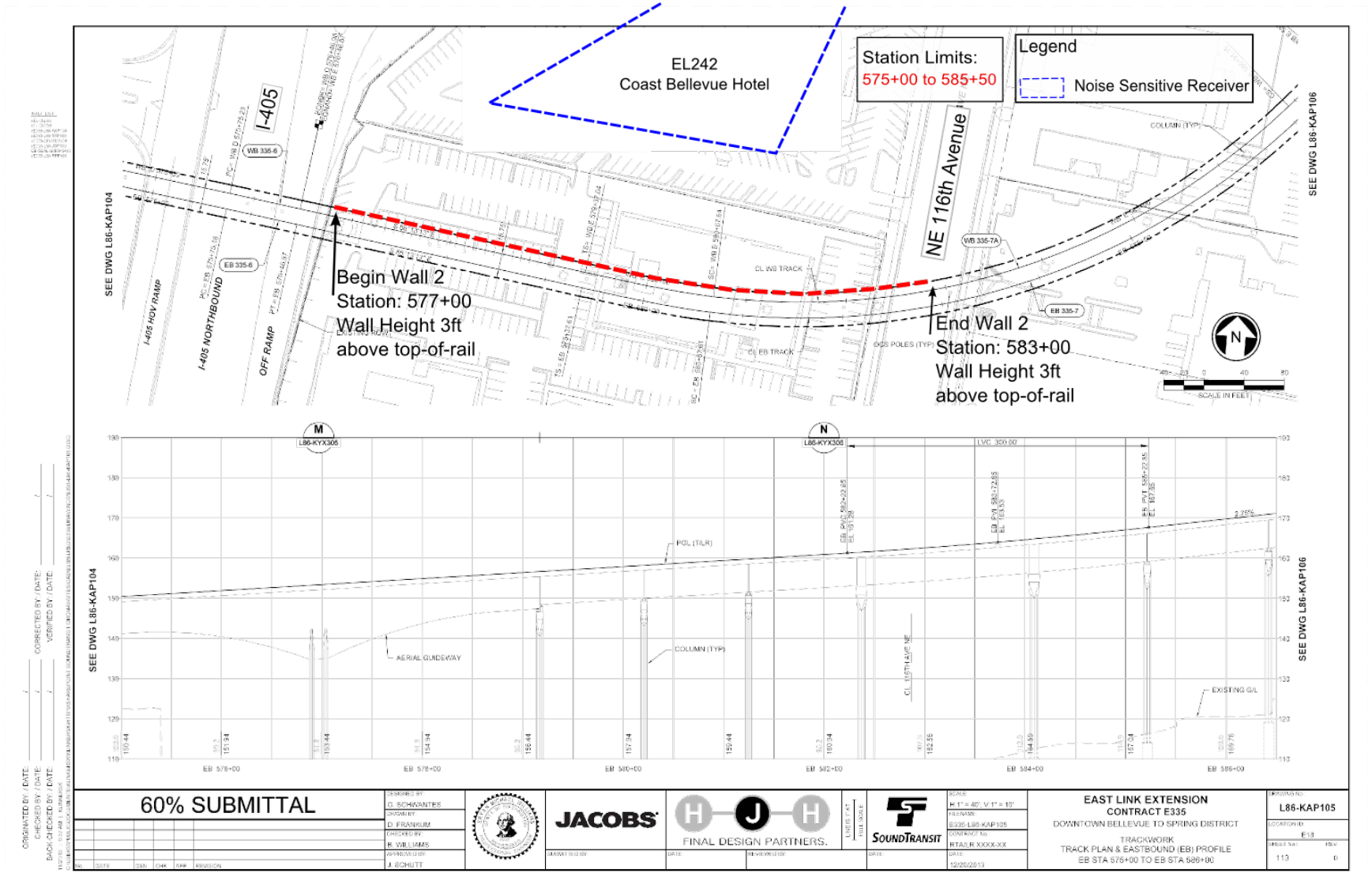
Parcel	Distance to WB track, ft	Speed (mph)	Existing Noise Level, dBA	Impact Threshold[1], dBA		Predicted Level, Ldn dBA	Amount Exceeds Moderate	Mitigated Level, dBA Ldn
				Moderate	Severe			
EL242	164	45	70	65	79	67	2	61

[1] ***Noise Impact Thresholds are based on Table 3-1 of the FTA 2006 Guidance Manual.***

Table 5-6: Recommended Sound Wall for Coast Bellevue Hotel (Parcel EL242)

Wall	Start Station	End Station	Wall Length	Wall Height
2	EB 577+00	EB 583+00	600 ft	3 ft above top-of-rail

Figure 5-3: Location of Coast Bellevue Hotel (Parcel EL242)



5.5 EB STA 592+00 to EB STA 635+00: Hospital Station to 124th Avenue NE Crossing

This section presents the noise impact assessment for the noise sensitive receivers located in the section of track that begins in the BNSF ROW at the Hospital Station and extends to the 124th Avenue NE crossing, which is the east end of Contract E335. The noise sensitive receivers in this area are the Lake Bellevue Condominiums (EL261) and the Mercer Education facility (EL263). The locations of the sensitive receivers are shown in Figure 5-6.

Table 5-8 shows the existing noise levels, impact thresholds, and predicted noise levels for the sensitive receivers. Key notes on the prediction assumptions for this area include:

- Mercer Education (parcel EL263) provides educational enrichment programs and counseling. It is considered a Category 3 land use in this analysis. The FTA defines a Category 3 land use as an institutional land use with primarily daytime and evening use which includes schools, libraries, and theaters.
- The existing noise levels at the Lake Bellevue Condominiums (EL261) were measured by ATS Consulting in April 2013. The existing noise level used for the analysis of Mercer Education is the peak hour measured at the Lake Bellevue Condominiums.
- The Lake Bellevue Condominiums (EL261) and the Mercer Education building (EL263) are adjacent to the trestle which will have DF track. The trestle is where the guideway structure transitions from aerial to at-grade.
- There is a crossover about 250 feet from the units in the north end of the Lake Bellevue complex. Noise from the crossover is included in the predictions for parcel EL261b.
- The Hospital Station is about 500 feet south of the sensitive receivers. The only noise associated with the station will be the train bells and the PA system. These noise sources will not affect the predicted Ldn at the sensitive receivers and are therefore not included in the predictions.
- As shown in Table 5-7, impact is predicted at the Lake Bellevue Condominiums (EL261). A sound wall is recommended for the Lake Bellevue Condominiums. The recommended length and height of the wall are shown in Table 5-8. Figure 5-4 shows the location of the wall. The wall begins on the aerial guideway, extends onto the trestle and then to the at-grade track section.
- The recommended sound wall will effectively mitigate noise from the crossover to below the FTA moderate impact threshold. Therefore, no low-impact frog is necessary to reduce noise levels from the crossover located north of the Lake Bellevue Condominiums.

Table 5-7: Predicted Noise Levels at Lake Bellevue Condominiums (Parcel EL261) and Mercer Education (Parcel EL263)

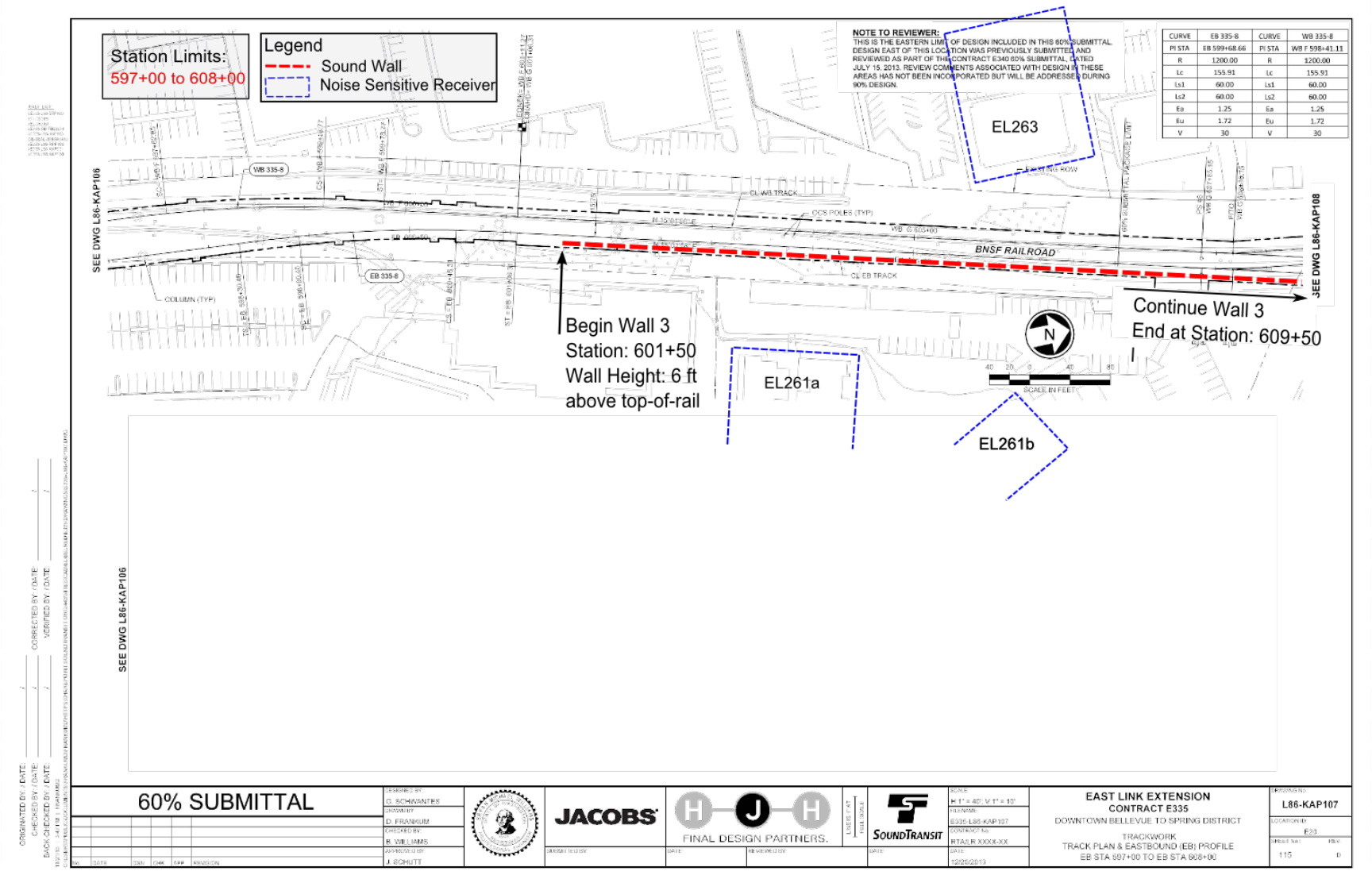
Parcel	Distance to track, ft	Speed (mph)	Existing Noise Level, dBA	Impact Threshold[1], dBA		Predicted Level, Ldn dBA	Amount Exceeds Moderate	Mitigated Level, dBA Ldn
				Moderate	Severe			
EL261a	105	30	56 (Ldn)	56 (Ldn)	63 (Ldn)	65 (Ldn)	9	53
EL261b	245 (distance to crossover	30	56 (Ldn)	56 (Ldn)	63 (Ldn)	63 (Ldn)	7	52
EL263	80	30	59 (Leq)	63 (Leq)	69 (Leq)	61 (Leq)	-2	--

[1] ***Noise Impact Thresholds are based on Table 3-1 of the FTA 2006 Guidance Manual.***

Table 5-8: Recommended Sound Wall for Lake Bellevue Condominiums (Parcel EL261)

Wall	Start Station	End Station	Wall Length	Wall Height
3	601+50	609+50	800 ft	6 ft above top-of-rail

Figure 5-4: Sound Wall for Lake Bellevue Condominiums (Parcel EL261)



5.6 TPSS Noise Analysis

There are two TPSS units located within the Contract E335 limits. One TPSS unit will be located near the DBT south portal near STA 539+00, east of the tracks. The nearest sensitive receiver is parcel EL196, located west of the tracks. The location of the TPSS unit is shown in Figure 5-5. The other TPSS unit is located adjacent to the storage track west of 120th Avenue NE, shown in Figure 5-6. The nearest receiver is EL278, a commercial land use.

TPSS noise is regulated by the City of Bellevue noise code. The TPSS site near the south tunnel portal is currently a residential land use in a Class A EDNA. The receiving property (parcel EL196) is also a Class A EDNA. The allowable daytime noise level defined in the City of Bellevue noise code for these land use designations is 55 dBA and the allowable nighttime noise level is 45 dBA. The TPSS site adjacent to the storage track west of 120th Avenue NE is currently a Class B EDNA, so the TPSS noise is assumed to originate from a Class B EDNA. The receiving property is a commercial land use, or Class B EDNA. The allowable daytime and nighttime noise level defined in the City of Bellevue noise code for this land use designations is 60 dBA.

The predicted level for each TPSS unit is shown in Table 5-9. The predicted noise does not exceed the allowable noise levels. Therefore, no noise mitigation is recommended for the TPSS units.

Table 5-9: Predicted Noise Level for TPSS Unit

Receiver	Distance from TPSS to property line(ft)	Predicted Noise Level (Leq)[1]	Daytime Noise Limit	Nighttime Noise Limit
EL196	100 ft	39 dBA[2]	55	45
EL278	30 ft	54 dBA	60	60

[1]Predicted noise level assumes continuous operation. This is a worst-case assumption because the primary noise source is a fan that will operate intermittently.

[2]This predicted level includes a 5 dB reduction from the sound wall that will be constructed to mitigate train noise.

Figure 5-5: Location of TPSS Unit in Downtown Bellevue

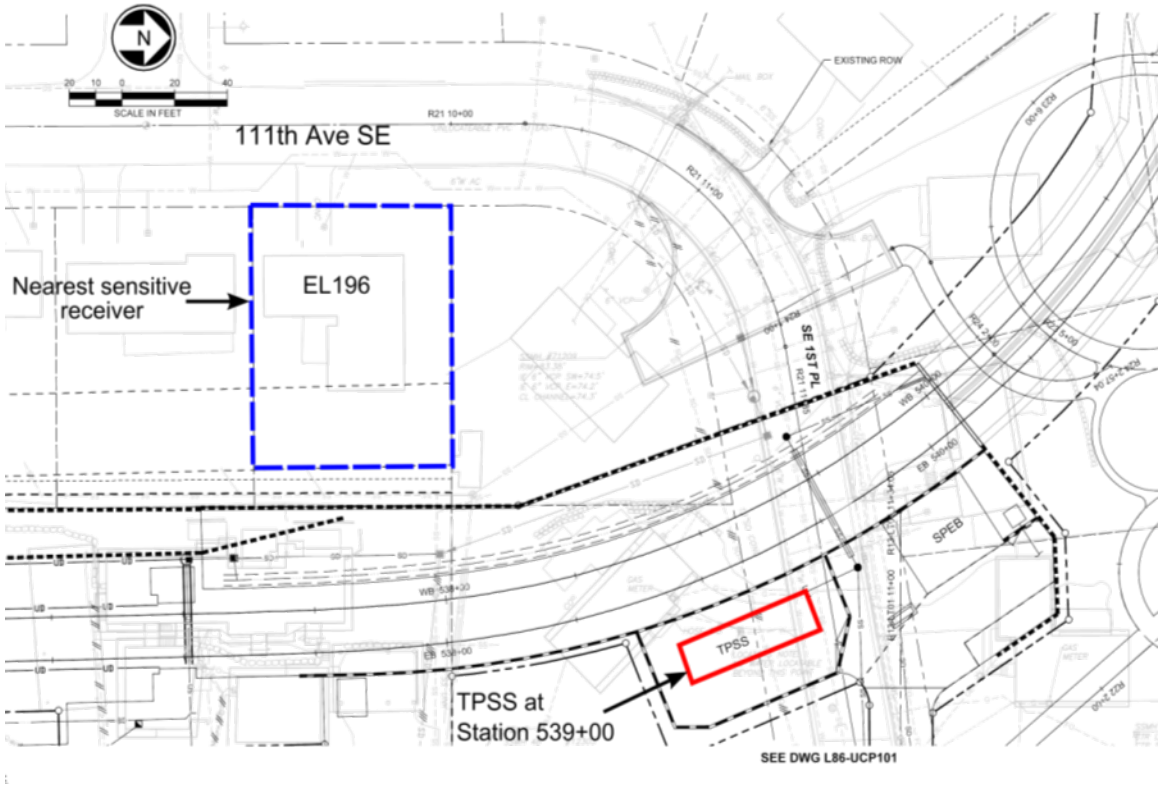
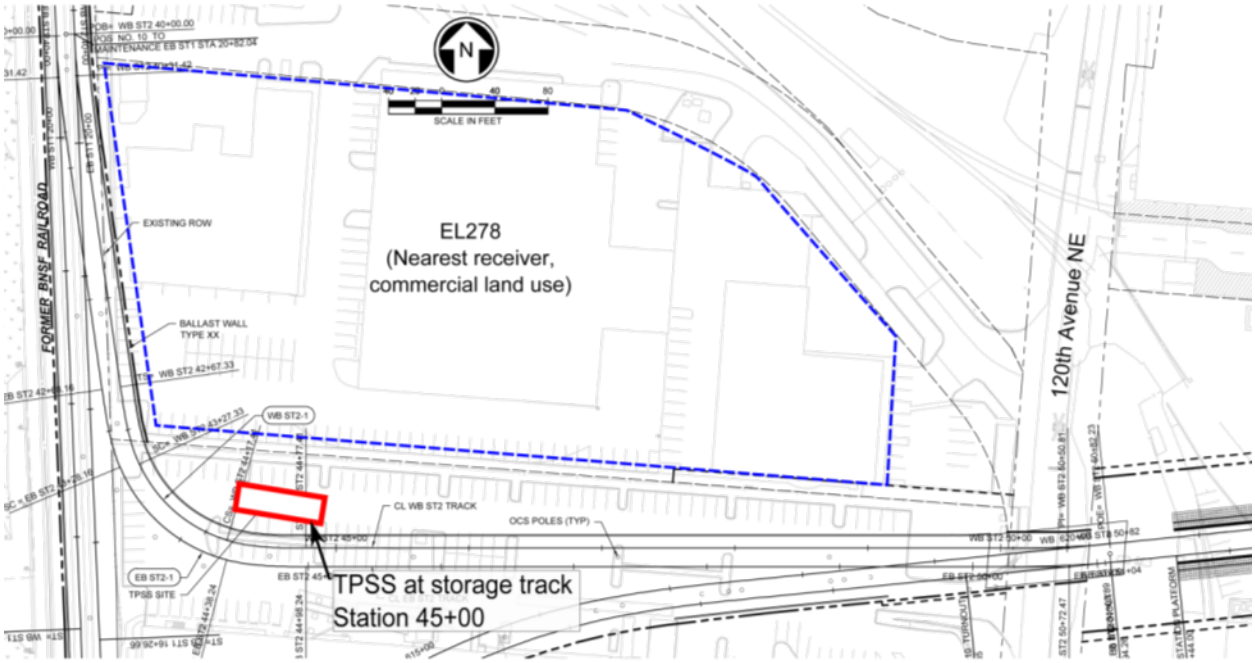


Figure 5-6: Location of TPSS Unit Adjacent to Storage Track



5.7 Acoustical Design of Stations

Obtaining maximum benefit from acoustic treatment of transit stations requires that suitable amounts of the material be installed in the proper locations. In general, for control of any noise source, it is best if absorption treatment can be located close to the noise source so that some of the sound energy can be absorbed before it reaches the reverberant sound field. Inappropriate placement of treatment can control reverberation without obtaining satisfactory or efficient reduction of train noise. Newer subway station designs have acoustical treatment on ceiling and under platform overhang surfaces. Due to these designs noise levels from the transit train operations are much more acceptable than those found in older systems with completely untreated, highly reverberant stations. The reverberation times measured in acoustically treated stations are typically 1.3 to 1.5 seconds at 500 Hz, as compared with 7 to 9 seconds for untreated stations.

Because of the frequency characteristics of transit system noise and the lack of low-frequency absorption in untreated stations, an acoustical treatment with a high sound absorption coefficient at 500 Hz should be used. This requires a relatively thick material because thin materials do not have good low-frequency absorption. It also minimizes the total area of treatment required. The most flexible and most durable material is a sprayed-on acoustical vermiculite plaster. A facing may be needed to provide a more finished surface than that of the sprayed vermiculite plaster which tends to form a relatively coarse surface. This material is applied in different thicknesses in the range of ½" to 1-5/8" depending on the sound absorption needed. The thicker the application the less area needs to be treated.

5.7.1 East Main Street Station

The East Main Street Station is an at-grade station that is not fully enclosed but is open to the outside area. Due to the large area of the station ceiling and side walls that are open to the outside area the station acoustics will not exceed the Sound Transit reverberation time goal of 1.2 seconds and will not need any acoustical treatment.

5.7.2 Bellevue Transit Center Station

The Bellevue Transit Center Station platform begins at the edge of the DBT north portal and extends away from the portal where it is at-grade and opens to the outside. Due to the large area of the platform ceiling and side walls that are open to the outside area the station acoustics will not exceed the Sound Transit reverberation time goal of 1.2 seconds at the platform and will not need any acoustical treatment.

5.7.3 Hospital Station

The Hospital Station is an elevated station that is not fully enclosed but is open to the outside area. Due to the large area of the station ceiling and side walls that are open to the outside area the station acoustics will not exceed the Sound Transit reverberation time goal of 1.2 seconds at the platform and will not need any acoustical treatment.

5.7.4 120th Avenue NE Station

The 120th Avenue NE Station is a partially enclosed space that is located in a retained cut section of the alignment. More than half of the ceiling area is open to the outside area. The remaining ceiling surfaces are either perforated metal canopies located over the platform area and perforated metal ceilings at the underside of the slab above the station. Due to the large area of the platform ceiling and side walls that are open to the outside area the station acoustics will not exceed the Sound Transit reverberation time goal of 1.2 seconds at the platform and will not need any acoustical treatment.

5.8 Station Noise Analysis

The stationary noise sources associated with the stations in the E335 contract are electrical transformers and the PA announcements. These noise sources are subject to the City of Bellevue's noise limits. The stations within the contract E335 limits are East Main Station, Bellevue Transit Center Station, Hospital Station, and 120th Station. Below are the predicted noise levels at the property line of the nearest parcel for each station.

5.8.1 East Main Station

The nearest receiving properties to the East Main station are the single family residences on 111th Avenue SE (parcels EL189 through EL194) in a Class A EDNA. The station itself is also located in the Class A EDNA. The City of Bellevue's noise limit for these land use designations is 55 dBA (Leq) for daytime hours and 45 dBA (Leq) for nighttime hours. Predicted noise levels are presented for the peak nighttime hour because it has the strictest limit.

A 75kVa transformer is proposed for this station. The PA system will have a level that is adjusted to 10 dB above the ambient noise level. The closest 24 hour noise measurement to the East Main Station was conducted at 240 111th Avenue SE (Parcel EL187). The noise level at this location from 6 a.m. to 7 a.m. is an Leq= 59 dBA. Based on this ambient, the level of the PA announcements would be 69 dBA at 10 feet from the PA speaker at the station platform. The 6 a.m. to 7 a.m. ambient is used in the analysis because it is the nighttime hour which has the highest ambient noise level. The property line of the nearest parcel to the station is 40 feet from the station platform. Between the station and the residences on 111th Avenue SE we have recommended a six foot high sound wall on the right-of-way of the transit guideway to mitigate train noise impacts (see Table 5-3). The predicted noise levels with and without the mitigation recommended for the train noise impacts is presented in Table 5-10. There are no predicted noise impacts from the East Main Station operations.

Table 5-10: Predicted Noise Levels of Station Equipment at East Main Station

Noise Source	Receiver	Distance to property line	Predicted Noise Level (Leq)	Mitigated Noise Level (Leq)	BCC Nighttime Noise Limit (Leq)
Electrical Transformer	Single-family residences on 111th Avenue SE (EL189 through EL194)	40 ft	52 dBA[1]	40 dBA	45 dBA
PA Announcements	Single-family residences on 111th Avenue SE (EL189 through EL194)	40 ft	57 dBA[2]	45 dBA	45 dBA

[1]Predicted noise level assumes continuous operation.

[2]Predicted noise level assumes the PA announcements will not exceed 5 minutes in a one hour period.

5.8.2 Bellevue Transit Center Station

The nearest receiving property to the Bellevue Transit Center Station is Bellevue City Hall (parcel EL229). The station and nearest parcels are located in a Class B EDNA. The City of Bellevue's noise limit for receiving and source Class B EDNAs is 60 dBA (Leq).

The noise sources at the Bellevue Transit Center Station that could potentially affect the nearby residents are the electrical transformers, condenser units, and the PA announcements. A 75kVa transformer is proposed for this station. The PA system will have a level that is adjusted to 10 dB above the ambient noise level. The closest 24-hour noise measurement to the Bellevue Transit Center Station was conducted at the Bravern Condominiums (Parcel EL236). The peak hour Leq measured at this location is 69 dBA. Based on this ambient, the level of the PA announcements would be 79 dBA at 10 feet from the PA speaker at the station platform. The property line of the nearest parcel (City Hall) is 30 feet from the station platform. The predicted noise levels are presented in Table 5-11.

Table 5-11: Predicted Noise Levels of Station Equipment at Bellevue Transit Center Station

Noise Source	Receiver	Distance to property line	Predicted Noise Level (Leq)	BCC Noise Limit
Electrical Transformer	City Hall (EL229)	30 ft	35 dBA[1]	60 dBA
Condenser Units	City Hall (EL229)	30 ft	47 dBA[1]	60 dBA
PA Announcements	City Hall (EL229)	30 ft	53 dBA[2]	60 dBA

[1]Predicted noise level assumes continuous operation.

[2]Predicted noise level assumes the PA announcements will not exceed 5 minutes in a one hour period

5.8.3 Hospital Station

The nearest receiving property to the Hospital Station is parcel EL256, commercial property east of the station. The station and nearest parcels are located in a Class B EDNA. The City of Bellevue's noise limit for receiving and source Class B EDNAs is 60 dBA (Leq).

The closest noise measurement to the Hospital Station was conducted at the Lake Bellevue Condominiums (parcel EL261). The peak hour Leq measured at this location is 55 dBA. The noise level of the PA announcements would be 10 dBA above the ambient, or 65 dBA at 10 feet from the PA speaker on the station platform. The property line of the nearest parcel is 30 feet from the station platform. Electrical transformers have a noise level of 55 dBA at three feet from the transformer. The predicted noise levels for PA announcements and transformer noise at the property line of the closest parcel are shown in Table 5-12. No noise impact is predicted.

Table 5-12: Predicted Noise Levels of Station Equipment at Hospital Station

Noise Source	Receiver	Distance to property line	Predicted Noise Level (Leq)	BCC Noise Limit
Electrical Transformer	EL256	30 ft	35 dBA[1]	60 dBA
PA Announcements	EL256	30 ft	53 dBA[2]	60 dBA

[1]Predicted noise level assumes continuous operation.

[2]Predicted noise level assumes the PA announcements will not exceed 5 minutes in a one hour period.

5.8.4 120th Avenue NE Station

The nearest property to the 120th Avenue NE Station is parcel EL283a, commercial property located north of the station. The station and nearest parcels are located in a Class B EDNA. The City of Bellevue's noise limit for receiving and source Class B EDNAs is 60 dBA (Leq).

The closest noise measurement to 120th Avenue NE Station was conducted at the Pacific Northwest Ballet School (parcel EL310). The peak hour Leq measured at this location is 59 dBA. The noise level of the PA announcements would be 10 dBA above the ambient, or 69 dBA at 10 feet from the PA speaker on the station platform. The property line of the nearest parcel is 30 feet from the station platform. Electrical transformers have a noise level of 55 dBA at three feet from the transformer. The predicted noise levels for PA announcements and transformer noise at the property line of the closest parcel are shown in Table 5-13. No noise impact is predicted.

Table 5-13: Predicted Noise Levels of Station Equipment at 120th Avenue NE Station

Noise Source	Receiver	Distance to property line	Predicted Noise Level (Leq)	BCC Noise Limit
Electrical Transformer	EL256	30 ft	35 dBA[1]	60 dBA
PA Announcements	EL256	30 ft	53 dBA[2]	60 dBA

[1]Predicted noise level assumes continuous operation.

[2]Predicted noise level assumes the PA announcements will not exceed 5 minutes in a one hour period.

5.9 Emergency Ventilation Noise

Jet fans are used in the DBT to provide ventilation during emergency conditions. The jet fans are located in fan niches near the south and north portals and in a fan room mid-tunnel that is located at the top of the tunnel separated by a concrete slab from the tunnel section where the trains operate. The fan noise analysis for the fan room assumed two Flakt Jet Fans, Model 160JMTS/63/6/12/27 with one diameter reversible silencer. The analysis of the fan niches assumed two Flakt Jet Fans, Model 160JMTS/63/6/12/27 with two diameter reversible silencer.

The predicted fan noise in the fan room and fan niche is presented in Table 5-14. The applicable noise limit for the fan room is Lmax = 85 dBA from the Sound Transit DCM. The applicable noise limit for the fan niche is Lmax = 92 dBA from the NFPA Standard 130. The fan noise exceeds the applicable noise limit in both the fan room and in the fan niche without acoustical treatment.

The recommended noise control treatment for the emergency fans are:

- Within the Fan Room, acoustical vermiculite cement plaster (AVCP) shall be applied to the dome of the fan room in accordance with E335 Specification Section 09 82 19, Sprayed Acoustic Insulation (Figure 5-7). AVCP shall also be applied to any of the wall/ceiling surfaces feasible within the fan room. The AVCP shall be a minimum of 1-5/8 thick. Even with treatment on every surface in the fan room, it is not possible to achieve the Sound Transit Design Criteria when the fans are operational. However, the treatment does lower the predicted noise levels to be within the OSHA guidance provided that exposure to the fan noise is less than 4 hours.
- In the Fan Niches AVCP shall be applied to the ceiling and walls within the fan niche. The treatment should be a minimum of 1" thick (Figure 5-8 and Figure 5-9).

Table 5-14: Emergency Ventilation Fan Predicted Noise Levels - Lmax

Location	No Treatment	With Treatment	Sound Transit Design Criteria	NFPA Standard 130 Noise Limits
Fan Room	104 dBA	92 dBA	85 dBA	NA
Fan Niche	99 dBA	89 dBA	NA	92 dBA

The Sound Transit DCM also specifies noise limits for fan noise on the station platforms. There are no stations within the DBT; however, the predicted fan noise during emergency operations at the East Main Station platform is 55 dBA for the fans in one tunnel and 58 dBA for the fans in

both tunnels. At the Bellevue Transit Center Station platform the fan noise is 69 dBA for one tunnel and 72 dBA for both tunnels. The predicted emergency fan noise at both stations do not exceed the Sound Transit Design Criteria of Lmax=75 dBA.

Figure 5-7: Acoustical Treatment for Mid-Tunnel Fan Room

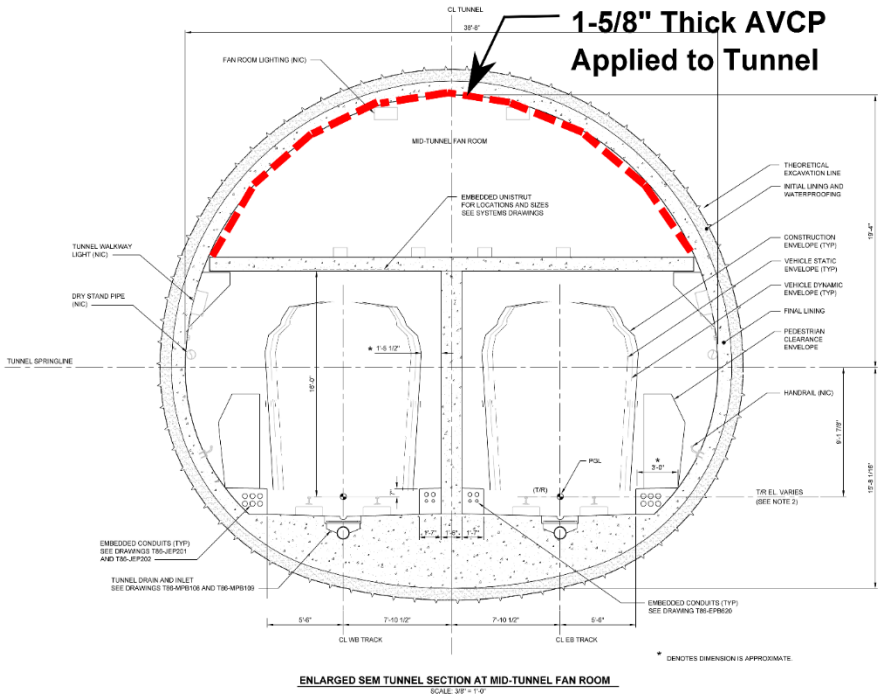


Figure 5-8: Acoustical Treatment for Fan Niche, Plan View

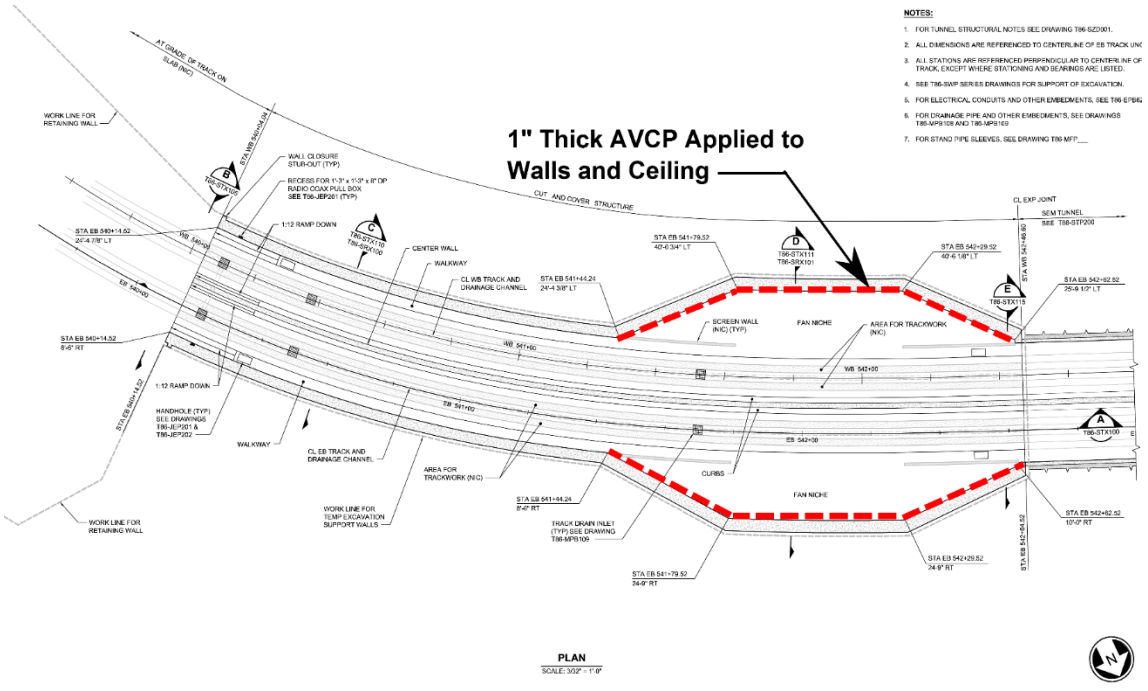
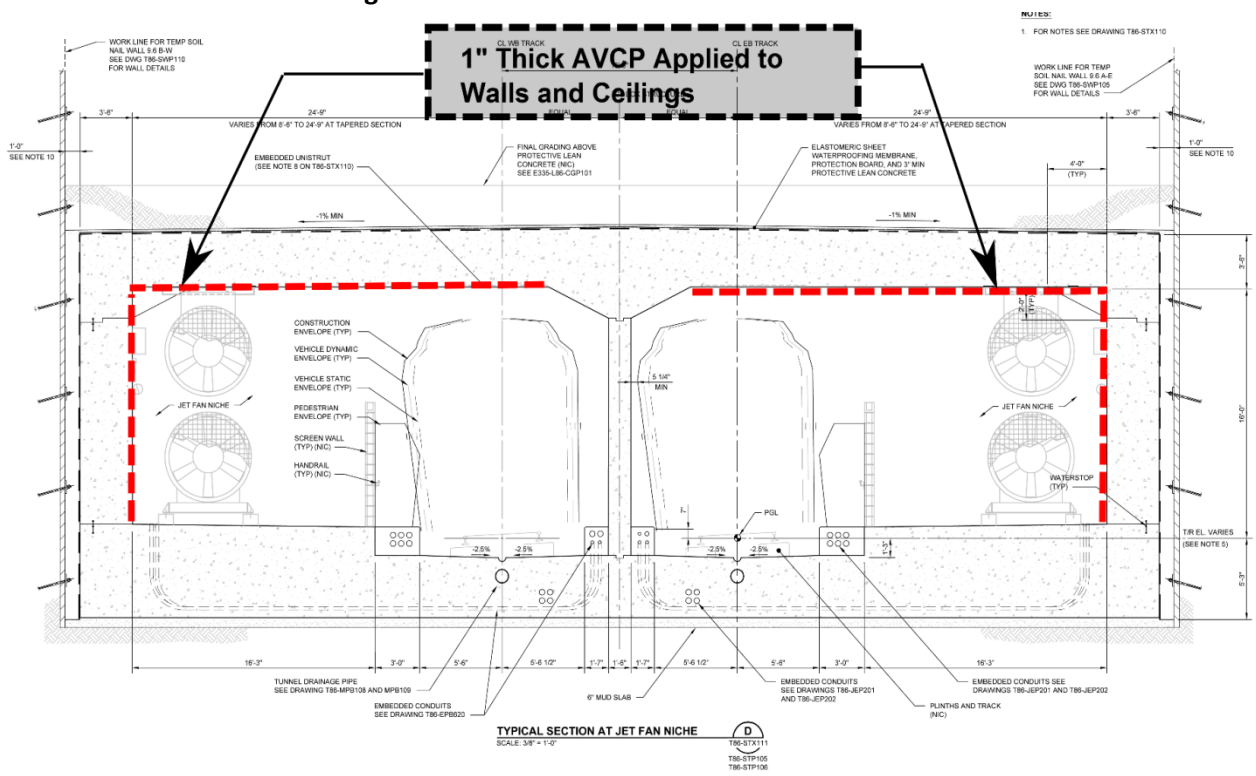


Figure 5-9: Acoustical Treatment for Fan Niche



6.0 OPERATIONAL VIBRATION IMPACT ASSESSMENT

This section presents a detailed vibration impact analysis of LRT operations. Vibration propagation tests were performed at locations where groundborne noise or vibration impacts were identified during the environmental analysis. The data from the vibration propagation tests are used to refine the vibration predictions and recommend appropriate mitigation measures. The sensitive receivers included in the analysis are:

- Residences adjacent to the East Main Station (parcels EL187 to EL206) and the Red Lion Hotel (parcel EL199)
- Residential land uses adjacent to the DBT (parcels EL208, EL210, and EL227)
- Office/Institutional land uses adjacent to the DBT
- Bravern Condominiums (parcel EL236)
- Meydenbauer Center (parcel EL240)
- Coast Bellevue Hotel (parcel EL242)
- Lake Bellevue Condominiums (parcel EL261)
- Mercer Education Center (parcel EL263)

6.1 Residences Adjacent to East Main Station

A vibration propagation test was conducted at the residential parcel EL184 in July 2013. The results of the propagation test was used to estimate the LSTM and to predict the vibration levels from LRT operations at the single family residences in the area north of Surrey Downs Park and south of the Downtown Bellevue Tunnel. The prediction methodology follows the FTA detailed vibration analysis procedure.

The measurement locations from the vibration propagation test at EL184 are shown in Figure 6-1. A drop hammer was used to incite vibration along the sidewalk of 112th Avenue SE. The tracks will be west of the sidewalk; however, we could not incite vibration at the future track location due to the existing Carriage Place Condominiums that will be acquired and demolished as part of the project. The accelerometers were located at 25 ft, 37 ft, 50 ft, 75 ft, 105 ft, 135 ft, 155 ft, and 160 ft from the vibration source.

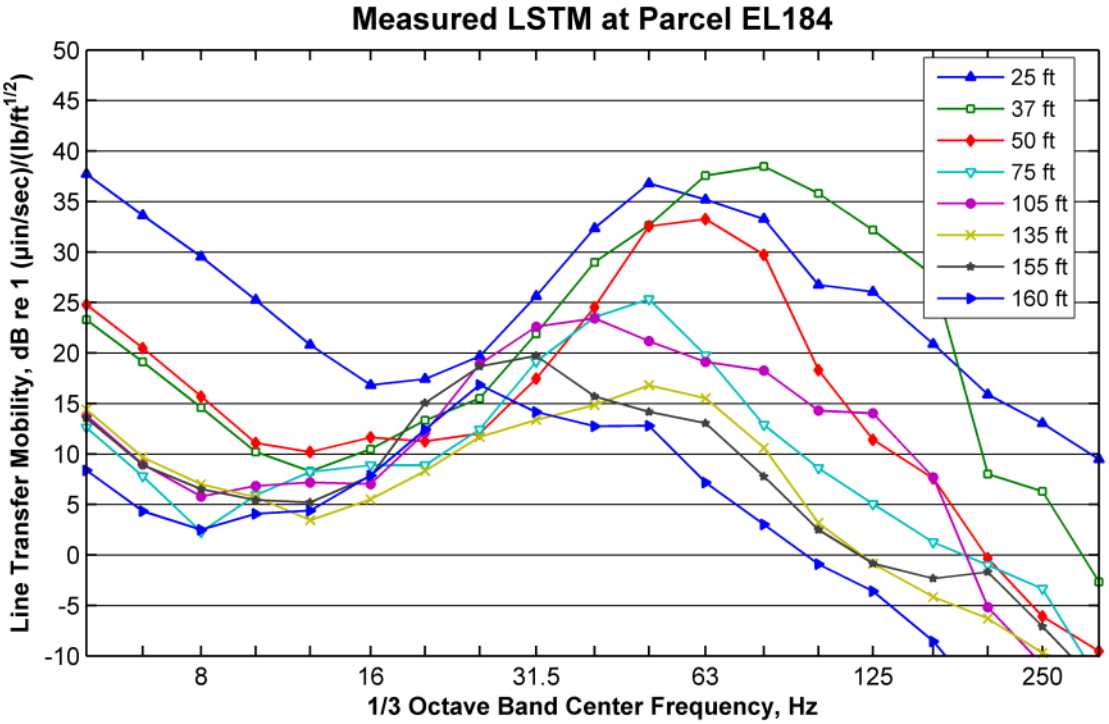
Figure 6-1: Measurement Diagram for Surface Vibration Propagation Test at EL184

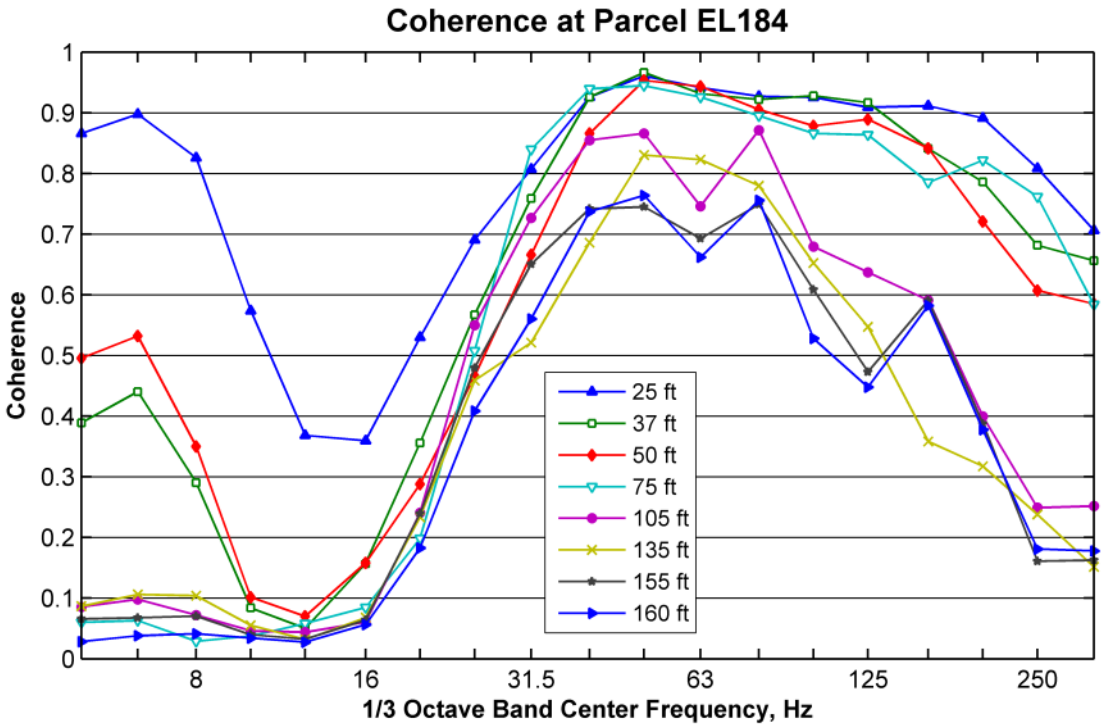
The measured LSTM and coherence for all measurement positions from the test at parcel EL184 are shown in Figure 6-2. The LSTM data was used to predict the vibration levels at the parcels north of Surrey Downs Park. The predicted levels assume ballast-and-tie track for parcels EL187 to EL192 and direct fixation track for parcels EL194 to EL206. As shown in Table 6-1, the predicted vibration levels are below the impact threshold of 72 VdB at all parcels. Therefore, no vibration mitigation is recommended.

Table 6-1: Predicted Vibration Levels at Parcels North of Surrey Downs Park and South of Downtown Bellevue Tunnel

Parcel Number	Distance to WB track (ft)	Predicted level in max. 1/3 octave band (VdB)	Max. 1/3 octave band	Vibration Impact Threshold, Max. 1/3 octave band (VdB)
EL187	106	48	63 Hz	72
EL189	93	50	63 Hz	72
EL190	96	45	63 Hz	72
EL191	100	45	63 Hz	72
EL192	97	45	63 Hz	72
EL194	93	53	50 Hz	72
EL195	105	52	50 Hz	72
EL196	75	57	50 Hz	72
EL206	115	51	50 Hz	72
EL199	200	44	50 Hz	72

Figure 6-2: Measured LSTM and Coherence at Parcel EL184

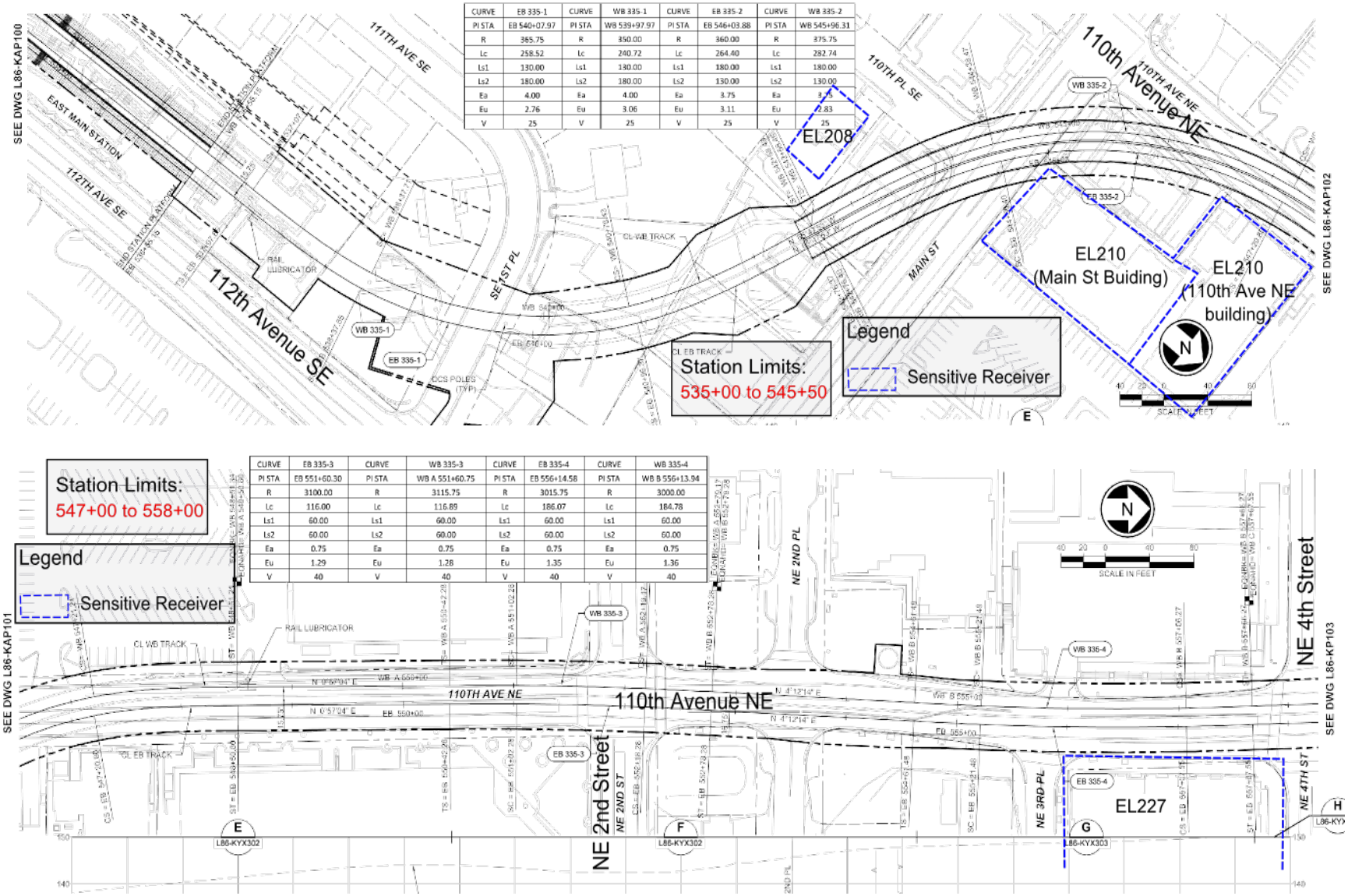




6.2 Downtown Bellevue Tunnel Residential Receivers

The LRT tracks will run in a tunnel through Downtown Bellevue. Vibration propagation measurements were conducted at two measurement sites near the tunnel to characterize the vibration propagation characteristics of the soil. The vibration propagation tests were conducted adjacent to the parcels where vibration or groundborne noise impact was predicted during the environmental impact assessment. The propagation tests included measurements inside the sensitive receivers to better characterize the building response to vibration. The parcels where measurements were performed include EL208 (a single family residence), EL210 (multi-family residence), and EL227 (multi-family residence). Other receivers assessed for impact include parcels EL222 (future site of Marriott Hotel) and parcel EL223a (multi-family residence). The LSTMs for parcels EL222 and EL223a were estimated using the results from the vibration propagation test performed at EL227. The location of the parcels and the LRT tracks are shown in Figure 6-3.

Figure 6-3: Location of Parcels EL208 (SFR), EL210 (MFR), EL222 (future hotel), EL223a (MFR), and EL227 (MFR)



CURVE	EB 335-1	CURVE	WB 335-1	CURVE	EB 335-2	CURVE	WB 335-2
PI STA	EB 540+07.97	PI STA	WB 539+97.97	PI STA	EB 546+03.88	PI STA	WB 545+96.31
R	365.75	R	350.00	R	360.00	R	375.75
Lc	258.52	Lc	240.72	Lc	264.40	Lc	282.74
Ls1	130.00	Ls1	130.00	Ls1	180.00	Ls1	180.00
Ls2	180.00	Ls2	180.00	Ls2	130.00	Ls2	130.00
Ea	4.00	Ea	4.00	Ea	3.75	Ea	3.75
Eu	2.76	Eu	3.06	Eu	3.11	Eu	2.83
V	25	V	25	V	25	V	25

CURVE	EB 335-3	CURVE	WB 335-3	CURVE	EB 335-4	CURVE	WB 335-4
PI STA	EB 551+60.30	PI STA	WB A 551+60.75	PI STA	EB 556+14.58	PI STA	WB B 556+13.94
R	3100.00	R	3115.75	R	3015.75	R	3000.00
Lc	116.00	Lc	116.89	Lc	186.07	Lc	184.78
Ls1	60.00	Ls1	60.00	Ls1	60.00	Ls1	60.00
Ls2	60.00	Ls2	60.00	Ls2	60.00	Ls2	60.00
Ea	0.75	Ea	0.75	Ea	0.75	Ea	0.75
Eu	1.29	Eu	1.28	Eu	1.35	Eu	1.36
V	40	V	40	V	40	V	40

Two borehole vibration propagation tests were conducted near the sensitive receivers to develop an LSTM estimate. For a borehole vibration propagation test, a borehole is drilled to the approximate depth of the tunnel and a pneumatic hammer on the drill rig is used to incite vibration at the bottom of the borehole. The vibration response is measured at several locations on the surface. The measurement locations are shown in Figure 6-4 and Figure 6-5. A summary of the vibration propagation measurements in Downtown Bellevue follows:

- Borehole test near parcel EL208 and EL210 (Main Street borehole):
  - Measurements at three drill depths: 20 ft, 30 ft, and 40 ft
  - Borehole locations: Center turn lane of Main Street, 40 ft south of the intersection with 110th Place.
  - 5 accelerometer locations on Main Street at 27 ft, 50 ft, 100 ft, 125 ft, and 175 ft from the borehole
  - EL208 accelerometer locations: outdoors at front facade of residence (labeled SFR1) and inside the residence (labeled SFR2)
  - EL210 accelerometer locations: outdoors at Main Street facade of the building (labeled MFR1) and two locations indoors on the second floor (labeled MFR2 and MFR3). There are no residential units on the first floor.
- Borehole test near parcel EL227 (NE 4th Street borehole):
  - Measurements at three drill depths: 30 ft, 40 ft, and 50 ft
  - Borehole location: Center turn lane of NE 4th Street, near the intersection with 110th Avenue NE
  - 6 outdoor accelerometer locations on NE 4th Street at 25 ft, 37 ft, 50 ft, 80 ft, 125 ft, and 175 ft from the borehole
  - EL 227 accelerometer locations: outdoors at NE 4th Street facade of residence (labeled MFR1), inside the building on the first floor (labeled MFR2), and two locations inside the building on the second floor (labeled MFR3 and MFR4). No residential units are located on the first floor.

Figure 6-4: Borehole Vibration Test Layout for Parcels EL210 (MFR) and EL208 (SFR)

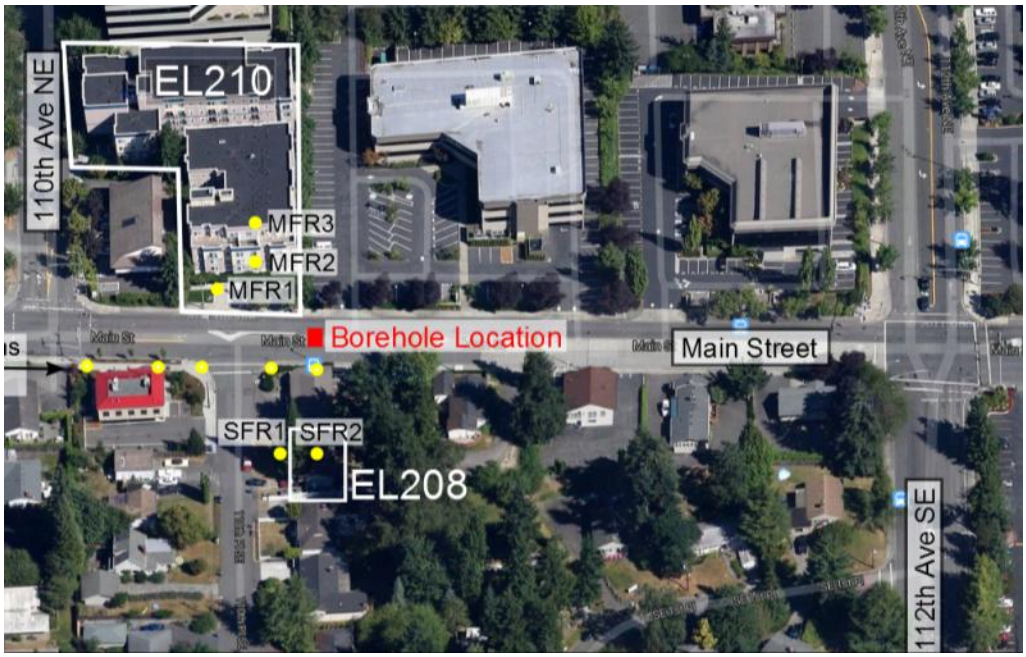
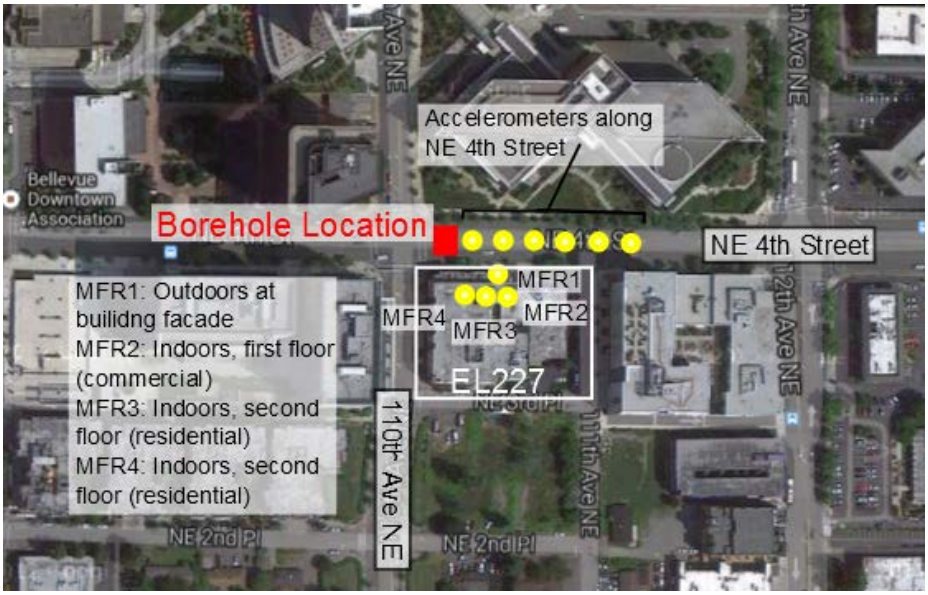


Figure 6-5: Borehole Vibration Propagation Test Layout for Parcel EL227 (MFR)



The vibration prediction methodology using data from borehole vibration tests is slightly different than using data from surface vibration tests. For surface vibration tests, drop-hammer impacts are used to incite vibration at several locations along a line on the ground to simulate the length of the train. The point source transfer mobility (PSTM) measured at each point along the line is combined to determine the line source transfer mobility (LSTM). However, with borehole vibration tests, hammer impacts are used to incite vibration at several depths of the borehole rather than in a line along the surface. The procedure for predicting the indoor LSTM using the borehole vibration propagation data is as follows:

- Use the PSTM measured from all test depths and all outdoor measurement locations to estimate the PSTM at several points along a line at the depth of the tunnel to simulate the length of the train.
- Use the estimated PSTM data to calculate the LSTM from the tunnel to the building facade. This calculation is done in the same way as for the surface vibration tests where the PSTM is measured at several points along a line.
- Compare the PSTM data from the indoor measurement locations and the measurement locations at the building facade to determine a Building Adjustment for each sensitive receiver.

The formula for predicting the indoor train vibration, Lv, using the borehole vibration propagation data is:

Lv = FDL + LSTM + Building Adjustment + SF + Train Length Adjustment

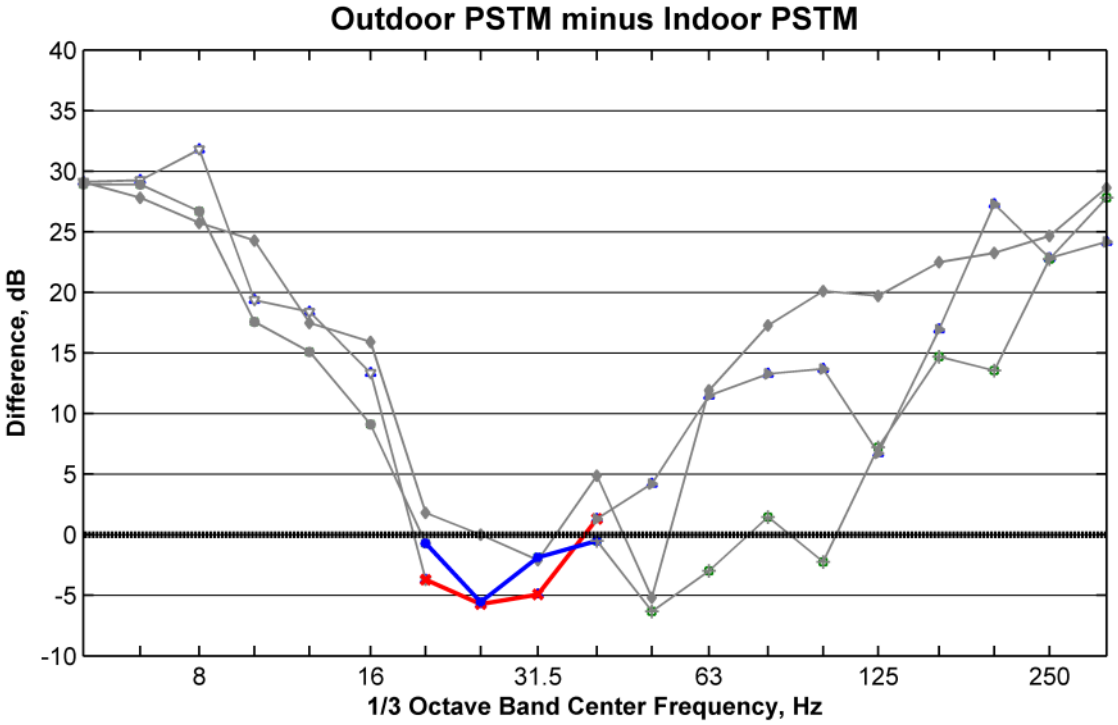
As explained in Section 4.4, the safety factor (SF) included in the predictions is +3 decibels and the train length adjustment is +0.5 decibels.

6.2.1 Results and Predictions for Parcel EL208 (SFR)

Parcel EL208 is a single family residence located at 112 110th Place SE. The residence is a one-story structure. Appendix C includes figures showing the measured PSTM and coherence for all of the measurement locations for the Main Street borehole test, including the measurements at parcel EL208. Those figures show that there is very low coherence for the measurement inside of parcel EL208. Due to the low coherence, a measure of data quality, most of the data from the indoor measurement location at EL208 is not included in the predictions.

The building adjustment included in the predictions is calculated by subtracting the indoor PSTM from the outdoor PSTM. Figure 6-6 shows the outdoor minus indoor PSTM for the indoor measurement location for the three test depths. The results from 1/3 octave bands where the results are corrupted by high background vibration levels are plotted in grey. The frequency range with acceptable data quality is approximately 20 Hz to 40 Hz. As shown in Figure 6-6, the difference between indoor and outdoor PSTM is between 0 and -5 decibels in the 1/3 octave bands with acceptable data quality. This implies the building is not amplifying vibration. A building adjustment of 0 dB is assumed for the predictions.

Figure 6-6: Building Adjustment Measured at Parcel EL208 (MFR)



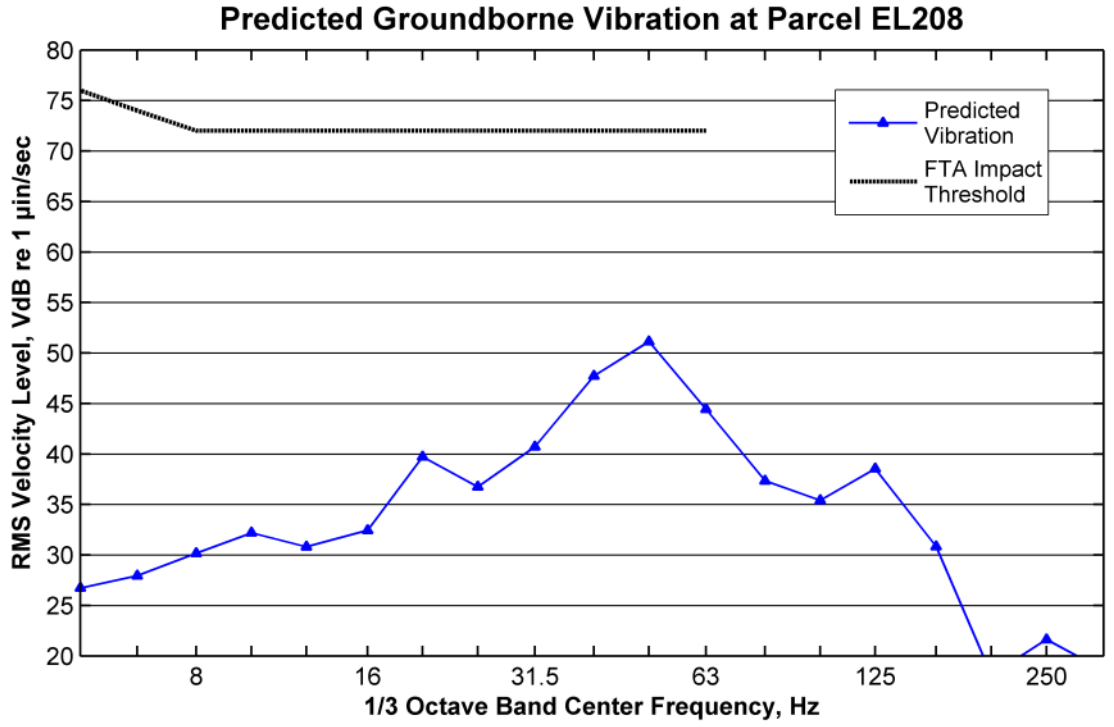
The predicted groundborne vibration level and the predicted groundborne noise level for parcel EL208 is shown in Table 6-2. The predictions assume direct fixation track and a train speed of 25 mph. The FTA impact threshold for groundborne vibration for residential and uses is 72 VdB in the maximum 1/3 octave band. The FTA impact threshold for groundborne noise is an overall level of 35 dBA. The overall level is the energy sum of the level over all of the frequency bands. The predicted groundborne vibration and groundborne noise levels are shown in Figure 6-7.

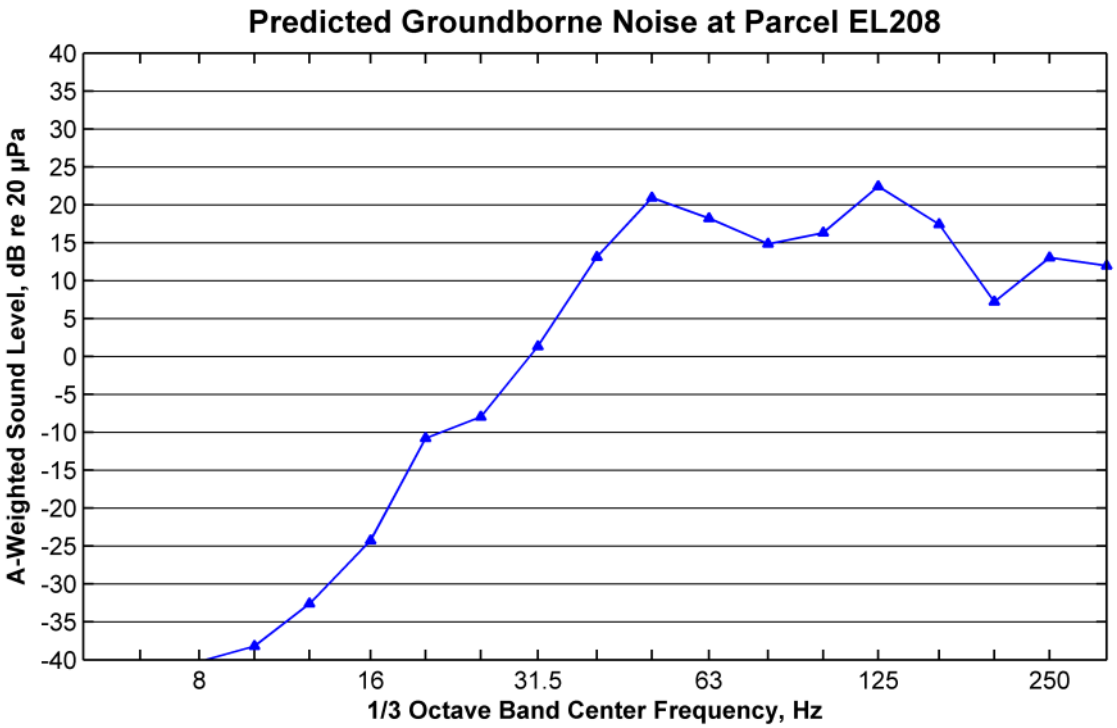
The predicted groundborne vibration and groundborne noise levels are below the FTA impact thresholds. Therefore, no vibration mitigation is recommended.

Table 6-2: Predicted Groundborne Vibration and Groundborne Noise Levels for Parcel EL208 (SFR)

Location	Predicted Vib. Vel. level in max. 1/3 octave band (VdB)	Max. 1/3 octave band	Vibration Impact Threshold (VdB)	Predicted Overall Groundborne Noise (dBA)	Groundborne Noise Impact Threshold (dBA)
Parcel EL208, (building adjustment = 0 dB)	51	50 Hz	72	27	35

Figure 6-7: Predicted Groundborne Vibration and Groundborne Noise at Parcel EL208 (SFR)





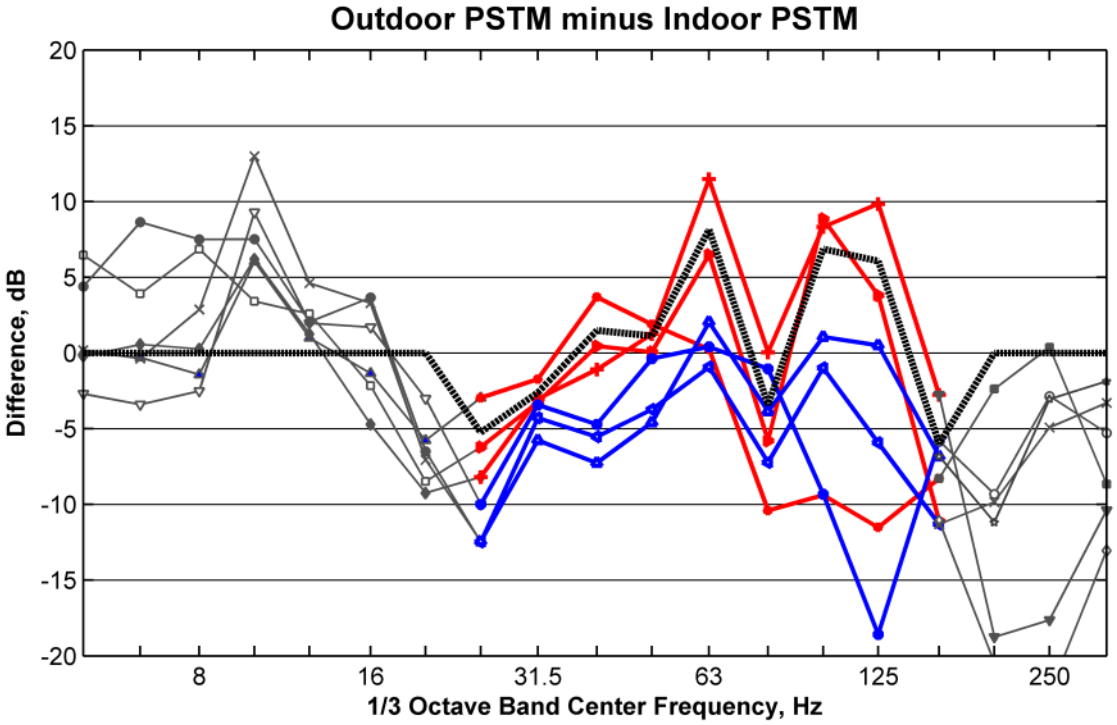
6.2.2 Results and Predictions for Parcel EL210 (MFR)

Parcel EL210 is a multi-family residential community located at the corner of Main Street and 110th Avenue NE. The parcel consists of two buildings: one with a facade on Main Street and one with a facade on 110th Avenue NE. Measurements were taken in the building on Main Street due to the location of the borehole. However, predictions are included for both the Main Street building and the 110th Avenue NE building, taking into account the distance to the tracks of each building. Appendix C includes figures showing the measured PSTM and coherence for all measurement locations form the borehole vibration propagation test on Main Street.

Figure 6-8 shows the building adjustment measured at parcel EL210. The building adjustment is the difference between the PSTM measured at the building facade outdoors and the PSTM measured inside. Figure 6-8 shows the building adjustment for the two indoor measurement locations and the three test depths. Key observations from the figure are:

- The data plotted in grey is not included in the building adjustment calculation due to interference from existing background vibration. For the PSTM measurements, signal-to-noise ratio is often quantified using coherence (plots of coherence are presented in Appendix C). There is low coherence at frequencies below 25 Hz and frequencies above 160 Hz. Low coherence indicates a weak relationship between the force from the impact hammer and the measured response. Low coherence often results when the vibration generated from the impact hammer is less than the ambient background vibration level and is an indication that there is no significant building amplification. Therefore, the building adjustment is assumed to be zero in the frequency ranges with low coherence.
- The data from one of the indoor measurement locations show there may be a resonance at 63 Hz and 100 Hz (data plotted in red). The second indoor measurement location did not show the same resonance at those frequencies (data plotted in blue). It is not uncommon for floor resonances to be measured at certain locations on a floor, but not others.
- The building adjustment used in the predictions is plotted as a thick dashed black line. The building adjustment is the average of the adjustment measured for the three test depths for the indoor location that showed the resonances at 63 Hz and 100 Hz. The data from the measurement location that did not show resonances is not included in the building adjustment.
- Predictions are provided with and without the building adjustment to reflect that some locations within the building may show a resonance and some locations may not.

Figure 6-8: Building Adjustment Measured at Parcel EL210 (MFR)



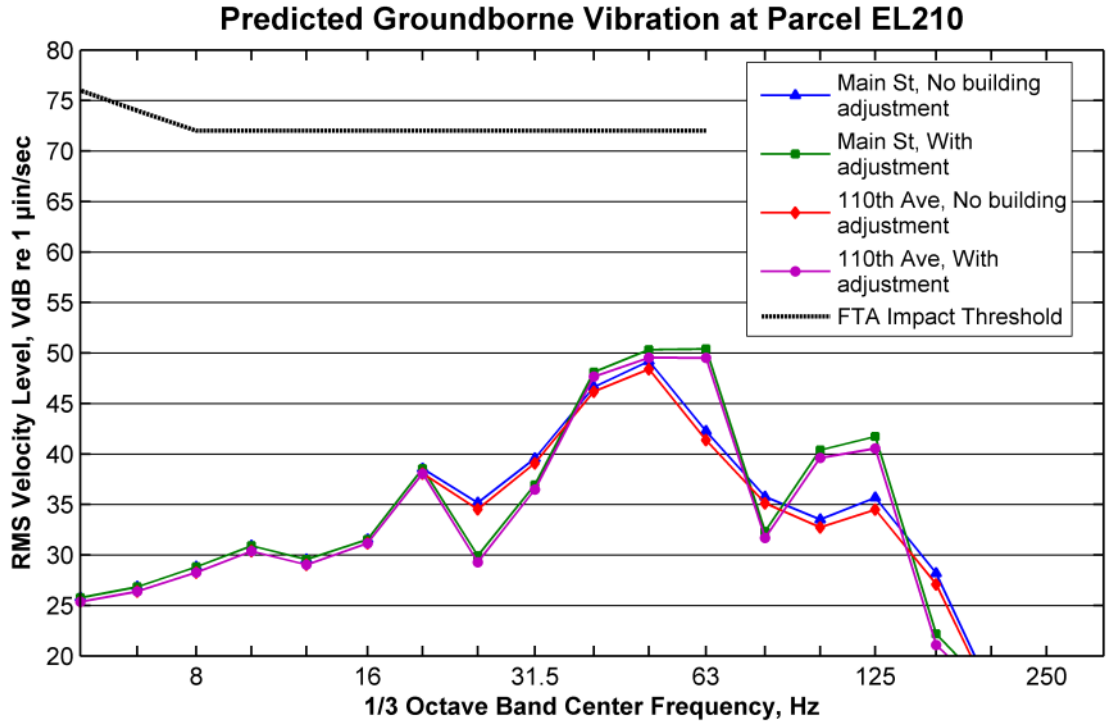
The predicted groundborne vibration levels and the predicted groundborne noise levels for parcel EL210 are shown in Table 6-3. The FTA impact threshold for groundborne vibration for residential land uses is 72 VdB in the maximum 1/3 octave band. The FTA impact threshold for groundborne noise is an overall level of 35 dBA. The overall level is the energy sum of the level over all of the frequency bands. The predicted groundborne vibration and groundborne noise levels are shown in Figure 6-9.

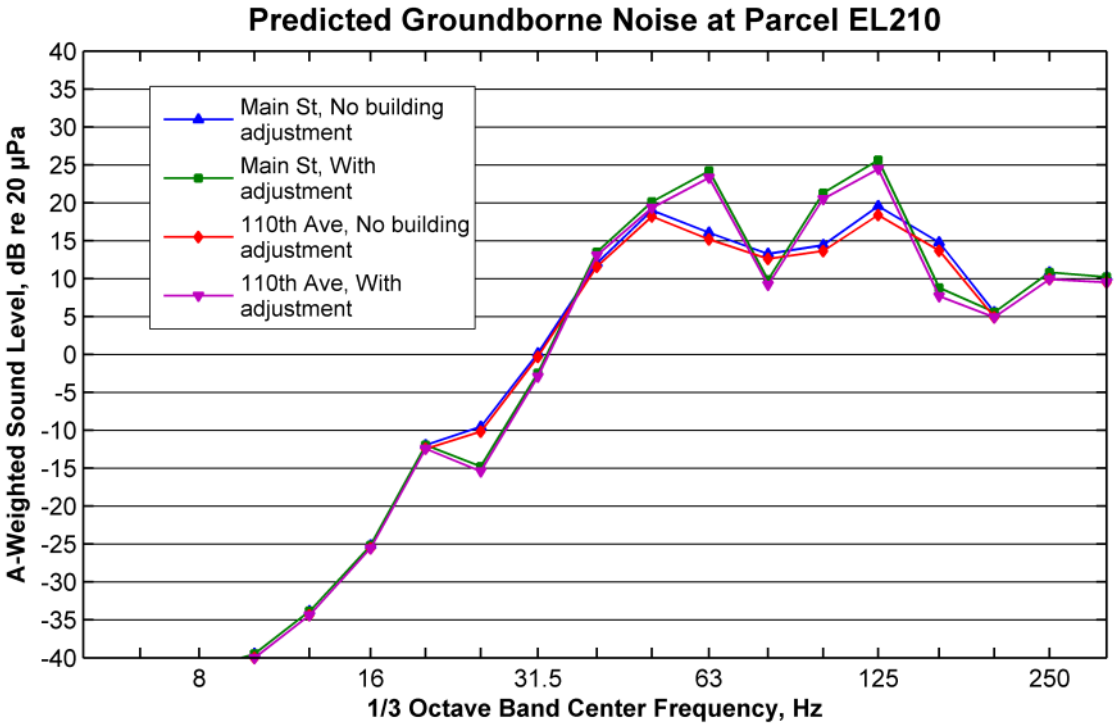
The predicted groundborne vibration and groundborne noise levels are below the FTA impact thresholds. Therefore, no vibration mitigation is recommended.

Table 6-3: Predicted Groundborne Vibration and Groundborne Noise Levels for Parcel EL210 (MFR)

Location	Predicted Vib. Vel. level in max. 1/3 octave band (VdB)	Max. 1/3 octave band	Vibration Impact Threshold (VdB)	Predicted Overall Groundborne Noise (dBA)	Groundborne Noise Impact Threshold (dBA)
Parcel EL210, Main St, no building adjustment (58 ft slant distance to tracks)	49	50 Hz	72	25	35
Parcel EL210, Main St, with building adjustment (58 ft slant distance to tracks)	50	63 Hz	72	30	35
Parcel EL210, 110th Ave, no building adjustment (63 ft slant distance to tracks)	48	50 Hz	72	24	35
Parcel EL210, 110th Ave, with building adjustment (63 ft slant distance to tracks)	50	50 Hz	72	29	35

Figure 6-9: Predicted Groundborne Vibration and Groundborne Noise Levels at Parcel EL210 (MFR)





6.2.3 Predictions for Parcel EL222

Parcel EL222 is currently a vacant lot and is the proposed site for a future Marriott Hotel. The parcel is assessed for groundborne noise and vibration impact as a Category 2

(residential) land use. The vibration prediction for parcel EL222 assumes DF track and a train speed of 40 mph. The vibration propagation test results from the outdoor measurement locations from the NE 4th Street test were used to estimate the LSTM at the future hotel location. The LSTM and coherence from the outdoor measurement locations for the NE 4th Street vibration propagation test are shown in Figure 10-7, Figure 10-9, and Figure 10-11.

The predicted groundborne vibration level and groundborne noise level for parcel EL222 is shown in Table 6-4. The predicted groundborne vibration and groundborne noise levels are below the FTA impact thresholds, therefore, no vibration mitigation is recommended.

Table 6-4: Predicted Vibration Levels for Parcel EL222 (site of future Marriott Hotel)

Parcel	Predicted Vib. Vel. level in max. 1/3 octave band (VdB)	Max. 1/3 octave band	Vibration Impact Threshold (VdB)	Predicted Overall Groundborne Noise (dBA)	Groundborne Noise Impact Threshold (dBA)
EL222 (future Marriott Hotel)	47	40 Hz	72	30	35

6.2.4 Predictions for Parcel EL223a

Parcel EL223a is a multi-family residential complex located at 10822 NE 2nd Street. The parcel is assessed for groundborne noise and vibration impact as a Category 2 (residential) land use. The vibration prediction for parcel EL223a assumes DF track and a train speed of 40 mph. The vibration propagation test results from the outdoor measurement locations from the NE 4th Street test were used to estimate the LSTM at the sensitive receiver. The LSTM and coherence from the outdoor measurement locations for the NE 4th Street vibration propagation test are shown in Figure 10-7, Figure 10-9, and Figure 10-11.

The predicted groundborne vibration level and groundborne noise level for parcel EL223a is shown in Table 6-5. The predicted groundborne vibration and groundborne noise levels are below the FTA impact thresholds, therefore, no vibration mitigation is recommended.

Table 6-5: Predicted Vibration Levels for Parcel EL223a

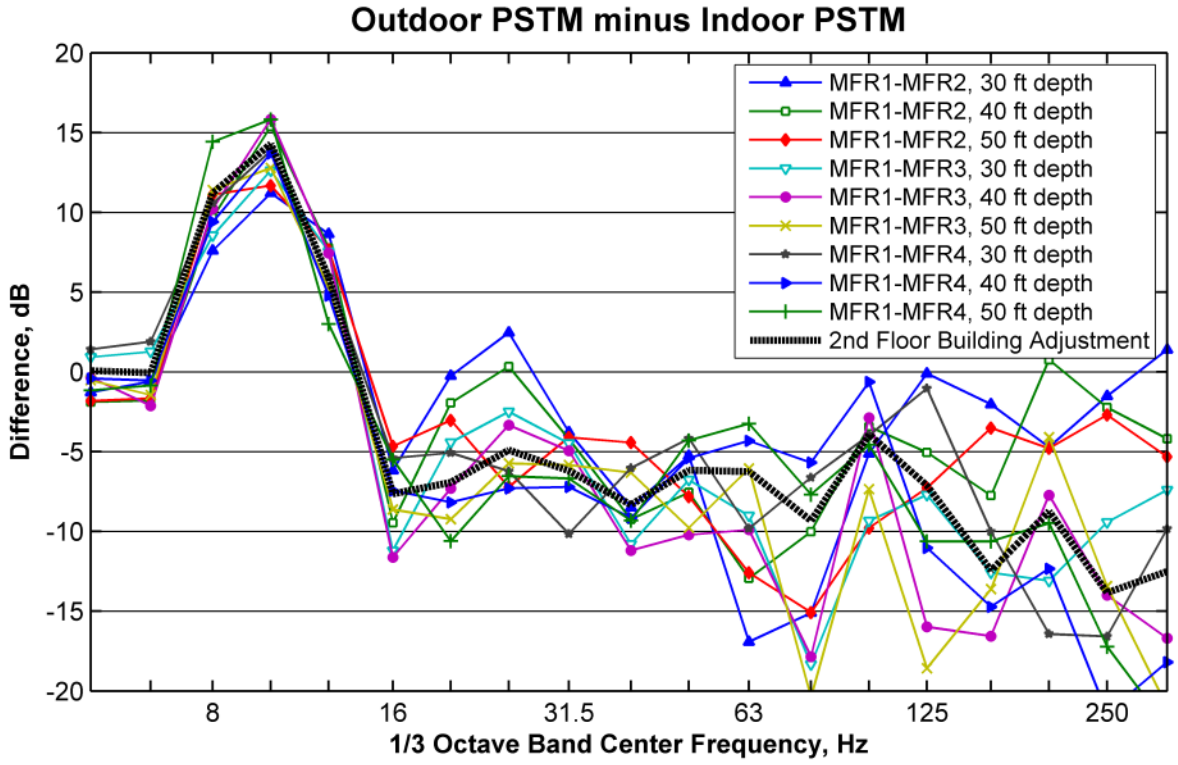
Parcel	Predicted Vib. Vel. level in max. 1/3 octave band (VdB)	Max. 1/3 octave band	Vibration Impact Threshold (VdB)	Predicted Overall Groundborne Noise (dBA)	Groundborne Noise Impact Threshold (dBA)
EL223a 10822 NE 2nd St	47	40 Hz	72	30	35

6.2.5 Results and Predictions for Parcel EL227 (MFR)

Parcel EL227 is a mixed-use building located at the corner of 110th Avenue NE and NE 4th Street. The ground floor of the building is commercial and the second floor and above are residential apartments. The data from the borehole test was used to assess potential for vibration impact at parcel EL227. Appendix C includes figures showing the measured PSTM and coherence for all of the measurement locations from the 4th Street borehole test.

Figure 6-10 shows the outdoor minus indoor PSTM for the three indoor measurement locations and for the three test depths. The outdoor PSTM is from the measurement located at the building facade (MFR1). For all indoor measurements, there is a similar building response. There is a resonance at 10 Hz that amplifies vibration levels by 10 to 15 decibels and a general reduction in vibration levels at frequencies greater than 12.5 Hz. The building adjustment used in the vibration predictions is the average difference for the two second floor measurement positions (MFR3 and MFR4), because the first floor of the building is a commercial land use. The average difference for the second floor measurement locations is the dashed black line in Figure 6-10.

Figure 6-10: Building Response for Parcel EL227 (MFR), Outdoor PSTM minus Indoor PSTM



The predicted groundborne vibration level and the predicted groundborne noise level for parcel EL227 is shown in Table 6-6. The predictions with and without the building adjustment are presented. The FTA impact threshold for groundborne vibration for residential land uses is 72 VdB in the maximum 1/3 octave band. The FTA impact

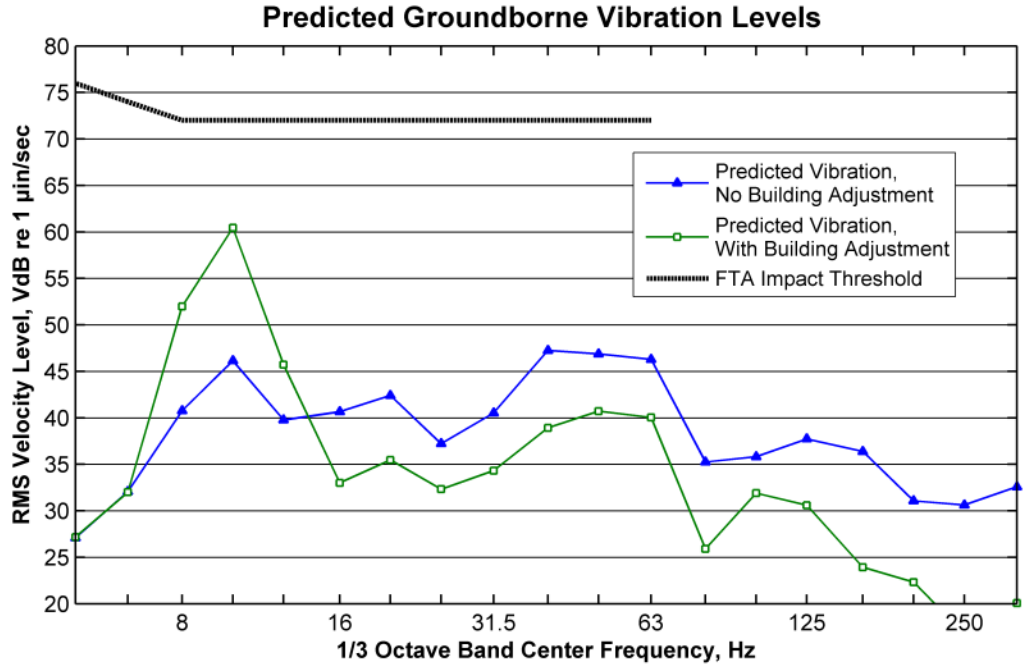
threshold for groundborne noise is an overall level of 35 dBA. The overall level is the energy sum of the level over all of the frequency bands. The predicted groundborne vibration and groundborne noise levels are shown in Figure 6-11.

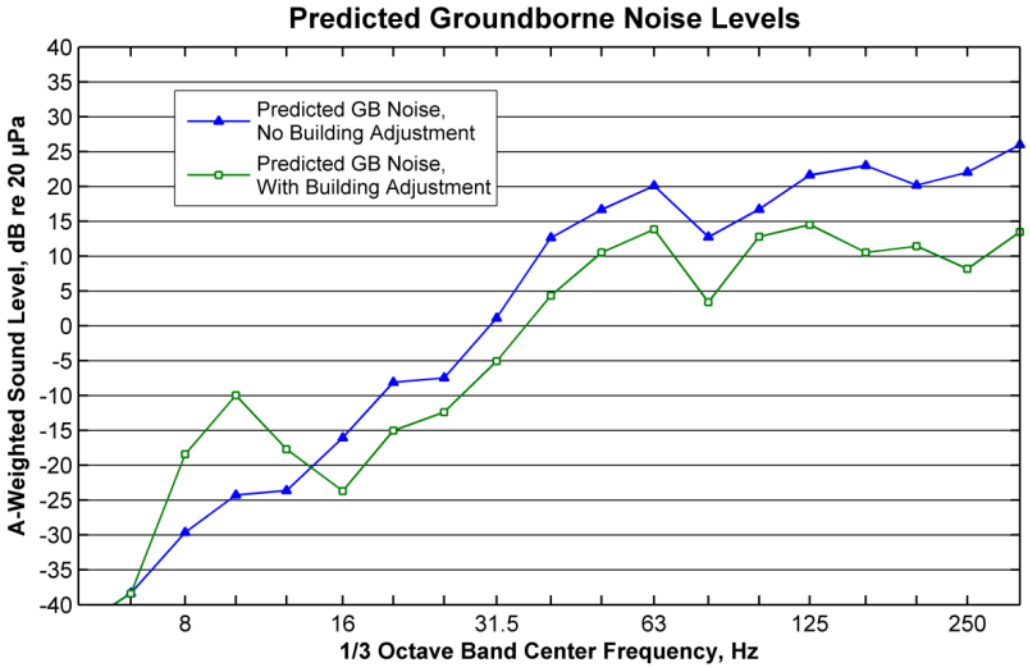
The predicted groundborne vibration and groundborne noise levels are below the FTA impact thresholds. Therefore, no vibration mitigation is recommended.

Table 6-6: Predicted Groundborne Vibration and Groundborne Noise Levels for Parcel EL227 (MFR)

Measurement Location	Predicted Vib. Vel. level in max. 1/3 octave band (VdB)	Max. 1/3 octave band	Vibration Impact Threshold (VdB)	Predicted Overall Groundborne Noise (dBA)	Groundborne Noise Impact Threshold (dBA)
Parcel EL227, no building adjustment	47	40 Hz	72	28	35
Parcel EL227, with building adjustment	60	10 Hz	72	20	35

Figure 6-11: Predicted Groundborne Vibration and Groundborne Noise Levels for Parcel EL227 (MFR)





6.3 Offices near Downtown Bellevue Tunnel

There are several office buildings located within close proximity to the Downtown Bellevue Tunnel (DBT). Quiet office space is considered Category 3 (institutional) land use using the FTA land use categories. The detailed vibration impact threshold for office space is 84 VdB in the maximum 1/3 octave band and the groundborne noise impact threshold is 40 dBA. These impact thresholds would also apply to the City Council meeting room at City Hall (Parcel EL299). The vibration predictions for the office spaces assume DF track and a train speed of 25 mph. The vibration propagation test results from the outdoor measurement locations from the NE 4th Street test were used to estimate the LSTM level at the office spaces. The LSTM and coherence for the outdoor measurement locations for the NE 4th Street vibration propagation test are shown in Figure 10-7, Figure 10-9, and Figure 10-11.

The predicted groundborne vibration level and groundborne noise level for each office buildings located within 100 feet of the tracks are shown in Table 6-7. The predicted groundborne vibration and groundborne noise levels are below the FTA impact thresholds, therefore, no vibration mitigation is recommended.

Table 6-7: Predicted Vibration Levels for Office Spaces Near DBT

Measurement Location	Predicted Vib. Vel. level in max. 1/3 octave band (VdB)	Max. 1/3 octave band	Vibration Impact Threshold (VdB)	Predicted Overall Groundborne Noise (dBA)	Groundborne Noise Impact Threshold (dBA)
110 Atrium Parcel EL216	46	40 Hz	84	26	40
Skyline Tower Parcel EL228	47	40 Hz	84	29	40
City Hall Parcel EL229	47	40 Hz	84	31	40

6.4 Bravern Condominiums

The Bravern Condominiums (parcel EL236) are located in a mixed use building across the street from the Bellevue Transit Center Station. Vibration prediction for the parcel is presented for DF track and a train speed of 25 mph. A vibration propagation test was conducted nearby for the Meydenbauer Center; the location of the vibration propagation measurement is shown in Figure 6-12. The outdoor measurement locations were used to estimate the LSTM for the Bravern Condominiums. The LSTM and coherence for the outdoor measurement locations for the Meydenbauer Center vibration propagation test are shown in Figure 10-13.

The predicted vibration level for the Bravern Condominiums (parcel EL236) is presented in Table 6-8. The predicted vibration level is below the FTA vibration impact threshold, therefore, no vibration mitigation is recommended.

Table 6-8: Predicted Vibration Level for Bravern Condominiums (Parcel EL236)

Location	Predicted Vib. Vel. level in max. 1/3 octave band (VdB)	Max. 1/3 octave band	FTA Groundborne Vibration Impact Threshold (VdB)
Bravern Condominiums Parcel EL236	43	50 Hz	72

6.5 Meydenbauer Center (Parcel EL240)

The Meydenbauer Center (parcel EL240) is a convention center facility that also houses a theater. It is assessed using the criteria for theaters in Table 8-2 Groundborne Vibration and Noise Impact Criteria for Special Buildings in the FTA guidance manual. The Meydenbauer Center is located east of the north portal of the DBT. The LRT tracks transition from the tunnel onto an aerial structure as the LRVs pass the Meydenbauer Center. Predictions are included for both at-grade DF track and aerial structure DF track. The train speed assumed for the predictions is 55 mph.

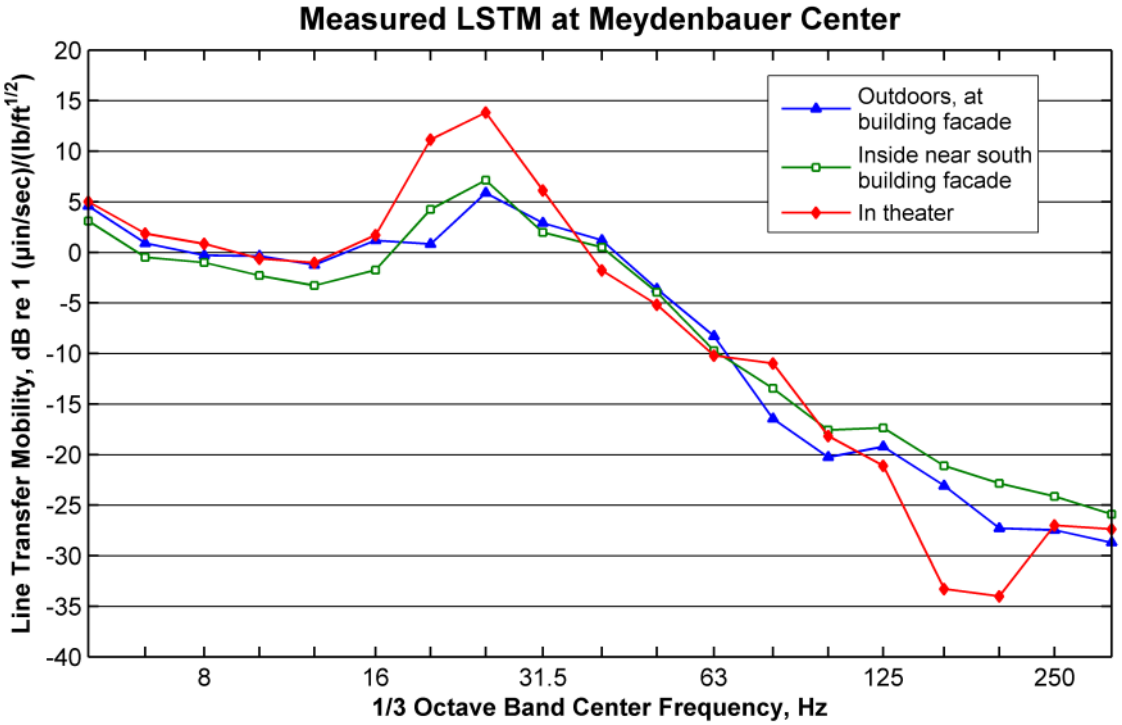
A vibration propagation test was conducted at the Meydenbauer Center to determine the soil propagation characteristics into the building. The measurement locations from the test are shown in Figure 6-12. A summary of the vibration propagation measurement follows:

- Impact locations: On the south sidewalk of NE 6th Street, 95 feet from the building facade
- Outdoor accelerometer locations: 25 ft, 37 ft, 50 ft, 75 ft, 125 ft, 175 ft, and 225 ft from the impact line (extending south)
- Meydenbauer Center accelerometer locations: outside at building facade, inside the building on cement floor near the south building facade, and inside the theatre.

Figure 6-13 shows the measured LSTM for the Meydenbauer Center accelerometer locations. Appendix C includes figures of the measured LSTM and coherence for all measurement positions. The LSTM measured in the theater is about five to ten decibels greater than the LSTM measured at the building facade in the 20 Hz and 25 Hz 1/3 octave bands. This implies there is a floor resonance in the 20 Hz and 25 Hz 1/3 octave bands inside the theater.

Figure 6-12: Vibration Propagation Measurement Locations at Meydenbauer Center (Parcel EL240)

Figure 6-13: Measured LSTM at Meydenbauer Center (Parcel EL240)



The groundborne noise and vibration prediction methodology follows the procedure described in Section 4.4. In addition, the following assumptions and adjustments were included in the predictions:

- The westbound LRT track will be 130 ft from the building facade and the impact locations from the LSTM measurement were 95 feet from the building facade. An adjustment was applied to the LSTM data measured inside the theater to account for the extra distance to the tracks. The distance adjustment was calculated by taking the difference between the LSTM at 90 ft and at 130 ft.
- There is a crossover on the aerial structure located 300 feet east of the Meydenbauer Center. The FTA guidance manual recommends an adjustment of +10 dB for crossovers, but in our experience, the additional vibration from a crossover does not exceed +5 dB at distances greater than 150 ft. A +5 dB adjustment was included in the aerial structure prediction to account for the crossover.
- The predictions include an adjustment for the attenuation from the aerial track structure. The FTA guidance manual recommends an adjustment of -10 dB in all 1/3 octave bands. This analysis assumes a -10 dB adjustment in all 1/3 octave bands except 10 Hz and 12.5 Hz, where there is a 0 dB adjustment. The aerial structure adjustment we use is based on measurements from aerial structure track from the existing Central Link[4], and is more conservative than the FTA guidance manual recommendation.

The predicted groundborne vibration levels and predicted groundborne noise levels for the Meydenbauer Center is shown in Table 6-9. There are separate predictions for at-grade DF track and aerial structure track with crossover. The track will be both at-grade and on aerial structure as it passes the Meydenbauer Center. The FTA impact threshold for groundborne vibration for theaters is 72 VdB. The impact threshold for groundborne noise is 35 dBA. The predicted groundborne vibration and groundborne noise spectra are shown in Figure 6-14.

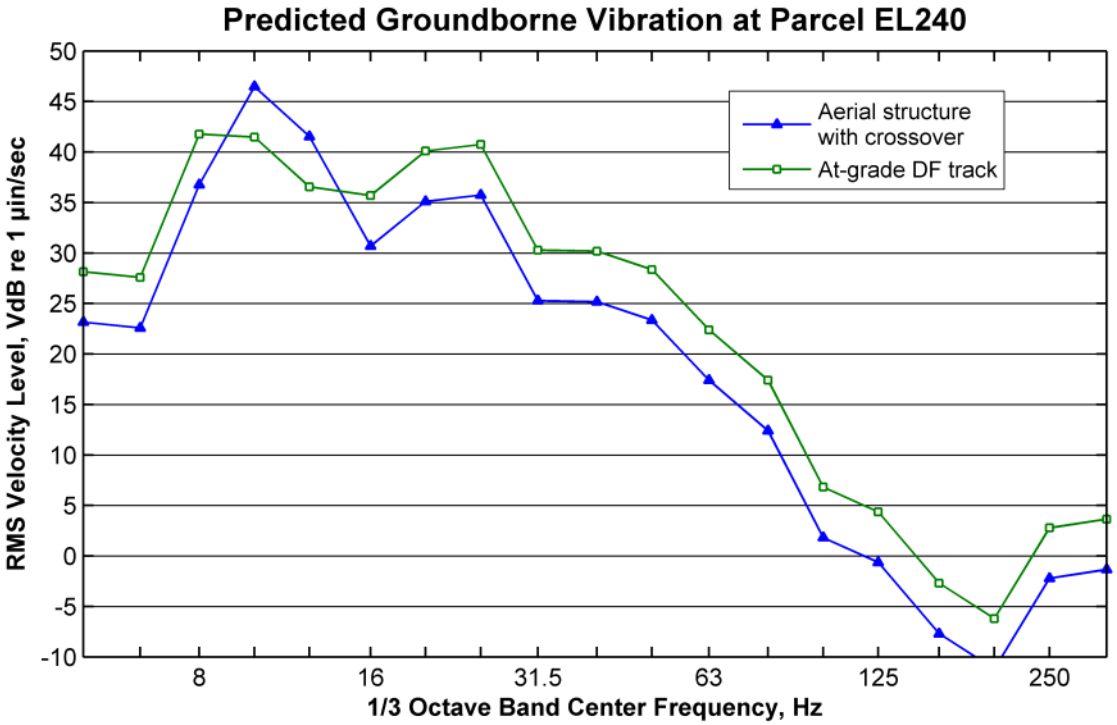
The predicted groundborne vibration and groundborne noise levels are below the FTA impact thresholds. Therefore, no vibration mitigation is recommended.

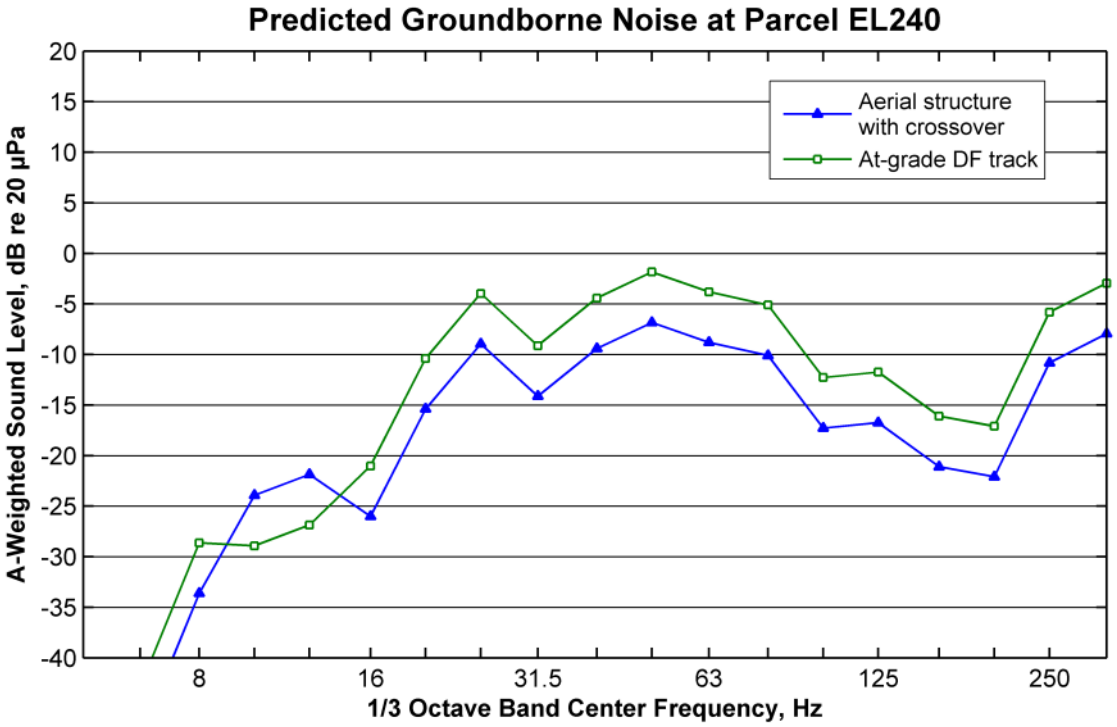
Table 6-9: Predicted Groundborne Vibration and Groundborne Noise Levels for Meydenbauer Center (Parcel EL240)

Prediction Location	Predicted Overall Groundborne Vibration (VdB)	FTA Groundborne Vibration Impact Threshold (VdB)	Predicted Overall Groundborne Noise (dBA)	FTA Groundborne Noise Impact Threshold (dBA)
Parcel EL240, at-grade DF Track	48	72	5	35
Parcel EL240, aerial DF Track with crossover adjustment	49	72	0	35

[4] The results of the Sound Transit Central Link vibration measurements are documented in the report: *Vibration Measurements of Existing Sound Transit Trains*, dated July 14, 2013.

Figure 6-14: Predicted Groundborne Vibration and Groundborne Noise for Meydenbauer Center (Parcel EL240)





6.6 Coast Bellevue Hotel (Parcel EL242)

The tracks will be on an aerial structure as they cross above I-405 and 116th Avenue NE and then turn north as they enter the BNSF right-of-way. The only sensitive receiver near the aerial structure is the Coast Bellevue Hotel (parcel EL242).The Hotel is located at 625 116th Avenue NE, east of I-405. The LRT aerial structure will be located 155 feet south of the hotel building. The aerial structure will have DF track. The train speed assumed for the predictions is 55 mph.

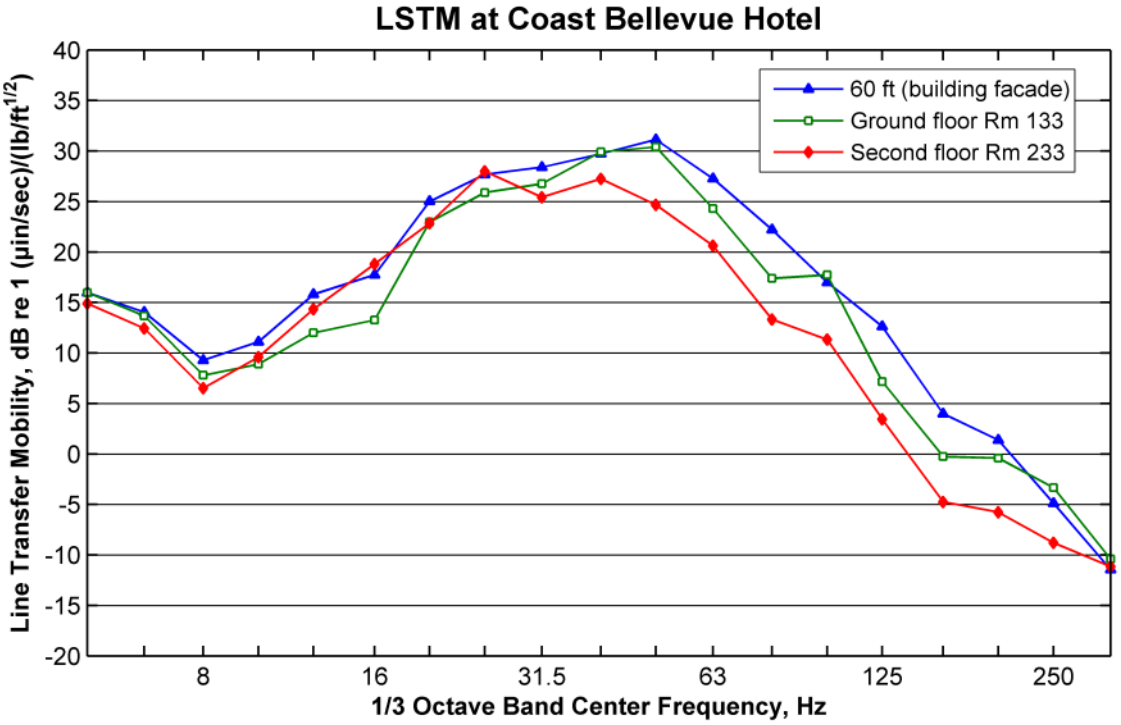
A vibration propagation test was conducted near the Coast Bellevue Hotel to determine the vibration propagation characteristics into the hotel. The measurement locations from the test are shown in Figure 6-15. A summary of the vibration propagation measurement follows:

- Impact Locations: At the southern edge of the hotel property, 60 feet from the building facade
- Outdoor accelerometer locations: 25 ft, 50 ft, 85 ft, 135 ft, and 175 ft from the impact line
- Indoor accelerometer locations: ground floor room 133 and second floor room 233

Figure 6-16 shows the measured LSTM for the indoor measurement locations and the LSTM at the building facade outdoors. As shown in Figure 6-16, the indoor and outdoor LSTMs have comparable levels. Therefore, the building adjustment used in the predictions for the Coast Bellevue Hotel is 0 decibels in all 1/3 octave bands. Appendix C includes figures of the measured LSTM and coherence for all measurement positions.

Figure 6-15: Vibration Propagation Measurement Locations at Parcel EL242 (Coast Bellevue Hotel)

Figure 6-16: LSTM Measured Indoors at Coast Bellevue Hotel (Parcel EL242)



The groundborne vibration prediction methodology follows the procedure described in Section 4.4. The predictions also include the following adjustments and assumptions:

- The LRT tracks will be 155 ft from the south building facade and the impact line is 60 feet from the south building facade. The outdoor LSTM data was used to estimate the LSTM at a distance of 155 feet.
- The indoor data did not show any floor resonance, therefore a building adjustment of 0 dB was used in the predictions.
- An adjustment for the attenuation from the aerial track structure was included in the predictions. The FTA guidance manual recommends an adjustment of -10 dB in all 1/3 octave bands. This analysis assumes a -10 dB adjustment in all 1/3 octave bands except 10 Hz and 12.5 Hz, where there is a 0 dB adjustment. The aerial structure adjustment we use is based on measurements from aerial structure track from the existing Central Link[5], and is more conservative than the FTA guidance manual recommendation.

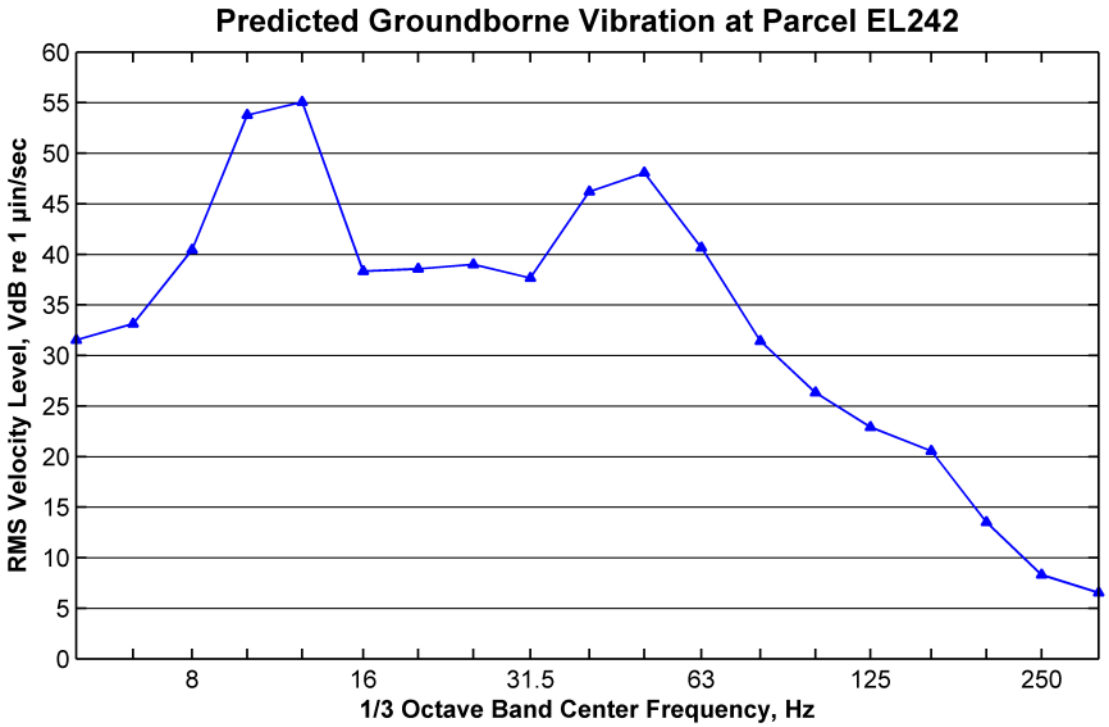
The predicted groundborne vibration levels for the Coast Bellevue Hotel are shown in Table 6-10. The FTA impact threshold for residential land uses (including hotels) is a maximum level of 72 VdB in any 1/3 octave band. The predicted groundborne vibration spectrum is shown in Figure 6-17. The predicted groundborne vibration is below the FTA impact threshold. Therefore, no vibration mitigation is recommended.

[5] The results of the Sound Transit Central Link vibration measurements are documented in the report: *Vibration Measurements of Existing Sound Transit Trains,* dated July 14, 2013.

Table 6-10: Predicted Groundborne Vibration Levels for Coast Bellevue Hotel (Parcel EL242)

Location	Predicted Vib. Vel. level in max. 1/3 octave band (VdB)	Max. 1/3 octave band	FTA Groundborne Vibration Impact Threshold (VdB)
Parcel EL242	55	12.5 Hz	72

Figure 6-17: Predicted Groundborne Vibration Spectra at Coast Bellevue Hotel (Parcel EL242)



6.7 Lake Bellevue Condominiums (Parcel EL261)

This section presents the vibration impact assessment for the Lake Bellevue Condominiums, located adjacent to the BNSF right-of-way north of the Hospital Station. The Condominiums are on a site with unusual soil conditions and construction.

A vibration propagation test was conducted at the Lake Bellevue Condominiums to determine the vibration propagation characteristics from the tracks into the Condominiums. The Condominiums are constructed on piles over Lake Bellevue and the parking area between the tracks and the Condominiums has a geofoam layer underneath the paved surface. The measurement locations from the test are shown in Figure 6-18. A summary of the vibration propagation measurement follows:

- Impact Locations: In the existing BSNF right-of-way, in the center of the east-most existing track.
- Parking lot accelerometer locations: 30 ft, 60 ft, 80 ft, 110 ft, 160 ft, and 175 ft from the impact line. Note that there is layer of geofoam under the parking lot.

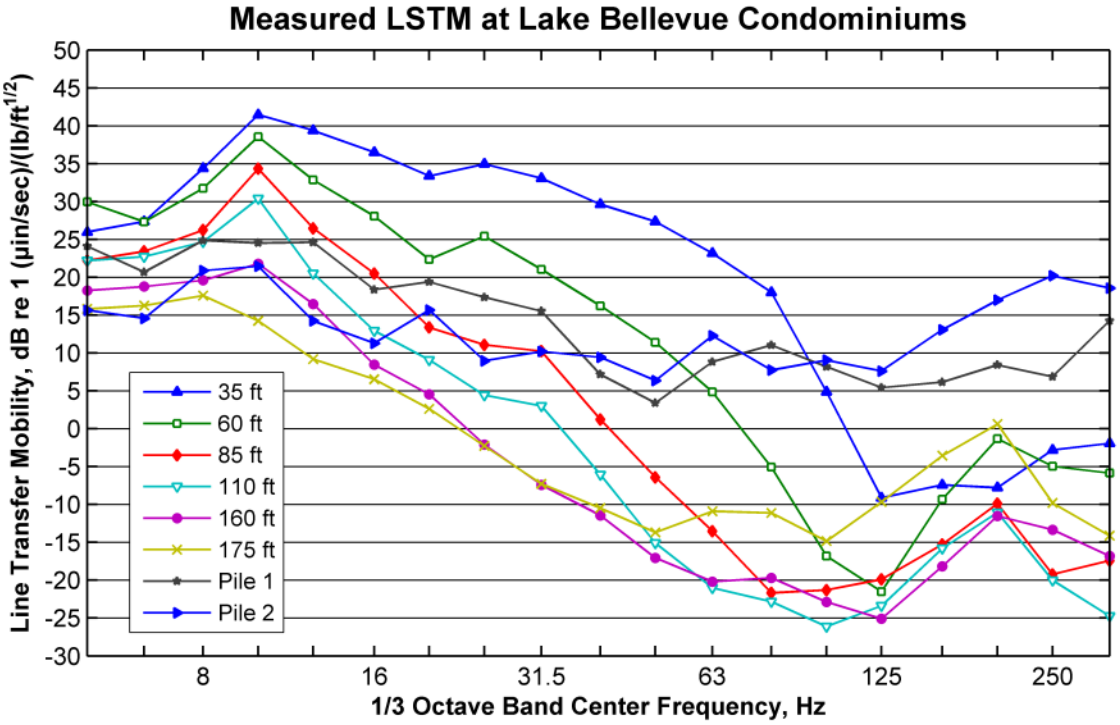
- Two accelerometers located on the piles of the deck between the condominiums.

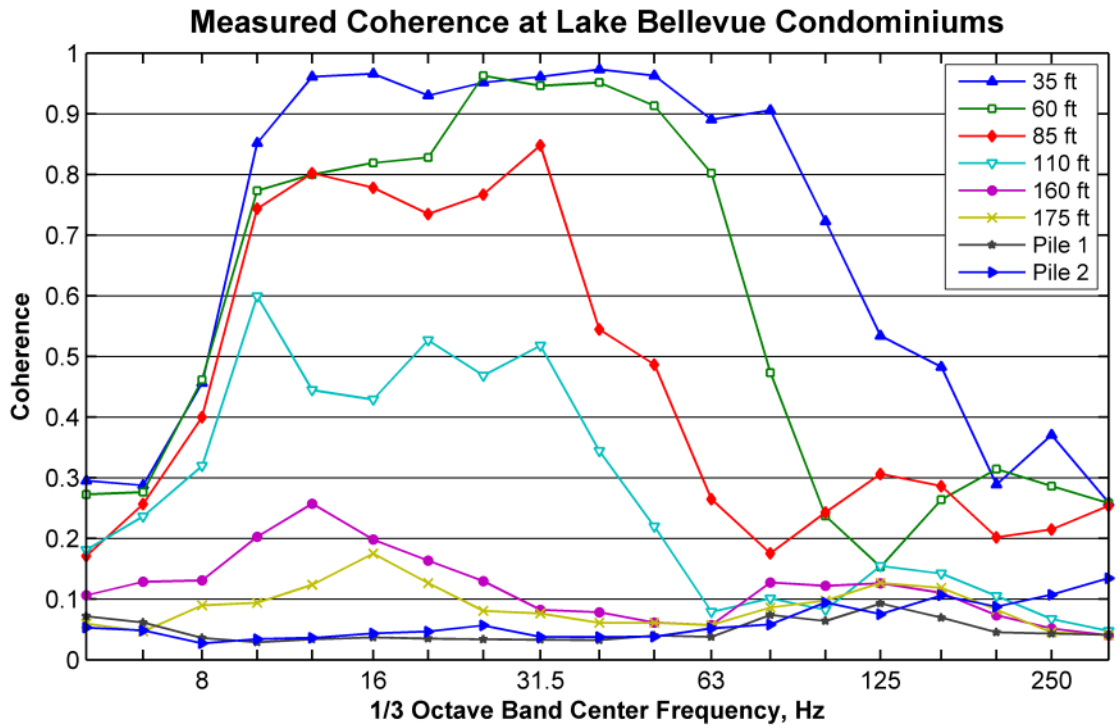
Figure 6-20 shows the LSTM and coherence for the measurement positions. There is very poor coherence for the LSTM data measured on the piles of the Lake Bellevue Condominiums and at the further distances (160 ft and 175 ft). Coherence is a measure of the relationship between the impact force and the acceleration response. Low coherence indicates that the measured response is not related to the input force, and is sign of low confidence in the data. Because the low coherence indicates there was no measurable vibration response on the piles, we infer that there is no significant amplification form the construction of the condominium structure on top of the piles. Therefore, the building adjustment used in the predictions for the Lake Bellevue Condominiums was 0 decibels.

Figure 6-18: Vibration Propagation Measurement Locations, Lake Bellevue Condominiums (Parcel EL261)

Figure 6-19: Accelerometer Location on top of a Pile (Orange Cone)

Figure 6-20: Measured LSTM and Coherence at Lake Bellevue Condominiums (Parcel EL261)





The groundborne vibration prediction methodology follows the procedure described in Section 4.4. The predictions also include the following adjustments and assumptions:

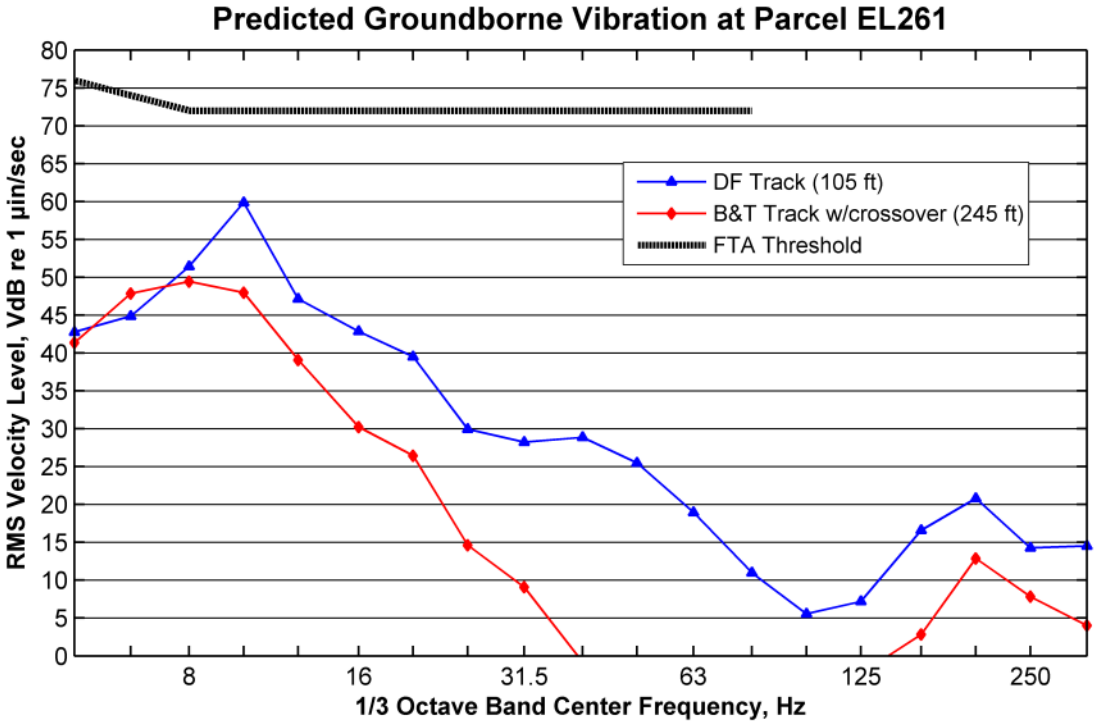
- The LRT tracks transition from direct-fixation on a retained fill to ballast and tie track type near the Lake Bellevue Condominiums. Predictions are included for both track types.
- A crossover is located approximately 245 feet from the Lake Bellevue Condominiums. The FTA guidance manual recommends an adjustment of +10 dB for crossovers, but in our experience, the additional vibration from a crossover does not exceed +5 dB at distances greater than 150 ft. A +5 dB adjustment was included in the prediction to account for the crossover.
- The measurement data on top of the piles did not show evidence of vibration amplification; therefore, a building adjustment of 0 decibels was used in the predictions.

The predicted groundborne vibration levels for the Lake Bellevue Condominiums are shown in Table 6-11. The FTA impact threshold for residential land uses is a maximum level of 72 VdB in any 1/3 octave band. The predicted groundborne vibration spectra are shown in Figure 6-21. The predicted groundborne vibration is below the FTA threshold in all 1/3 octave bands. Therefore, no vibration mitigation is recommended.

Table 6-11: Predicted Groundborne Vibration Levels at Lake Bellevue Condominiums (Parcel EL261)

Location	Predicted Vib. Vel. level in max. 1/3 octave band (VdB)	Max. 1/3 octave band	FTA Groundborne Vibration Impact Threshold (VdB)
Parcel EL261, DF Track (105 ft)	60	10 Hz	72
Parcel EL261, B&T Track with Crossover (245 ft)	49	8 Hz	72

Figure 6-21: Predicted Groundborne Vibration at Lake Bellevue Condominiums (Parcel EL261)



6.8 Mercer Education (Parcel EL263)

Mercer Education (parcel EL263) offers tutoring, enrichment programs, and counseling. The Mercer Education facility is assessed using the Residential (Day) criteria for detailed vibration analysis. The FTA Guidance Manual does not specify a detailed vibration criteria for institutional land uses such as schools and churches, so the Residential (Day) criteria is commonly used. The vibration prediction for this parcel assumes DF track and a train speed of 35 mph. The results from the vibration propagation test at the Coast Bellevue Hotel (parcel EL242) were used to estimate the LSTM for Mercer Education. The LSTM and coherence for the Coast Bellevue Hotel vibration propagation test are shown in Figure 10-15.

The predicted vibration level for Mercer Education (parcel EL263) is presented in Table 6-12. The predicted vibration level is below the FTA vibration impact threshold, therefore, no vibration mitigation is recommended.

Table 6-12: Predicted Groundborne Vibration Levels at Mercer Education (Parcel EL263)

Location	Predicted Vib. Vel. level in max. 1/3 octave band (VdB)	Max. 1/3 octave band	FTA Groundborne Vibration Impact Threshold (VdB)
Mercer Education Parcel EL263	65	50 Hz	78

7.0 NOISE IMPACT ASSESSMENT USING BELLEVUE CITY CODE

This section presents the results of the Contract E335 noise impact assessment of light-rail operations using the Bellevue City Code (BCC) noise limits. Included in the analysis are parcels from the East Main Station to the Downtown Bellevue Tunnel south portal that are in the City of Bellevue (COB) Environmental Designation for Noise Abatement (EDNA) Class A.

The noise impact thresholds used for this noise impact assessment are the maximum permissible sound levels set by BCC 9.18.030. The predicted light-rail operations noise levels are compared to those thresholds. The modeling for this report predicts that after installation of the mitigation required by the FTA Record of Decision, noise from train operations will comply with Chapter 9.18 of the BCC at all EDNA Class A properties

7.1 Bellevue City Code Noise Limits

7.1.1 Exemptions Applicable to Train Noise

Chapter 9.18 of the Bellevue City Code states maximum permissible sound levels within the City. BCC 9.18.020.B.5 exempts from these maximum permissible sound levels all sounds created by the operation of motor vehicles at all times when the receiving property is in a commercial or industrial zone (Class B or C EDNA), but this exemption applies only during the defined daytime of 7 a.m. to 10 p.m. weekdays and 9 a.m. to 10 p.m. on weekends when the receiving property is in a residential zone (Class A EDNA).

This noise report presents predicted noise levels from train operations at Class A EDNA properties during the defined nighttime hours of 10 p.m. to 7 a.m. when a 10 dBA maximum permissible sound level reduction is in effect per BCC 9.18.030.C. This report does not predict noise levels from 7 a.m. to 9 a.m. on weekends because the 10 dBA maximum permissible sound level reduction for nighttime noise does not apply after 7 a.m. and the noise from train operations is predicted to comply with the maximum permissible sound levels defined by BCC 9.18.030. Noise from train and wayside warning devices such as bells and horns are exempt from the BCC maximum permissible sound levels as safety warning devices.

7.1.2 Maximum Permissible Sound Levels

The maximum permissible sound levels for residentially zoned properties are presented in BCC 9.18.030.B. The maximum permissible sound levels are reduced by 10 dBA during nighttime hours, from 10 p.m. to 7 a.m. (BCC 9.18.030.C.1) and are increased for short duration noise events (BCC 9.18.030.C.3). The duration of the train events is between 90 seconds and 5 minutes in one hour for peak hour train headways, which is considered a short duration noise event, so the maximum permissible noise levels increase by 10 dBA. The definition of the duration of a train event is presented in the following section for various train speeds.

The maximum permissible noise levels used in this analysis are presented in Table 7-1. The levels in the table include the 10 dB reduction for nighttime noise and a 10 dB increase for short duration events. The maximum permissible sound level is only presented for Class A EDNA receiving properties because LRT noise is exempt from the BCC noise limits for Class B and Class C EDNA receiving properties per BCC 9.18.020.B.5.

Table 7-1: Maximum Permissible Sound Levels for Light Rail Vehicles

EDNA of Source	Maximum Permissible Sound Level for Class A EDNA Receiving Property, Leq(10pm to 7am), dBA
Class A	55 dBA
Class B	57 dBA
Class C	60 dBA

Source: Bellevue City Code Chapter 9.18

BCC 9.18.030 does not specify which noise metric applies to the maximum permissible sound levels. A noise metric is a descriptor of what the reported sound level represents, such as a maximum level or an average level over a given period of time. Two different noise metrics are defined in the noise code, Leq and Ldn. Ldn cannot be used for nighttime sound levels because it is, by definition, a 24-hour noise metric. This report therefore uses Leq as the noise metric.

Chapter 9.18 BCC also does not identify what time period should be used to model noise from train operations, and does not identify how the duration of train events should be defined. As explained below, this report uses a one-hour Leq and defines the duration of train events in a manner that is consistent with the FTA's guidance manual, in order to apply the code in a conservative manner that does not understate the noise from nighttime train operations.

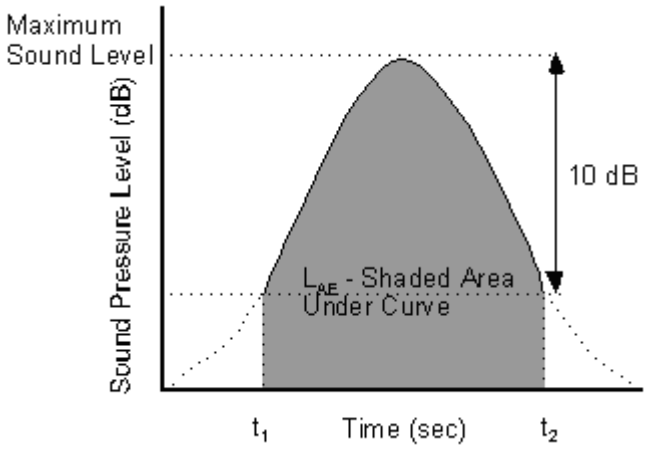
Leq is an energy average of the noise levels over a defined period of time. The noise code does not specify the period of time for the Leq. Since the noise code defines a maximum permissible noise level for nighttime hours and defines nighttime as the period between 10 p.m. to 7 a.m., it would be consistent with the code to use a 9-hour Leq corresponding to the nighttime period. However, light rail trains will not run throughout the night, and ambient noise will also be less during the middle of the night. This report therefore uses a 1-hour Leq to predict the noise from the train events during the two nighttime hours when the noise from trains will be most perceptible. For comparison purposes this report also models ambient noise during those two nighttime hours.

Using 1-hour Leq, this report predicts train noise during the 6 a.m. to 7 a.m. hour, the nighttime hour with the highest number of trains and therefore highest train noise 1-hour Leq. There will be eight-minute train headways during this hour. This report also presents the existing ambient 1-hr Leq during these same hours for reference.

7.2 Duration of Train Event

It is difficult to define train duration because it is not a fixed noise source, therefore the duration of the event will depend on train speed and train length. A reasonable definition for duration of a train event is to use the duration applied when calculating the sound exposure level (SEL). The SEL is a noise metric used in the FTA noise analysis and is defined in the FTA guidance manual as the level of sound accumulated over a given time interval or event. The FTA manual does not specifically state the duration of the time interval or event; however it is common practice to use the 10 dB down points to define the duration of the train event when determining the SEL. The 10 dB down points are the points before and after the maximum level that are 10 dB below the maximum. The Federal Highway Administration's Traffic Noise Model User's Guide states that as a minimum the SEL should encompass the 10 dB down points. In Figure 7-1, the 10 dB down points are at t_1 and t_2, and the duration of the event would be the time elapsed between t_1 and t_2. The time between the 10 dB down points is reasonably interpreted to be the acoustical duration of a train event.

Figure 7-1: Noise Event Illustrating 10 dB Down Points



Source: FHWA Traffic Noise Model Users Guide,

Table 7-2 shows the duration of train events using the 10 dB down point definition for a receiver at 50 feet and a 4-car train. The distance of 50 feet is commonly used as a reference distance for train noise events because the sound level at 50 feet generally exceeds the ambient noise level by at least 10 dB.

Table 7-2 shows the duration of a single train event and the duration of all train events for the hour with the most train events. The nighttime hour with the most train events is 6 a.m. to 7 a.m. During this hour the operating plan (see Table 7-2 below) shows 7.5 events in each direction, for this analysis this is rounded up to be 8 events in each direction resulting in a conservative total of 16 events in the hour. . The duration of train events in 1 hour for train speeds from 25 mph to 55 mph is between 1.5 minutes and 3.5 minutes. This duration corresponds to a 10 dBA increase to the maximum permissible sound levels for any receiving

property per BCC 9.18.030.C.3.c. The 10 dBA increase is applied to the maximum permissible sound level for nighttime hours (10 p.m. to 7 a.m.).

Table 7-2: Duration of Train Events for Different Train Speeds

Train Speed:	55 mph	50 mph	45 mph	40 mph	25 mph
Train Length:	380 ft.	380 ft.	380 ft.	380 ft.	380 ft.
Duration of 1 event (seconds):	6.0 sec	6.6 sec	7.2 sec	8.2 sec	13.0 sec
Max events per hour[1]:	16	16	16	16	16
Duration of train events in 1-hour:	1.6 min	1.8 min	1.9 min	2.2 min	3.5 min

[1]There are 15 scheduled events per hour, but the calculation assumes 16 events in order to be conservative.

The BCC does not define the duration of a train noise event and the definition presented in this section is not the only possible interpretation. An alternative interpretation is defining the time it takes the train to travel past a point. The duration of a train event using this alternative interpretation is the train length divided by the train speed, which would result in a shorter duration and therefore a higher permissible noise level (an increase of 15 dBA instead of 10 dBA per 9.18.030.C.3.c) for some train speeds than the definition of train duration adopted in this report.

7.3 Prediction Location

BCC 9.18.030.A states "the point of measurement shall be at the property boundary of the receiving property or anywhere within." Therefore, predicted noise levels should be presented at the location within the property where the noise will be the highest. In general, noise levels decrease with distance so the highest noise levels will be at the property line closest to the LRT tracks. However, when a sound wall is located close to the property line, the sound wall will provide the highest noise reduction at the property line and the noise level may be higher somewhere between the property line and the building facade where the sound wall is less effective.

To illustrate this point, Table 7-3 shows the difference in noise reduction for a sound barrier placed 20 feet from the LRT tracks and a barrier placed close to the property line (55 feet from the LRT tracks), where the property line is 60 feet from the track. The calculations assume flat topography and an 8 feet barrier height.

As shown in Table 7-3, the predicted noise reduction for the barrier located close to (20 feet from) the tracks has very little variation with distance. Noise levels decrease with distance; therefore, the highest noise level is expected to be at the property line and not at the building facade. However, for the barrier located close to the property line (55 feet from the tracks), noise levels may be higher at 100 feet compared to the 60 feet position, because the sound barrier is about 4 decibels less effective.

Table 7-3: Effect of Sound Barrier Location on Noise Reduction

Distance to Measurement Position	Predicted Noise Reduction for barrier located 20 ft. from tracks, dB	Predicted Noise Reduction for barrier located 55 ft. from tracks, dB
60 ft.	12.6	13.3
70 ft.	12.6	10.5
80 ft.	12.5	9.6
90 ft.	12.5	9.1
100 ft.	12.5	8.9

Note:

Predicted noise reduction from barrier assumes 8 ft. barrier height and flat topography.

Any location on a receiving property further away from the LRT track than the building structure will receive noise reduction from acoustical shielding from the structure itself. Therefore, noise predictions are presented at the building facade on the property for parcels where a sound wall is located close to the property line. The prediction location (property line or building facade) is indicated in the footnote in the bottom row of Table 4-1.

7.4 Noise Impact Assessment Methodology

The noise from light-rail vehicle (LRV) operations is predicted using the FTA detailed noise analysis procedure presented in the FTA Transit Noise and Vibration Impact Assessment guidance manual[6]. The FTA detailed noise analysis procedure is a spreadsheet model that uses formulas presented in the FTA guidance manual. The formulas take into account the following specific operating characteristics of the Sound Transit system:

- Measured reference sound level of existing Sound Transit LRVs,
- train operating schedule,
- train speed, and
- track structure

ATS Consulting took reference sound level measurements on the existing Sound Transit Central Link light-rail system in August 2014[7]. Measurements were taken on at-grade, ballast-and-tie track and on direct-fixation track on an aerial structure. The measurements were made using a 3-car train consist traveling at controlled speeds during non-revenue service hours and measurements of 2-car train consists during regular revenue service hours. The results of the noise measurements showed maximum noise levels from the light rail vehicle of 79 dBA at 50 feet and 40 mph. The noise levels on the Central Link system are about 2 decibels higher than the FTA reference noise level for LRVs. The measured maximum noise levels of the existing light rail vehicle was converted to a reference sound exposure level (SEL) which is the train passby compressed into a 1-second period. The referenced SEL used for the predictions in this analysis is 84 dBA at 50 feet for a one-car train traveling at 50 mph for ballast-and-tie track (2 decibels

[6] FTA-VA-90-1003-06. May 2006.

[7] The sound level measurements of the existing Sound Transit Central Link light-rail system are documented in the report: *Noise Measurements of Existing Sound Transit Trains* dated August 21, 2014.

higher than the FTA reference level of 82 dBA). The 1-car referenced SEL is adjusted to the number of rail vehicles per train which for East Link is a 4-car train consists. The measured reference levels for ballast-and-tie track and direct fixation track are shown in Table 7-4.

Table 7-4: Measured SEL Reference Levels

Track-type	SEL Reference Level, dBA[1]
Ballast-and-Tie	84
Direct Fixation	88

[1]SEL reference level is for a one-car train traveling at 50 mph at 50 ft

The train schedule from Sound Transit's Revised 2035 Light Rail Operation Plans, shown in Table 7-5, was used for the noise predictions. Note that the revised 2035 operating schedule is different than the assumptions used in the Final EIS predictions. The revised operating schedule assumes 8 minute peak headways and 4-car train consists, while the Final EIS schedule assumed 7-minute peak headways and 3-car train consists. The operating speeds and track structure type assumed in the predictions are based on the information in the 60% design drawings.

Table 7-5: East Link Operating Plan

Hours	Headway (minutes)	Total Trains in One Direction
5-6 a.m.	15	4
6-7 a.m.	8	7.5
7-8:30 a.m.	8	11.25
8:30 a.m.-3:00 p.m.	10	39
3-6:30 p.m.	8	26.25
6:30-10 p.m.	10	21
10 p.m.-1:00 a.m.	15	12
1-5 a.m.	0	0
Total Nighttime (10 p.m. - 7 a.m.)	-	23.5[1]

Notes:

Schedule is for trains in one direction.

[1]Total number of nighttime trains in one direction is rounded up to 24 when calculating predicted noise levels.

In addition to the operating characteristics of the system, the noise formulas also account for distance from the sensitive receiver to the tracks, ground absorption effects, and noise reduction from barriers recommended in the final design noise mitigation analysis using the FTA noise impact thresholds. The sound barrier lengths and locations recommended in the final design noise mitigation analysis are summarized in Table 7-6. The locations of the barriers are shown in Figure 4-1.

Table 7-6: Recommended Sound Wall Lengths and Heights from FTA Noise Impact Analysis

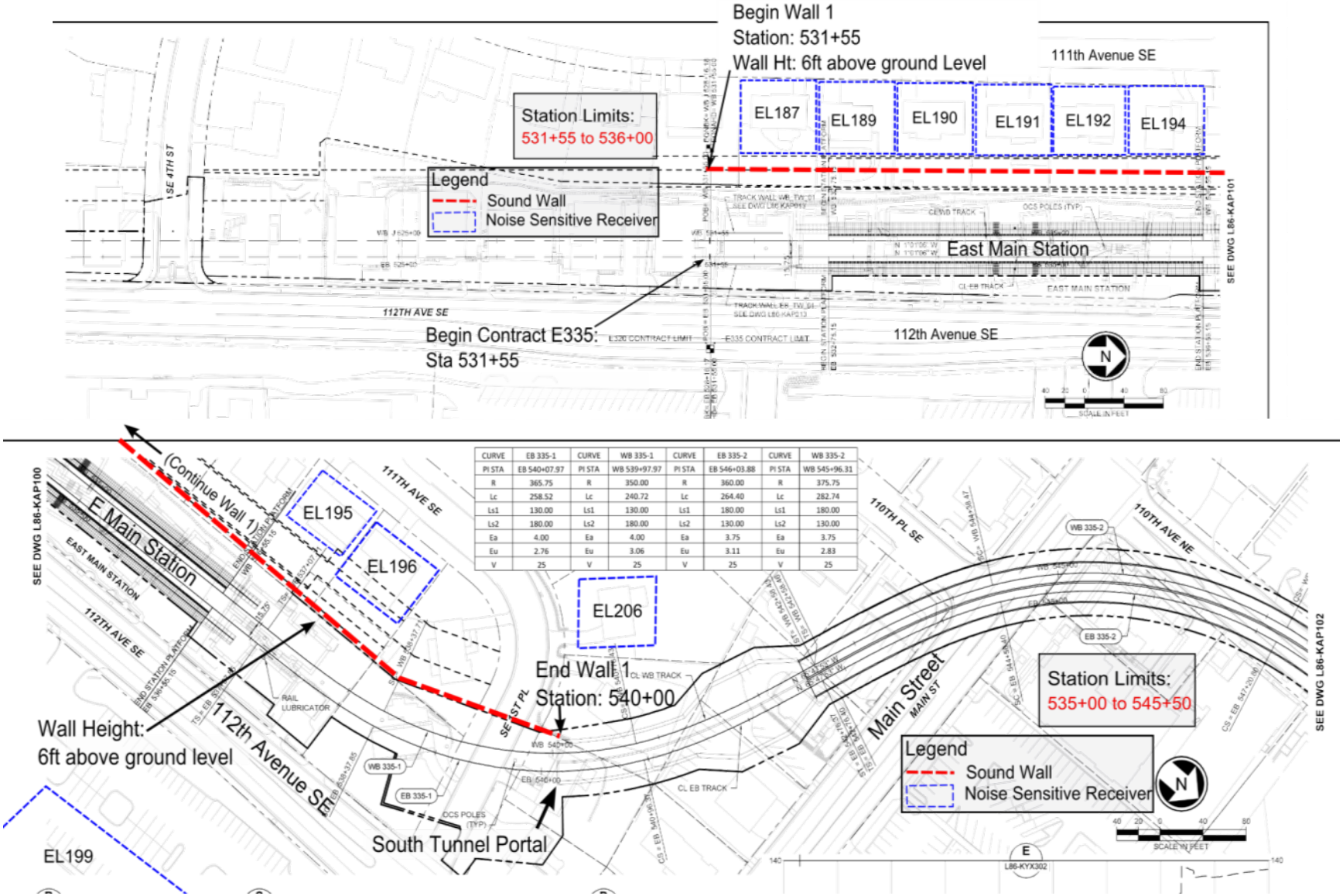
Wall	Start Station	End Station	Wall Length	Wall Height
1	531+55	540+15 (DBT South Portal)	860 ft.	~6 ft. above ground level at WB track right-of-way line.

7.5 Noise Impact Assessment

This section presents a detailed noise impact analysis of light-rail vehicle operations. Table 4-1 presents the predicted nighttime noise levels for Class A EDNA land uses within the Contract E335 limits. Each Class A parcel is identified in the first column of the table. Table 7-8 is a list of all parcel labels and corresponding street addresses. The location of all the EDNA Class A parcels with respect to the light-rail tracks, as well as the sound walls included in the analysis are shown in Figure 7-2.

The predicted nighttime noise levels with the noise mitigation required by the Record of Decision are compared with the maximum permissible noise levels defined in the Bellevue City Code. Predicted nighttime noise levels do not exceed the BCC maximum permissible noise level at any of the EDNA Class A parcels within the E335 Contract.

Figure 7-2: Recommended Sound Wall for Parcels EL187-EL196, and EL206



CURVE	EB 335-1	CURVE	WB 335-1	CURVE	EB 335-2	CURVE	WB 335-2
PI STA	EB 540+07.97	PI STA	WB 539+97.97	PI STA	EB 546+03.88	PI STA	WB 545+96.31
R	365.75	R	350.00	R	360.00	R	375.75
Lc	258.52	Lc	240.72	Lc	264.40	Lc	282.74
Ls1	130.00	Ls1	130.00	Ls1	180.00	Ls1	180.00
Ls2	180.00	Ls2	180.00	Ls2	130.00	Ls2	130.00
Ea	4.00	Ea	4.00	Ea	3.75	Ea	3.75
Eu	2.76	Eu	3.06	Eu	3.11	Eu	2.83
V	25	V	25	V	25	V	25

Table 7-7: Predicted Nighttime Noise Levels, with FTA Mitigation Included - 6am to 7am

Parcel	Distance[1] (ft)	Speed (mph)	Ambient Noise Level, Leq[2], dBA	Predicted Train Noise, Leq, dBA	Nighttime Impact Threshold, Leq(1-hr)[3], dBA	Amount Exceeds Threshold, dBA
EL187	106	35	59	43	55	-12
EL189	93	35	59	43	55	-12
EL190	96	25	59	41	55	-14
EL191	100	25	59	41	55	-14
EL192	97	25	59	41	55	-14
EL194	93	25	59	46	55	-9
EL195	100	25	59	45	55	-10
EL196	70	25	59	47	55	-8
EL206	115	25	***61***	44	55	-11

Notes:

[1]The distance is to the building facade, because the predicted noise level is higher at the building facade than at the property line due to the location of the sound wall

[2] Ambient noise level shown in bold italics is for the parcels where the noise level was measured. At all other parcels the ambient noise level was estimated based on the measurement and the relative distances to the roadway.

[3]Nighttime impact threshold is from the maximum permissible sound levels from the BCC applicable to train noise received in residential properties.

Table 7-8 lists the addresses of the parcels that are referenced in this report.

Table 7-8: List of Parcel Numbers and Corresponding Addresses

Parcel	Address
EL187	240 111TH AVE SE
EL189	236 111TH AVE SE
EL190	226 111TH AVE SE
EL191	220 111TH AVE SE
EL192	212 111TH AVE SE
EL194	204 111TH AVE SE
EL195	200 111TH AVE SE
EL196	112 111TH AVE SE
EL206	11102 SE 1TH PL

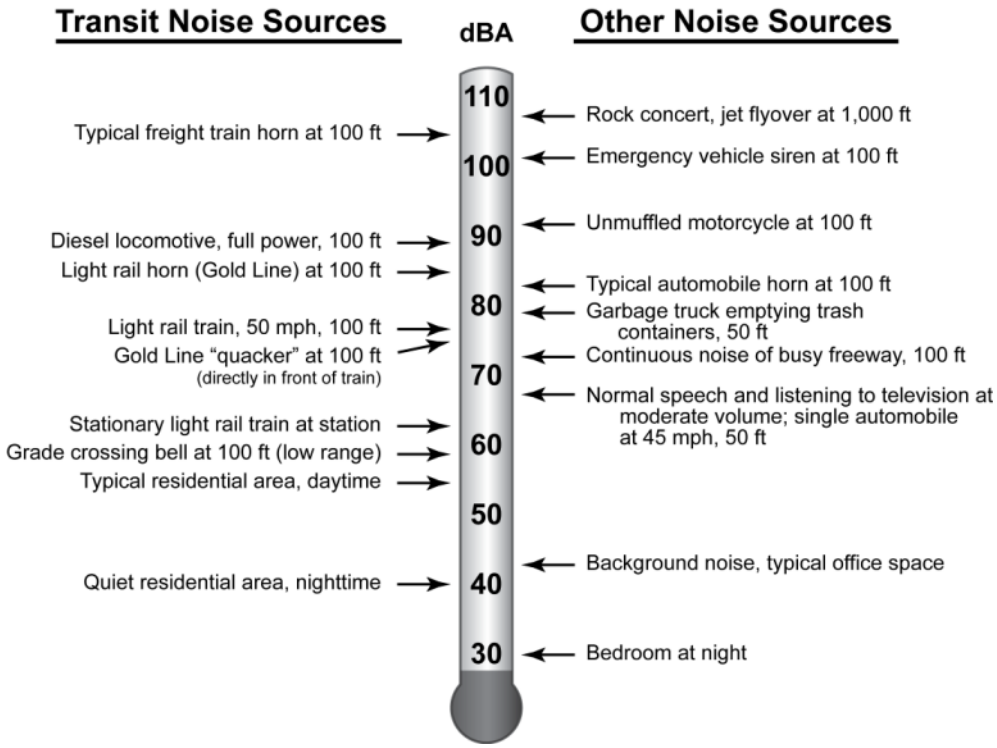
APPENDIX A: BACKGROUND ON NOISE AND VIBRATION

A.1 Noise Fundamentals

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise is generally defined as unwanted or excessive sound. Sound can vary in intensity by over one million times within the range of human hearing. Therefore, a logarithmic scale, known as the decibel scale (dB), is used to quantify sound intensity and compress the scale to a more convenient range.

Sound is characterized by both its amplitude and frequency (or pitch). The human ear does not hear all frequencies equally. In particular, the ear deemphasizes low and very high frequencies. To better approximate the sensitivity of human hearing, the A-weighted decibel scale has been developed. A-weighted decibels are abbreviated as "dBA." On this scale, the human range of hearing extends from approximately 3 dBA to around 140 dBA. As a point of reference, Figure A-1includes examples of A-weighted sound levels from common indoor and outdoor sounds.

Figure A-1: Typical Indoor and Outdoor Noise Levels



Using the decibel scale, sound levels from two or more sources cannot be directly added together to determine the overall sound level. Rather, the combination of two sounds at the same level yields an increase of 3 dB. The smallest recognizable change in sound level is approximately 1 dB. A 3-dB increase in the A-Weighted sound level is generally considered perceptible, whereas a 5-dB increase is readily perceptible. A 10-dB increase is judged by most people as an approximate doubling of the perceived loudness.

The two primary factors that reduce levels of environmental sounds are increasing the distance between the sound source and the receiver and having intervening obstacles such as walls, buildings, or terrain features that block the direct path between the sound source and the receiver. Factors that act to make environmental sounds louder include moving the sound source closer to the receiver, sound enhancements caused by reflections, and focusing caused by various meteorological conditions.

Following are brief definitions of the measures of environmental noise used in this study:

- *Maximum Sound Level (L_{max}):* L_{max} is the maximum sound level that occurs during an event such as a train passing. For this analysis L_{max} is defined as the maximum sound level using the slow setting on a standard sound level meter.
- *Equivalent Sound Level (L_{eq}):* Environmental sound fluctuates constantly. The equivalent sound level (L_{eq}) is the most common means of characterizing community noise. L_{eq} represents a constant sound that, over a specified period of time, has the same sound energy as the time-varying sound. L_{eq} is used by the FTA to evaluate noise effects at institutional land uses, such as schools, churches, and libraries, from proposed transit projects.
- *Day-Night Sound Level (L_{dn}):* L_{dn} is basically a 24-hour L_{eq} with an adjustment to reflect the greater sensitivity of most people to nighttime noise. The adjustment is a 10 dB penalty for all sound that occurs between the hours of 10:00 p.m. to 7:00 a.m. The effect of the penalty is that, when calculating L_{dn}, any event that occurs during the nighttime is equivalent to ten occurrences of the same event during the daytime. L_{dn} is the most common measure of total community noise over a 24-hour period and is used by the FTA to evaluate residential noise effects from proposed transit projects.
- *L_{xx}:* This is the percent of time a sound level is exceeded during the measurement period. For example, the L_{99} is the sound level exceeded during 99 percent of the measurement period. For a 1-hour period, L_{99} is the sound level exceeded for all except 36 seconds of the hour. L_1 represents typical maximum sound levels, L_{33} is approximately equal to L_{eq} when free-flowing traffic is the dominant noise source, L_{50} is the median sound level, and L_{99} is close to the minimum sound level.
- *Sound Exposure Level (SEL):* SEL is a measure of the acoustic energy of an event such as a train passing. In essence, the acoustic energy of the event is compressed into a 1-second period. SEL increases as the sound level of the event increases and as the duration of the event increases. It is often used as an intermediate value in calculating overall metrics such as L_{eq} and L_{dn}.
- *Sound Transmission Class (STC):* STC ratings are used to compare the sound insulating effectiveness of different types of noise barriers, including windows, walls, etc. Although the amount of attenuation varies with frequency, the STC rating provides a rough estimate of the transmission loss from a particular window or wall.

A.2 Vibration Fundamentals

One potential community effect from the proposed project is vibration that is transmitted from the tracks through the ground to adjacent houses. This is referred to as *groundborne vibration*. When evaluating human response, groundborne vibration is usually expressed in terms of decibels using the root mean square (RMS) vibration velocity. RMS is defined as the average of the squared amplitude of the vibration signal. To avoid confusion with sound decibels, the abbreviation VdB is used for vibration decibels. All vibration decibels in this report use a decibel reference of 1 micro-inch/second (µin/sec.).[8] The potential adverse effects of rail transit groundborne vibration are as follows:

- **Perceptible Building Vibration:** This is when building occupants feel the vibration of the floor or other building surfaces. Experience has shown that the threshold of human perception is around 65 VdB and that vibration that exceeds 75 to 80 VdB may be intrusive and annoying to building occupants.
- **Rattle:** The building vibration can cause rattling of items on shelves and hanging on walls, and various different rattle and buzzing noises from windows and doors.
- **Reradiated Noise:** The vibration of room surfaces radiates sound waves that may be audible to humans. This is referred to as *groundborne noise*. When audible groundborne noise occurs, it sounds like a low-frequency rumble. When the LRT tracks are at-grade, the groundborne noise is usually masked by the normal airborne noise radiated from the transit vehicle and the rails.
- **Damage to Building Structures:** Although it is conceivable that vibration from a light-rail system could cause damage to fragile buildings, the vibration from light-rail transit systems is usually one to two orders of magnitude below the most restrictive thresholds for preventing building damage. Hence the vibration effect criteria focus on human annoyance, which occurs at much lower amplitudes than does building damage.

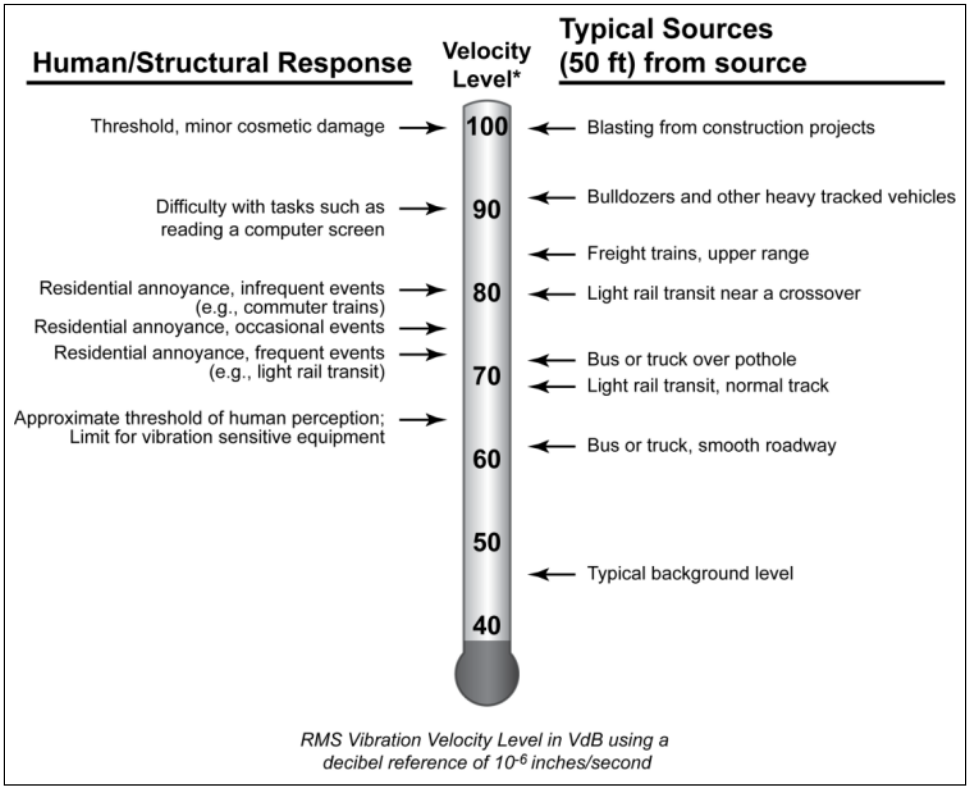
Vibration is an oscillatory motion that can be described in terms of the displacement, velocity, or acceleration of the motion. The response of humans to vibration is very complex. However, the general consensus is that for the vibration frequencies generated by passenger trains, human response is best approximated by the vibration velocity level. Therefore, vibration velocity has been used in this study to describe train-generated vibration levels.

When evaluating human response, groundborne vibration is usually expressed in terms of decibels using the root mean square (RMS) vibration velocity. RMS is defined as the average of the squared amplitude of the vibration signal. To avoid confusion with sound decibels, the abbreviation VdB is used for vibration decibels. All vibration decibels in this report use a decibel reference of 1 µin/sec.

Figure A-2 shows typical vibration levels from rail and non-rail sources as well as the human and structure response to such levels.

[8] One µin/sec= 10^{-6} in/sec.

Figure A-2: Typical Vibration Levels



Although there has been relatively little research into human and building response to groundborne vibration, there is substantial experience with vibration from rail systems. In general, the collective experience indicates that:

- It is rare that groundborne vibration from transit systems results in building damage, even minor cosmetic damage. The primary consideration therefore is whether vibration will be intrusive to building occupants or will interfere with interior activities or machinery.
- The threshold for human perception is approximately 65 VdB. Vibration levels in the range of 70 to 75 VdB are often noticeable but acceptable. Beyond 80 VdB, vibration levels are often considered unacceptable.
- For human annoyance, there is a relationship between the number of daily events and the degree of annoyance caused by groundborne vibration. The FTA Guidance Manual includes an 8 VdB higher impact threshold if there are fewer than 30 events per day and a 3 VdB higher threshold if there are fewer than 70 events per day.

Often it is necessary to determine the contribution at different frequencies when evaluating vibration or noise signals. The 1/3-octave band spectrum is the most common procedure used to evaluate frequency components of acoustic signals. The term “octave” has been borrowed from music where it refers to a span of eight notes. The ratio of the highest frequency to the lowest frequency in an octave is 2:1. For a 1/3-octave band spectrum, each octave is divided

into three bands where the ratio of the lowest frequency to the highest frequency in each 1/3-octave band is $2^{1/3}$:1 (1.26:1). An octave consists of three 1/3 octaves.

The 1/3-octave band spectrum of a signal is obtained by passing the signal through a bank of filters. Each filter excludes all components except those that are between the upper and lower range of one 1/3-octave band. The FTA Guidance Manual is a good reference for additional information on transit noise and vibration and the technical terms used in this section.

APPENDIX B: LIST OF SENSITIVE RECEIVERS

Parcel Number	Address
EL187	240 111TH AVE SE
EL189	236 111TH AVE SE
EL190	226 111TH AVE SE
EL191	220 111TH AVE SE
EL192	212 111TH AVE SE
EL193	204 111TH AVE SE
EL194	200 111TH AVE SE
EL196	112 111TH AVE SE
EL199	11211 MAIN ST
EL206	11102 SE 1TH PL
EL208	112 110TH PL SE
EL210	11030 MAIN ST
EL216	110 Atrium
EL222	Future Marriott Hotel
EL223a	10822 NE 2nd St
EL227	300 110TH AVE NE
EL228	Skyline Tower
EL229	City Hall
EL240	11100 NE 6th ST
EL242	625 116TH AVE NE
EL261	4 LAKE BELLEVUE DR
EL263	1260 116TH AVE NE

APPENDIX C: SUMMARY OF NOISE MEASUREMENTS

Figure C-1: Noise Measurement Position at Parcel EL206 (11102 SE 1st Place)

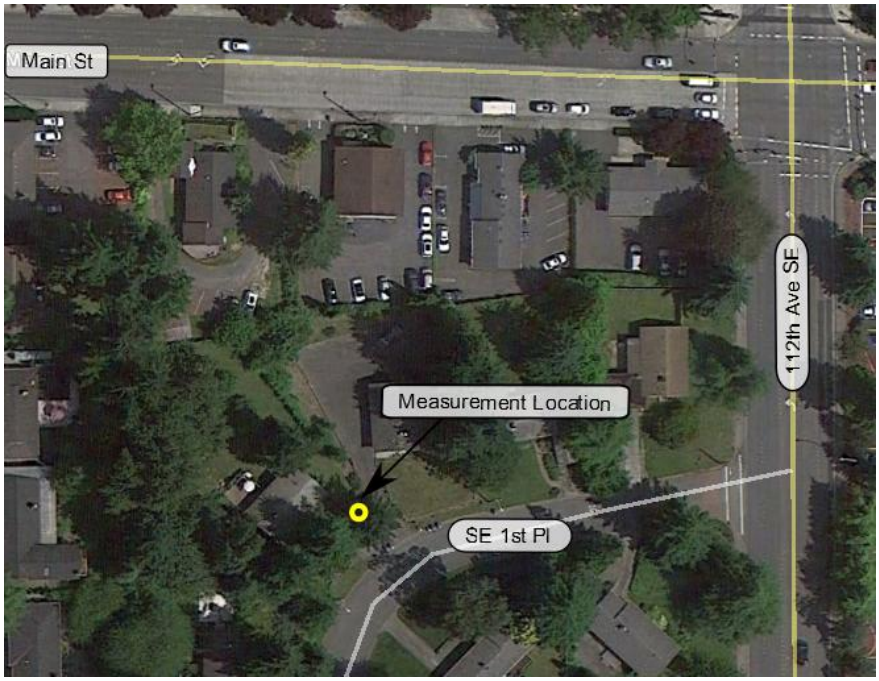


Figure C-2: Noise Measurement Position at Parcel EL236 (Bravern Condominiums, 688 110th Ave NE)

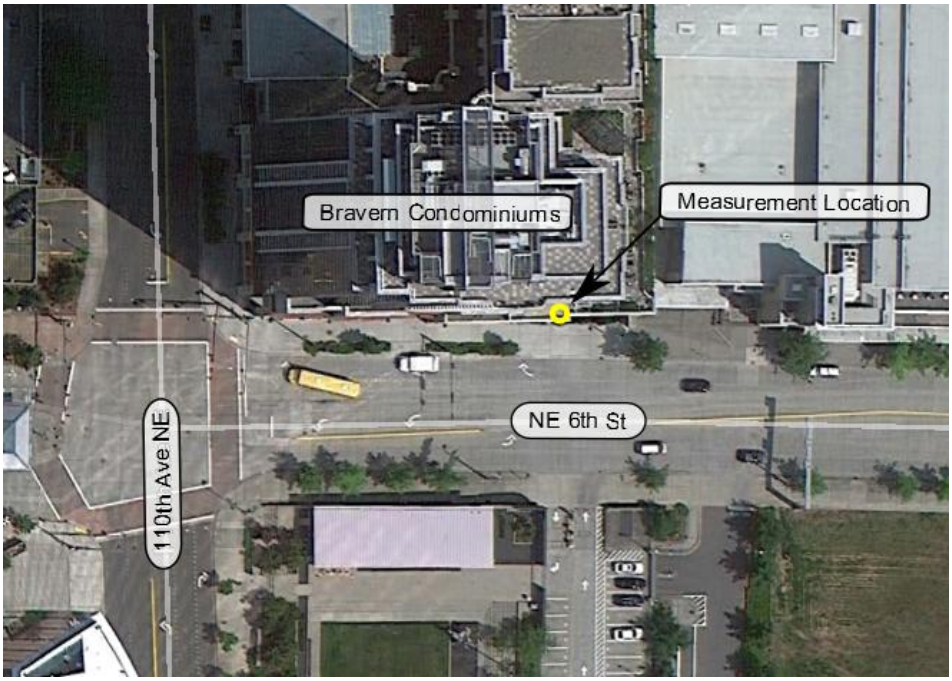
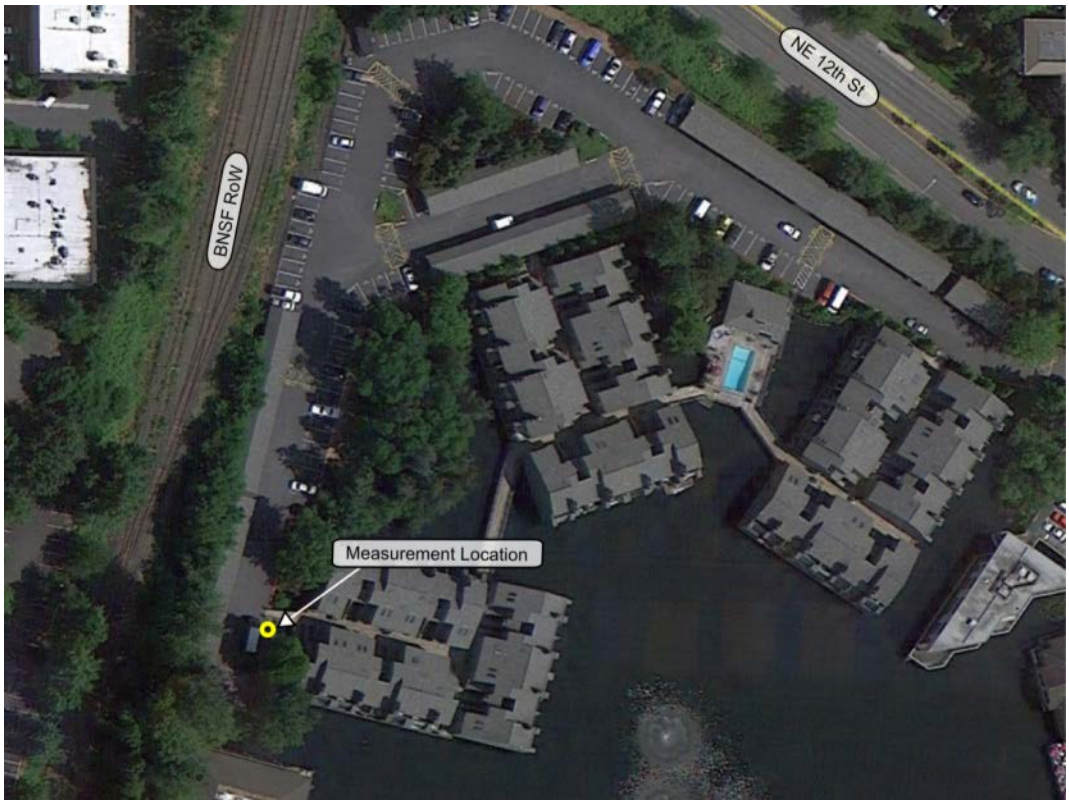


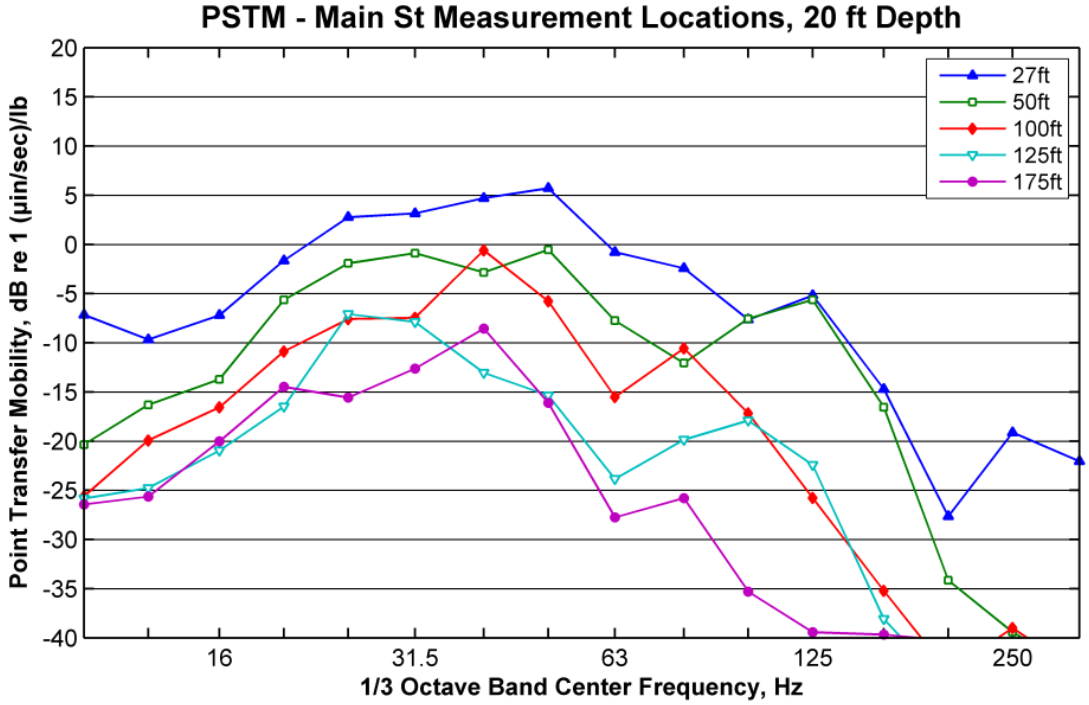
Figure C-3: Noise Measurement Position at Parcel EL242 (Coast Bellevue Hotel, 625 116th Ave NE)

Figure C-4: Noise Measurement Position at Parcel EL261 (4 Lake Bellevue Drive)



APPENDIX D: VIBRATION PROPAGATION MEASUREMENT RESULTS

Figure D-1: Measured PSTM and Coherence for Main Street Borehole, 20 ft Depth at Main Street Measurement Locations



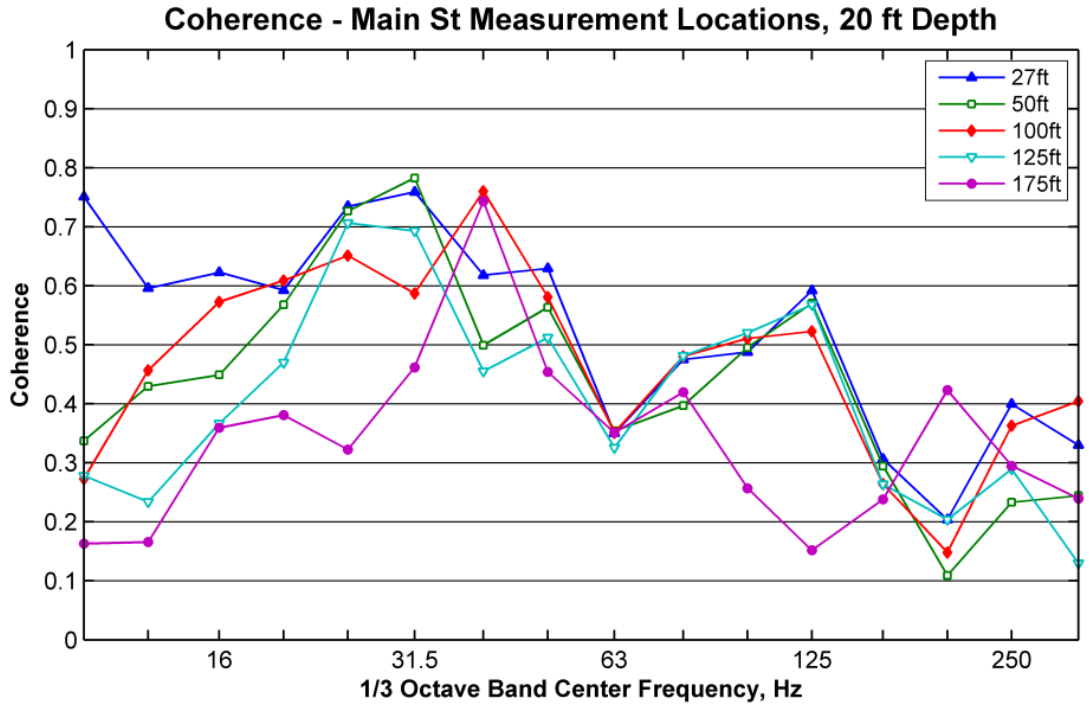
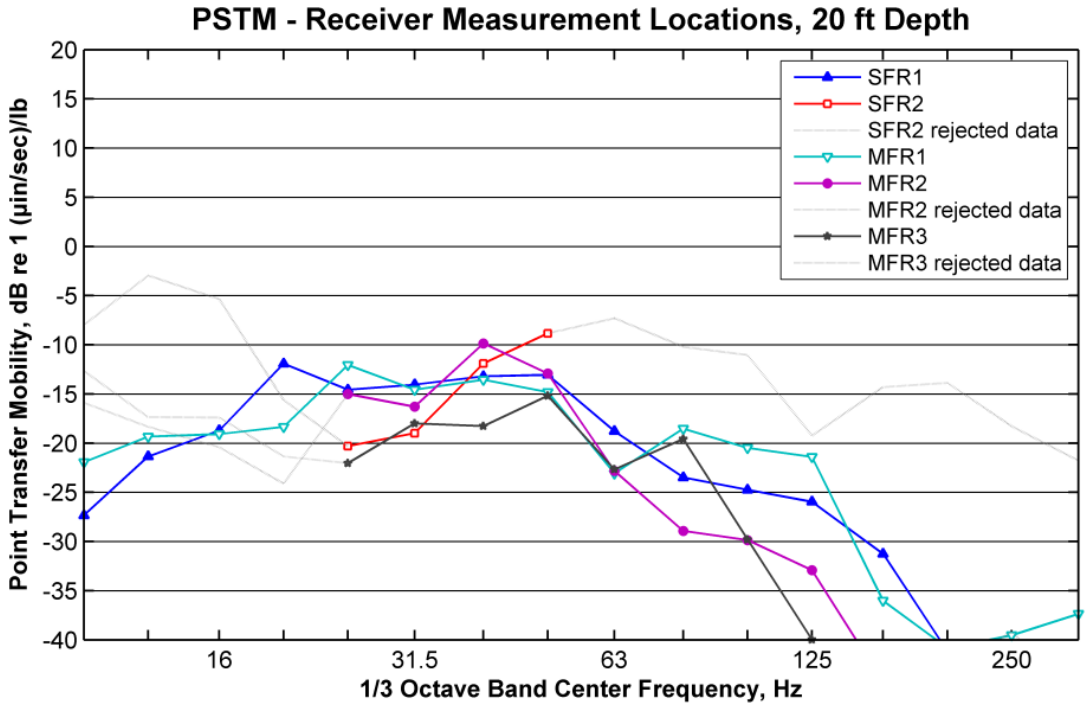


Figure D-2: Measured PSTM and Coherence at Main Street Borehole, 20 ft Depth, Indoor Measurement Locations



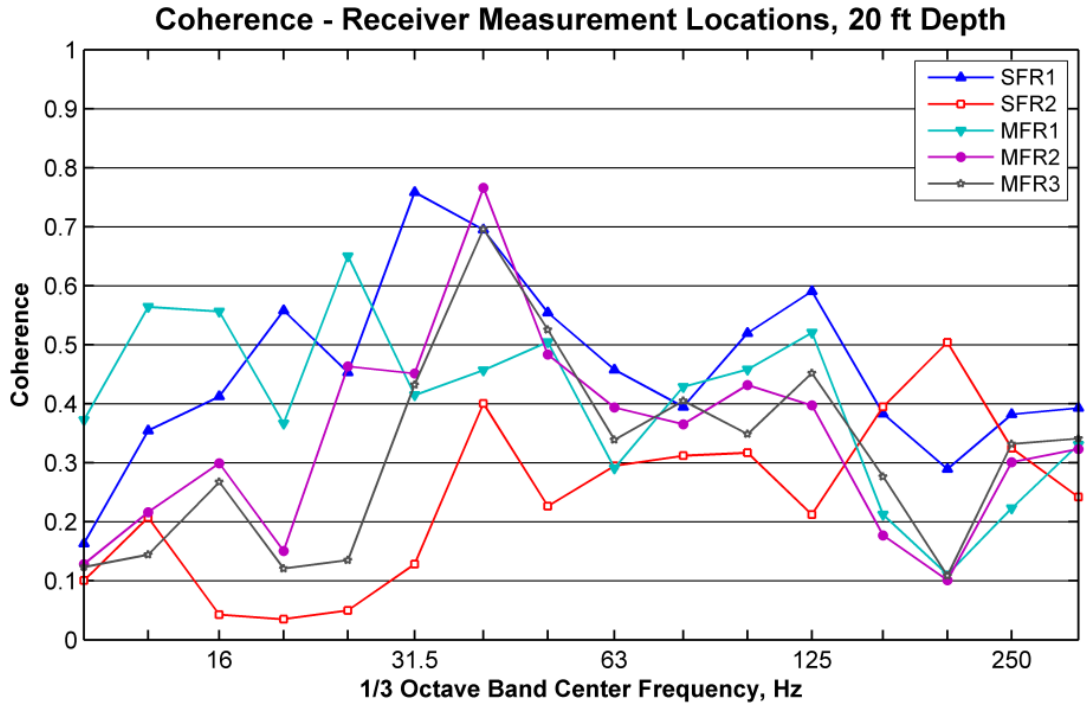
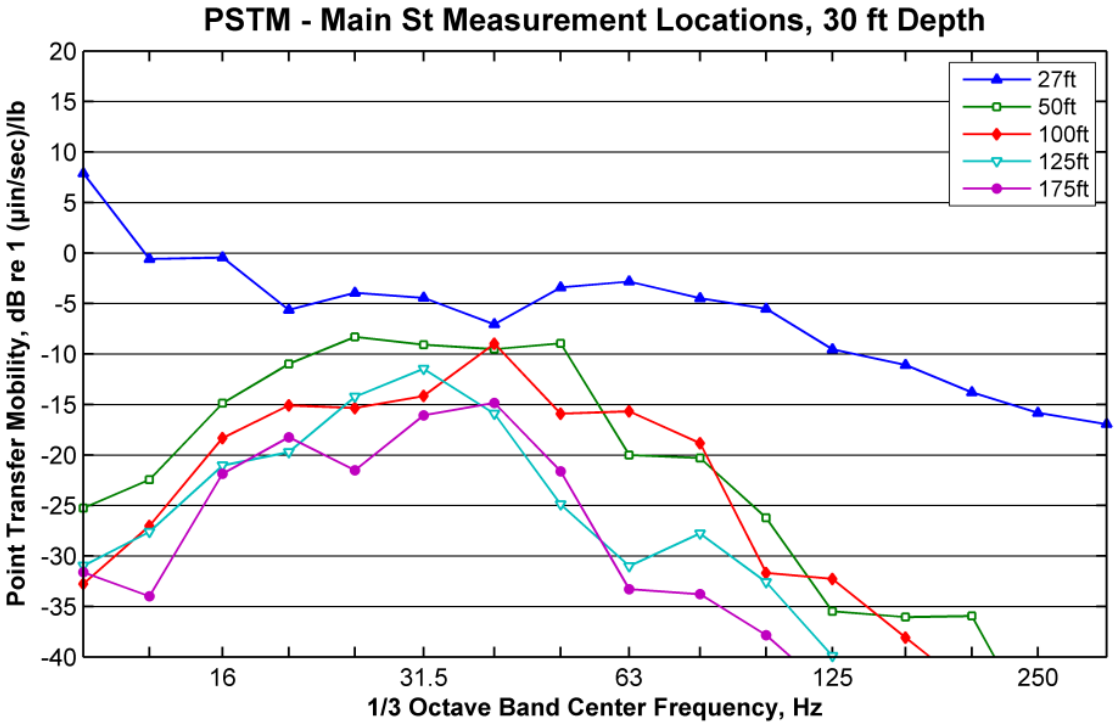


Figure D-3: PSTM and Coherence at Main Street Borehole, 30 ft Depth at Main Street Measurement Locations



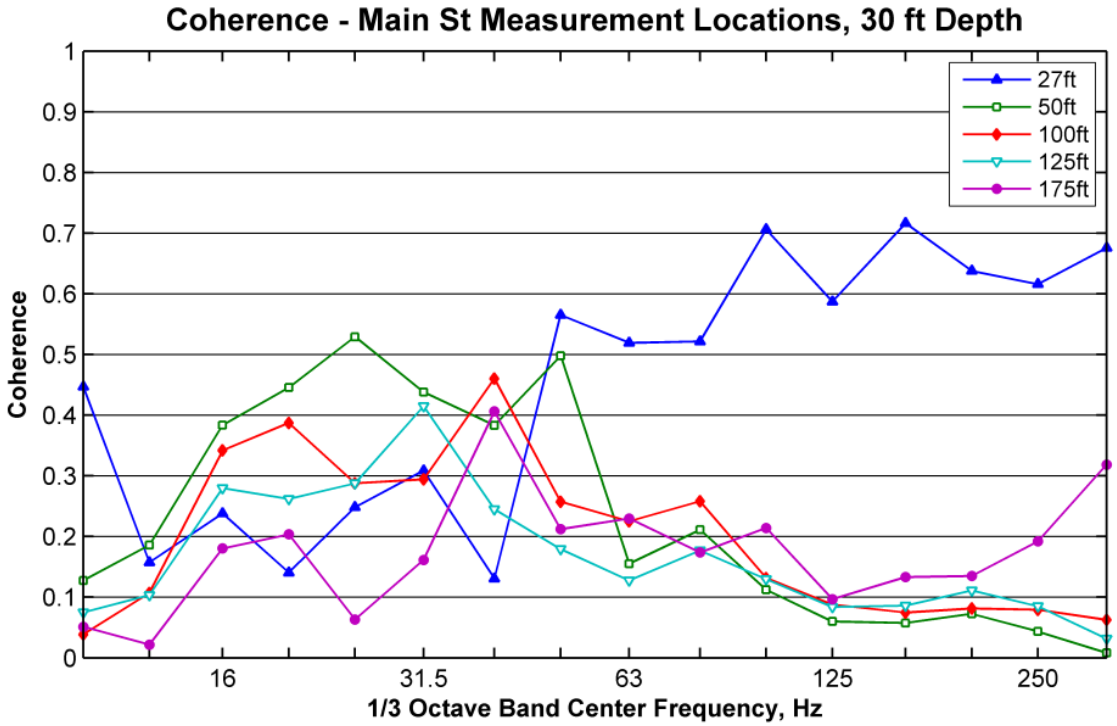
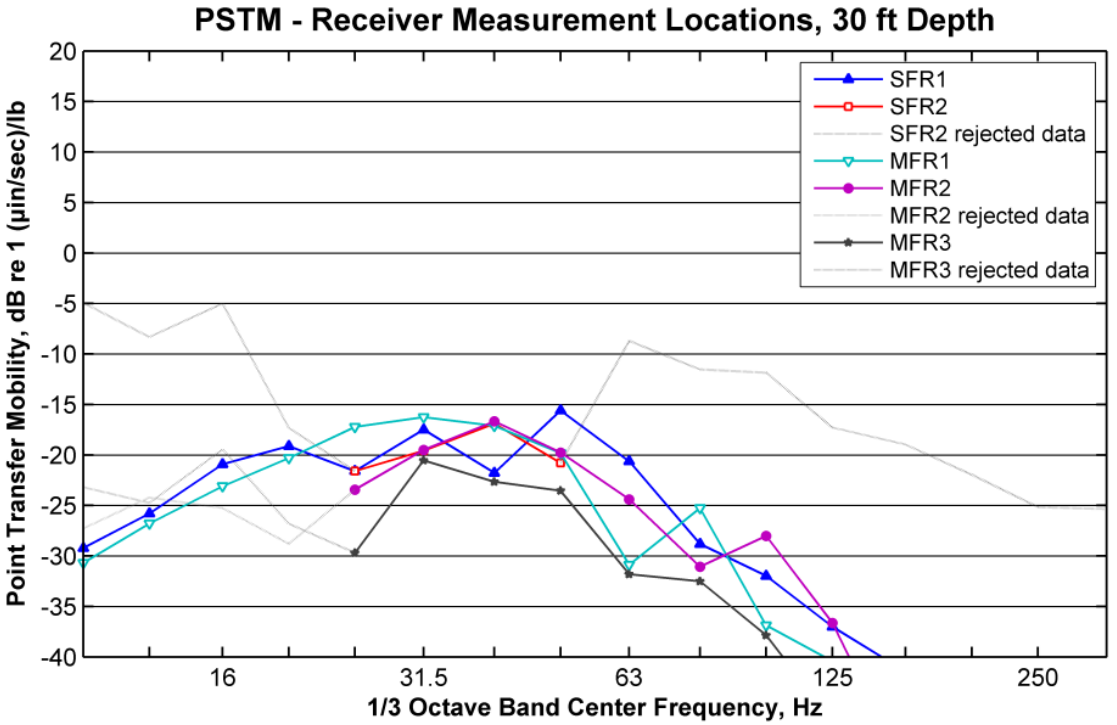


Figure D-4: PSTM and Coherence at Main Street Borehole, 30 ft Depth at Indoor Measurement Locations



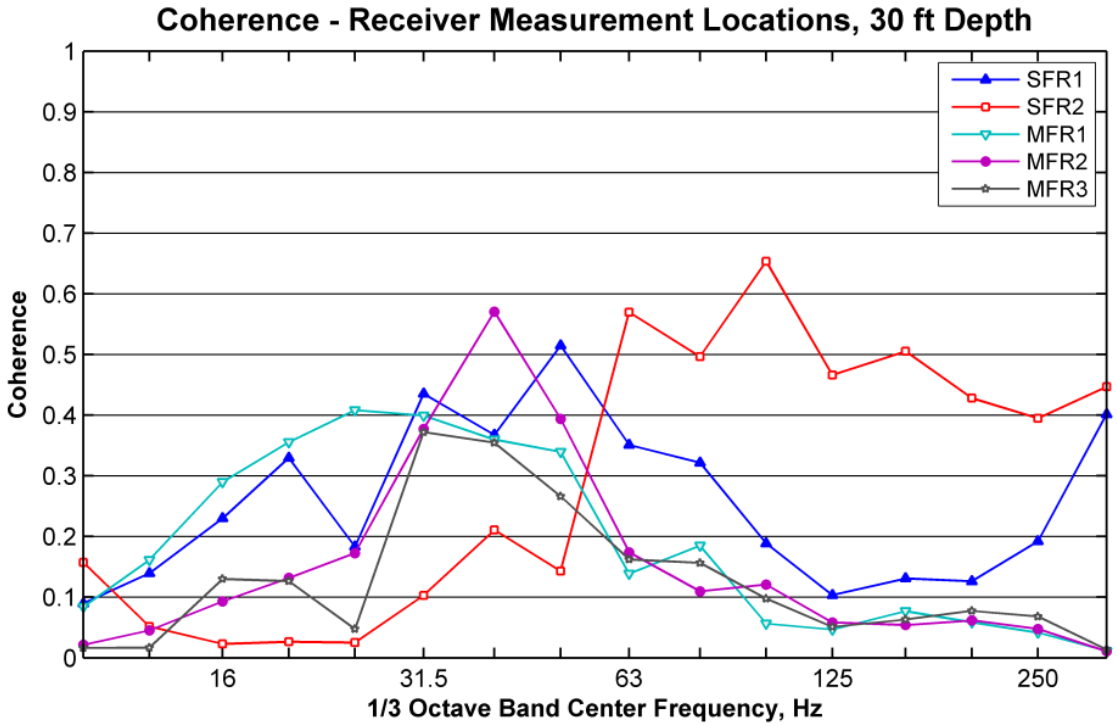
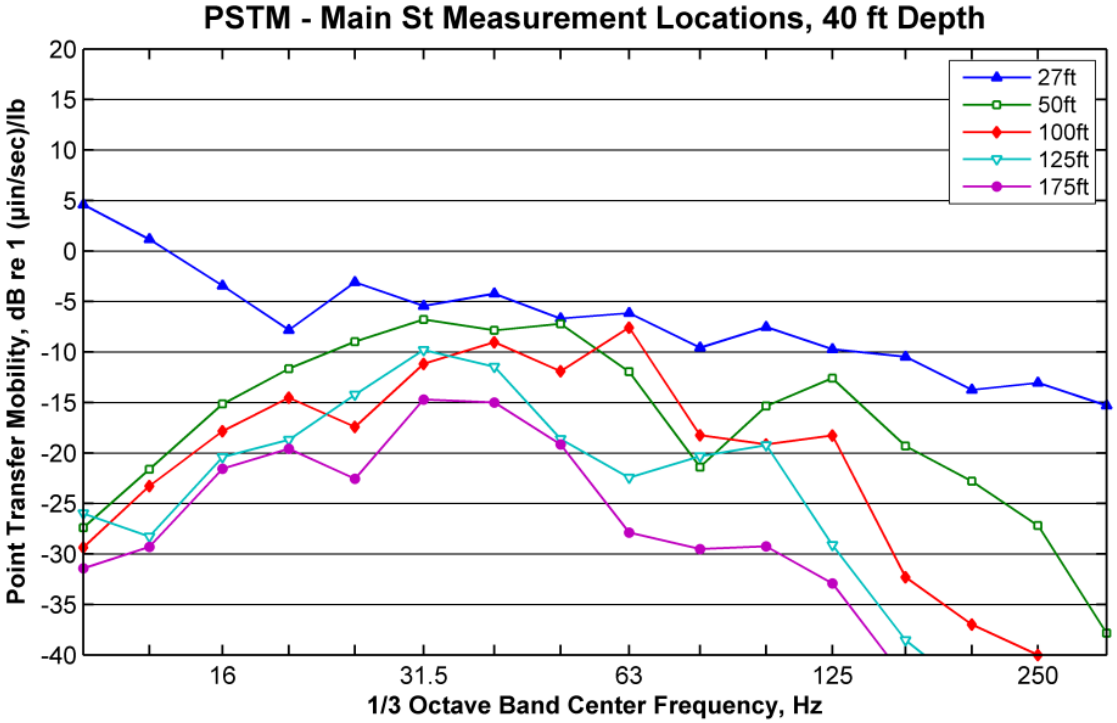


Figure D-5: Measured PSTM and Coherence for Main Street Borehole, 40 ft Depth at Main Street Measurement Locations



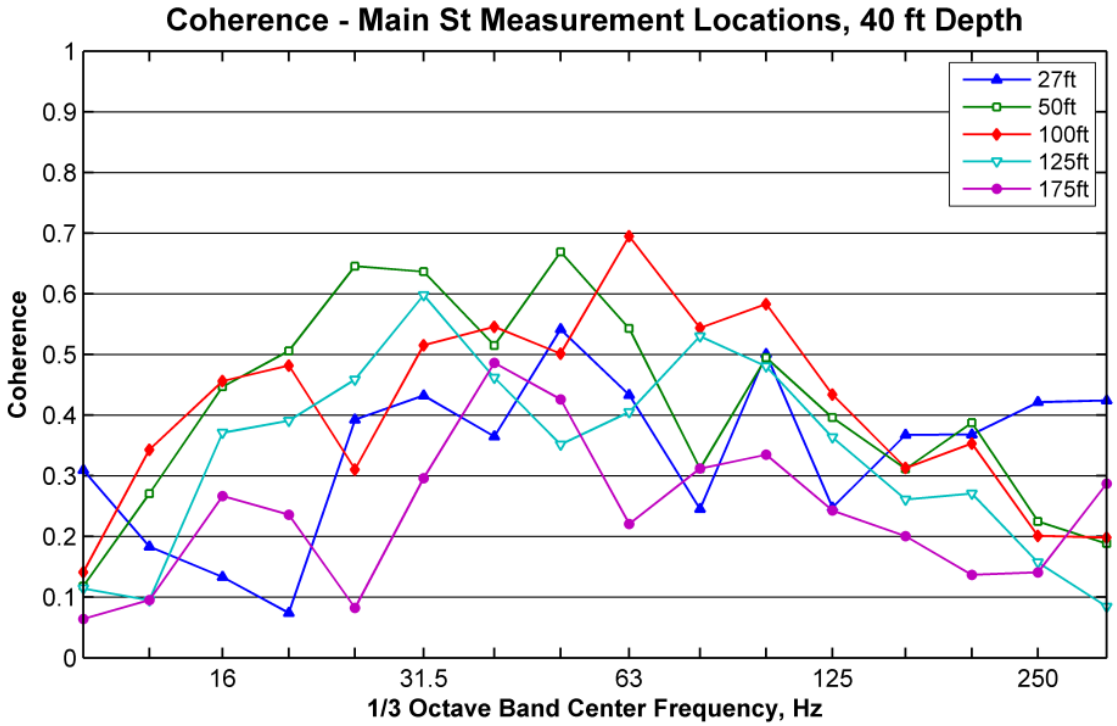
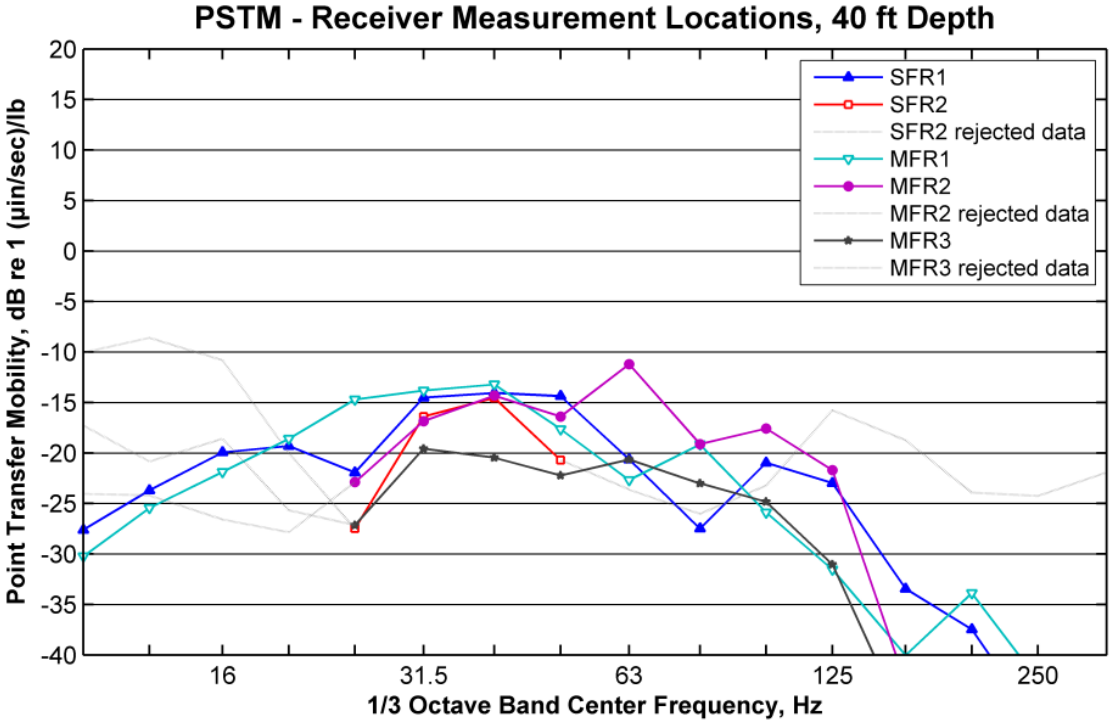


Figure D-6: PSTM and Coherence for Main Street Borehole, 40 ft Depth at Indoor Measurement Positions



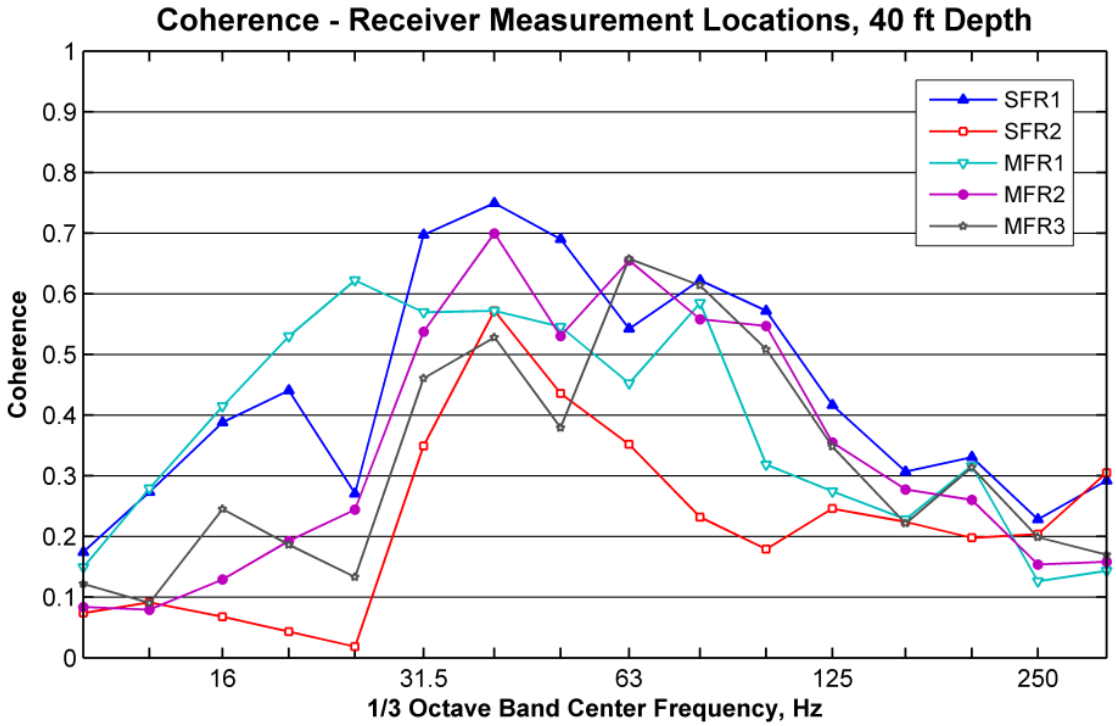
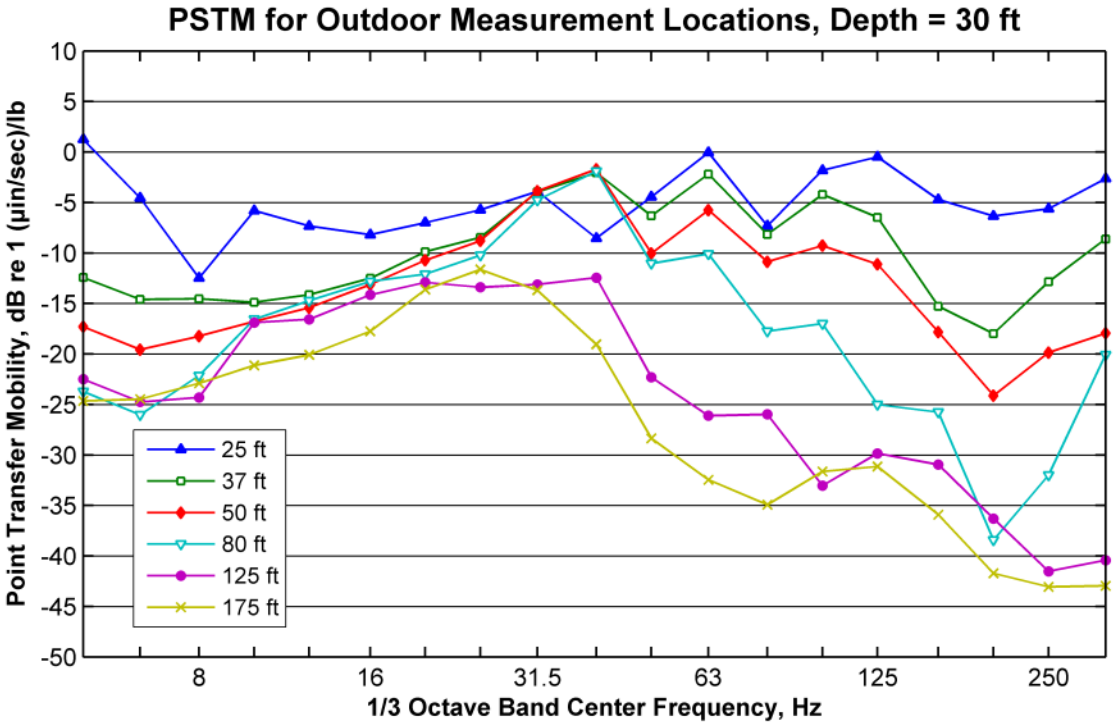


Figure D-7: Measured PSTM and Coherence at NE 4th Street Borehole, 30 ft Depth at NE 4th Street Measurement Locations



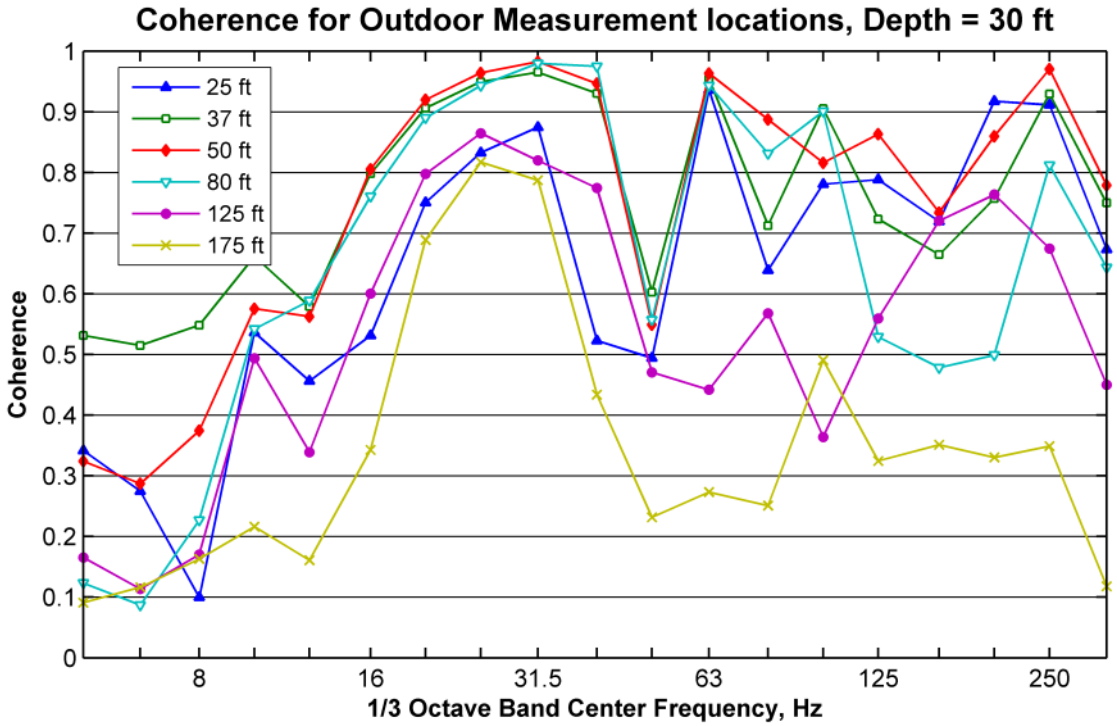
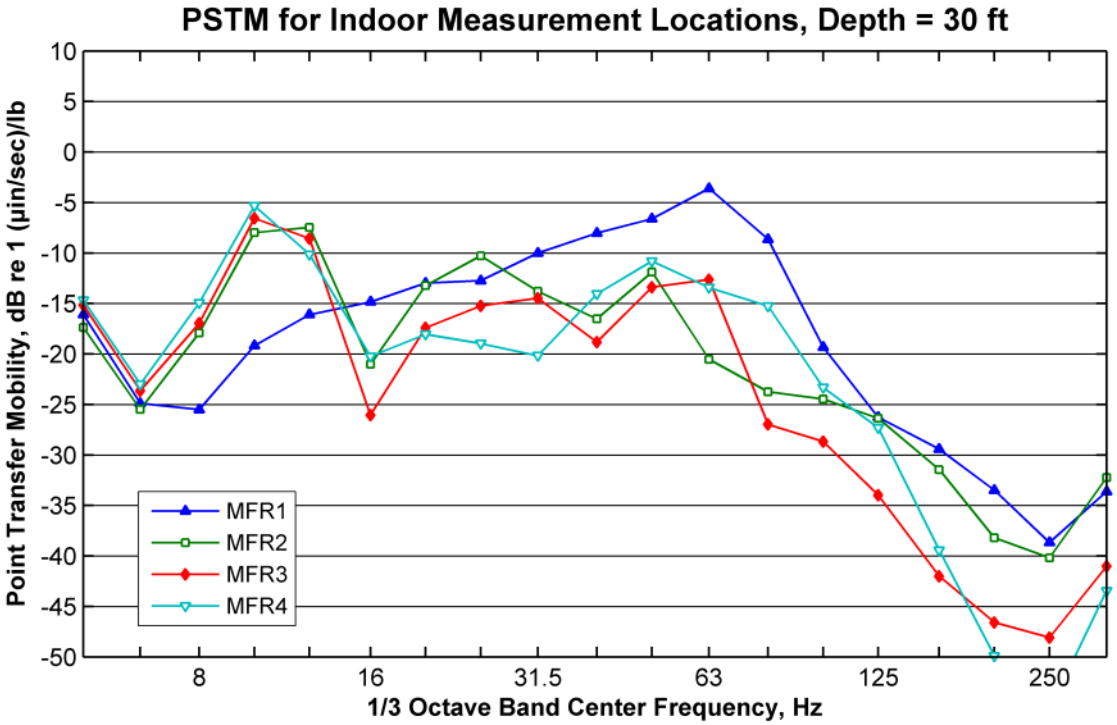


Figure D-8: Measured PSTM and Coherence for NE 4th Street Borehole, 30 ft Depth at Indoor Measurement Locations



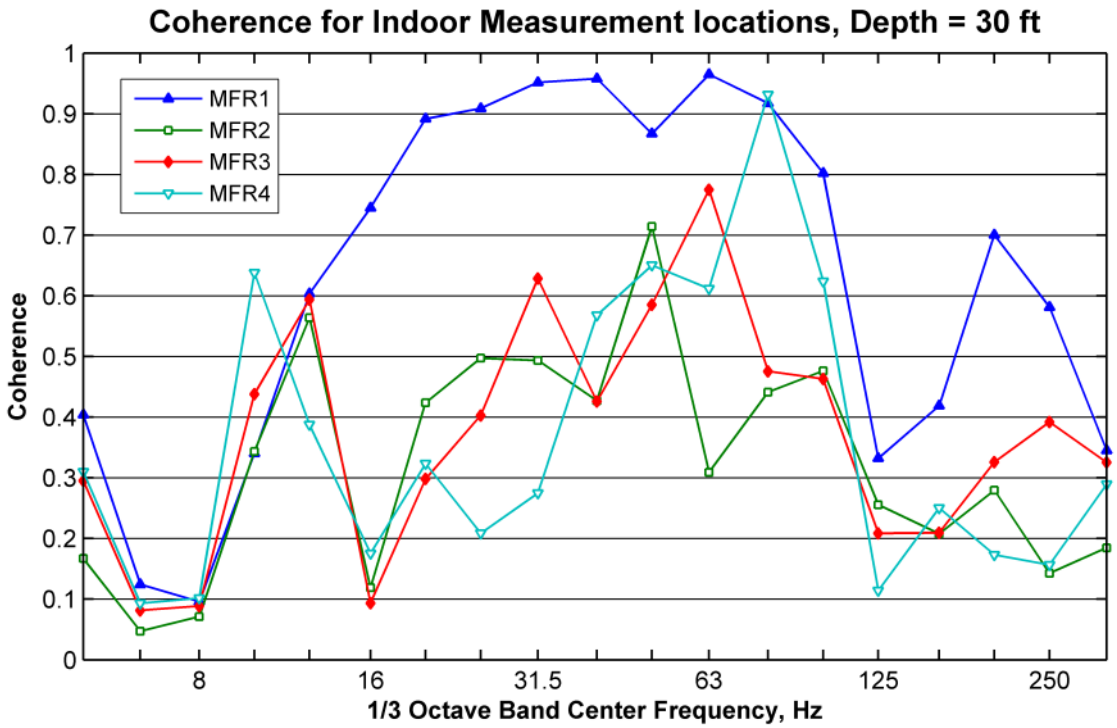
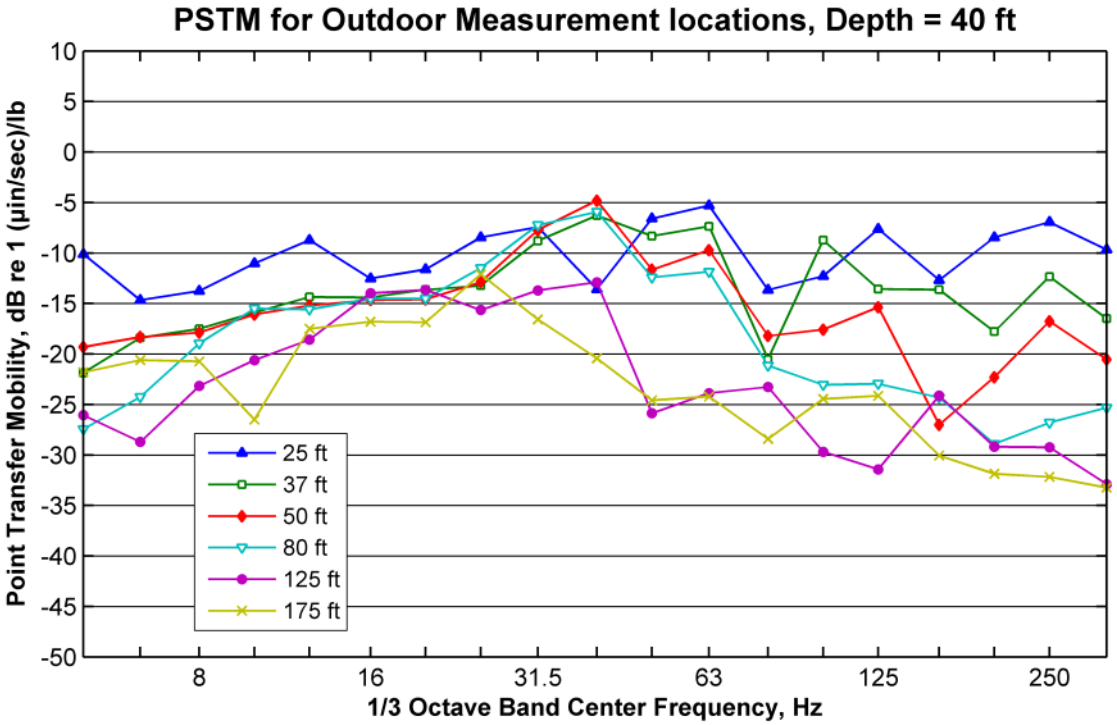


Figure D-9: Measured PSTM and Coherence for NE 4th Street Borehole, 40 ft Depth at NE 4th Street Measurement Locations



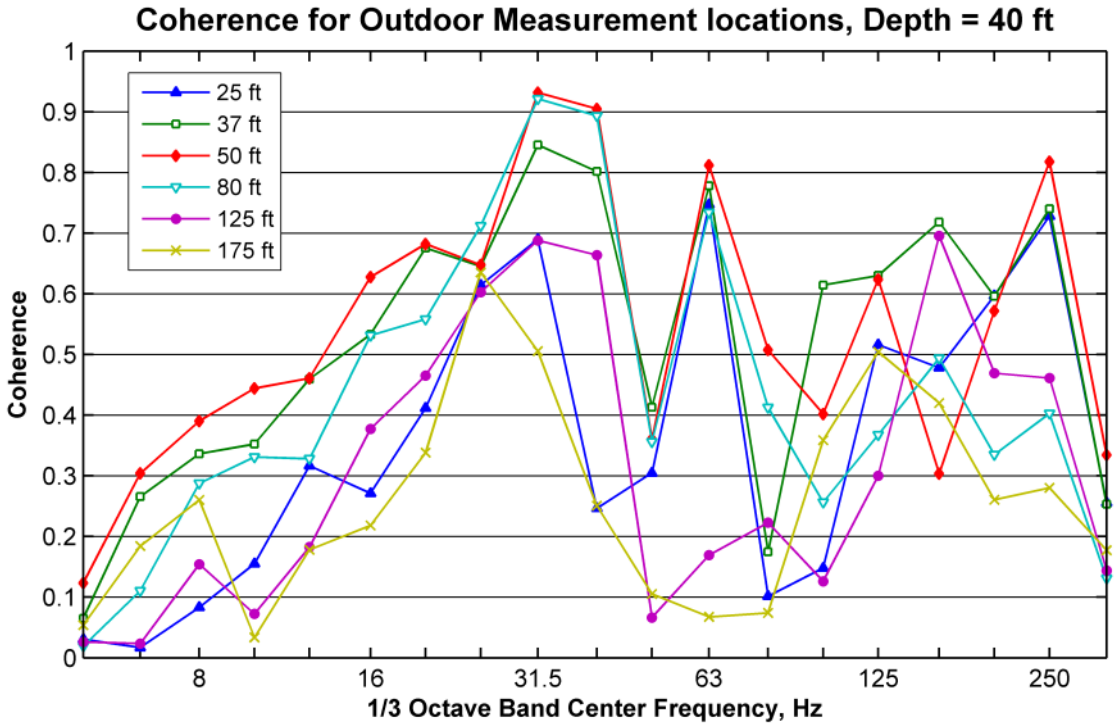


Figure D-10: Measured PSTM and Coherence for NE 4th Street Borehole, 40 ft Depth at Indoor Measurement Locations

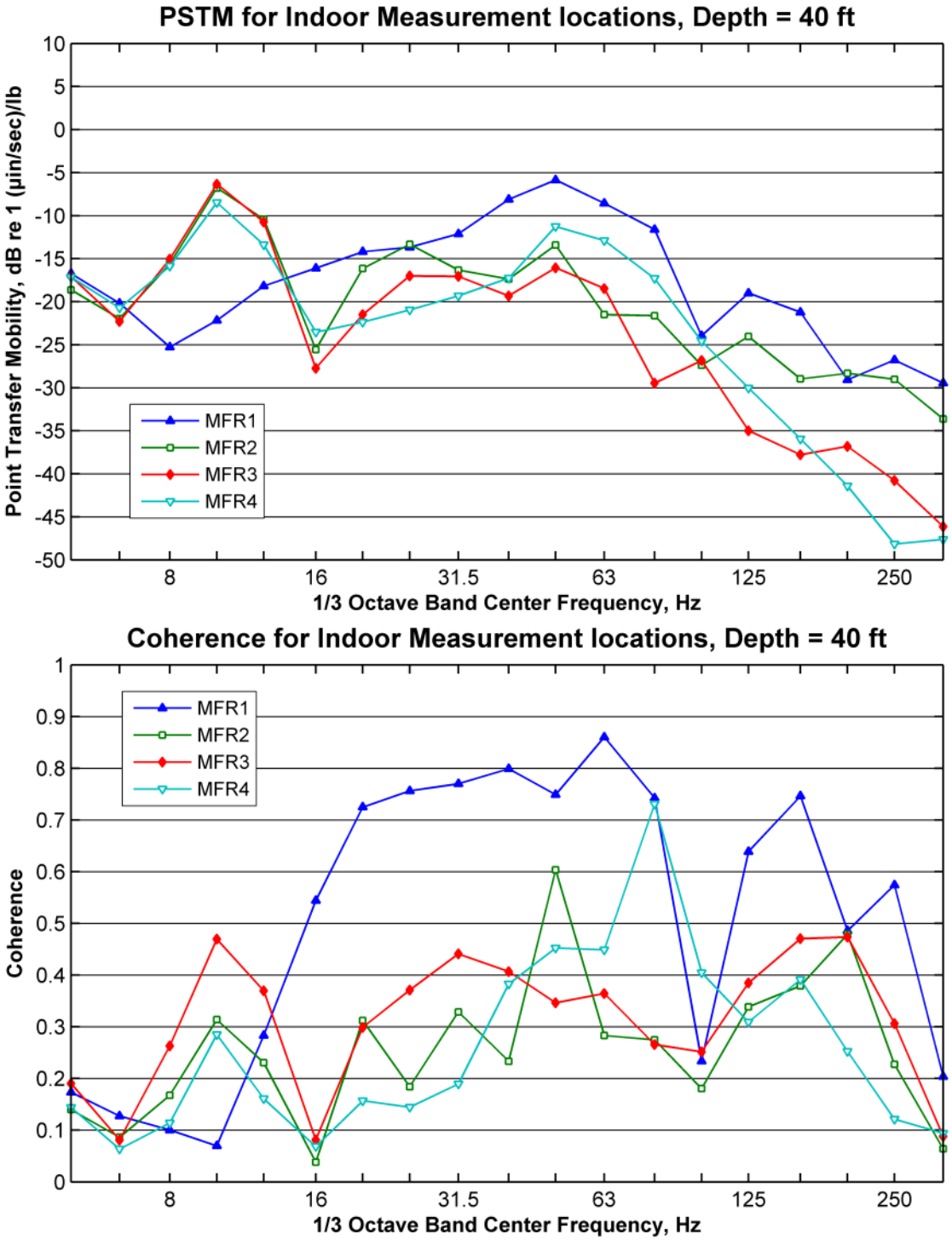
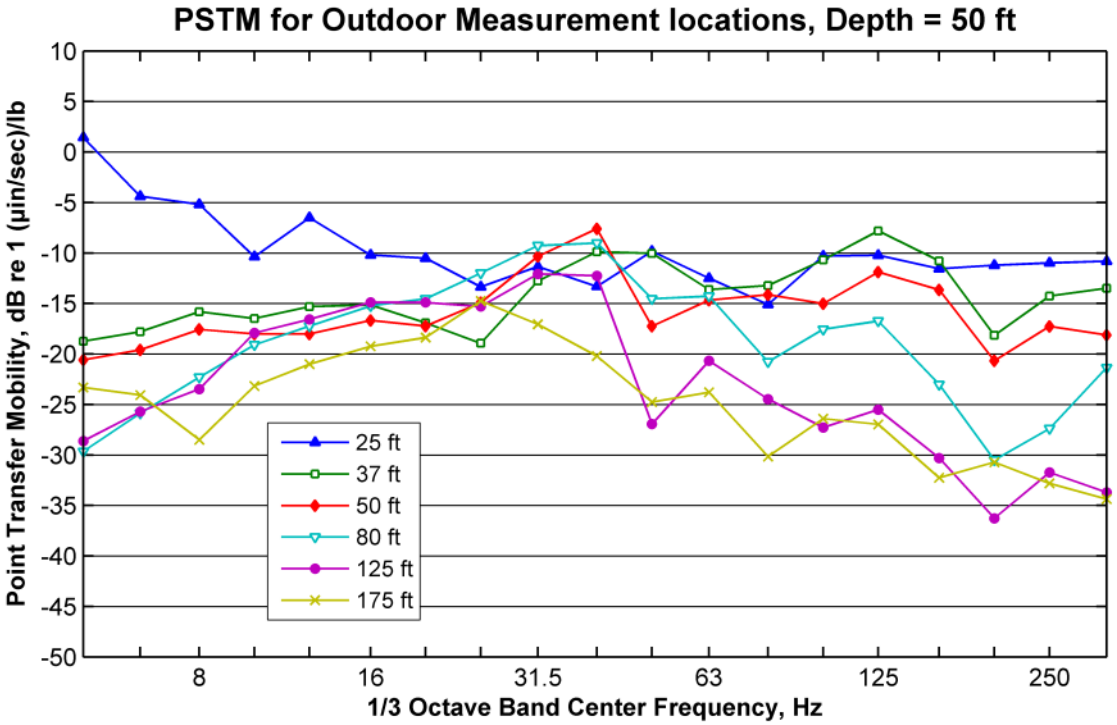


Figure D-11: Measured PSTM and Coherence at NE 4th Street Borehole, 50 ft Depth at NE 4th Street Measurement Locations



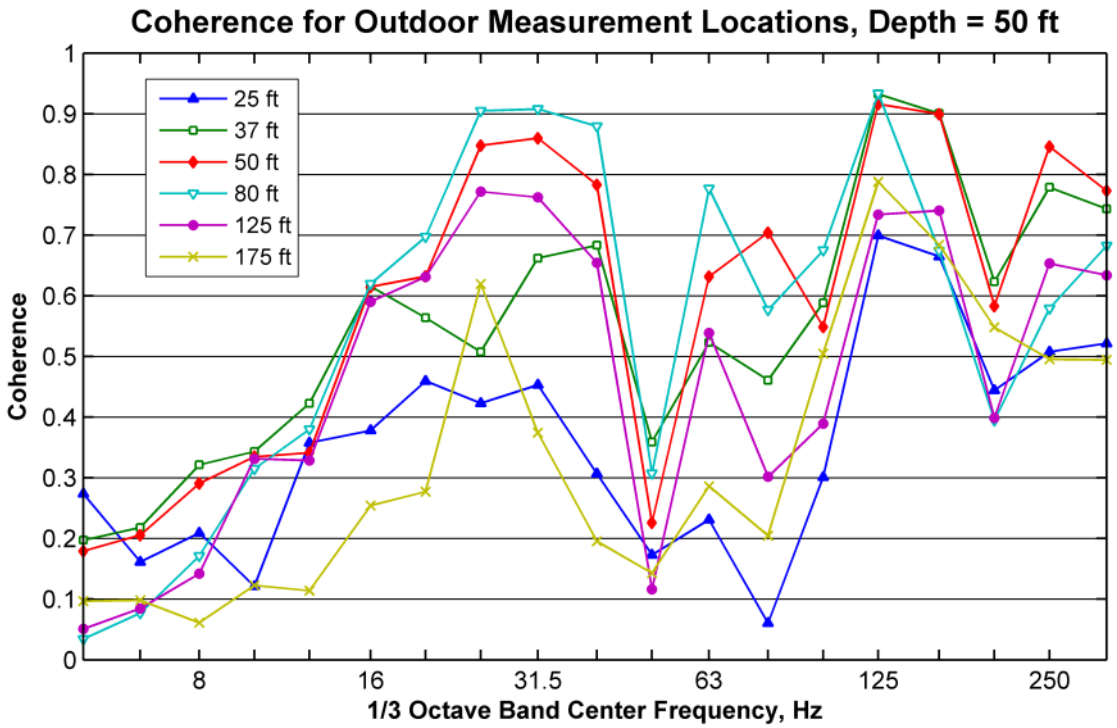
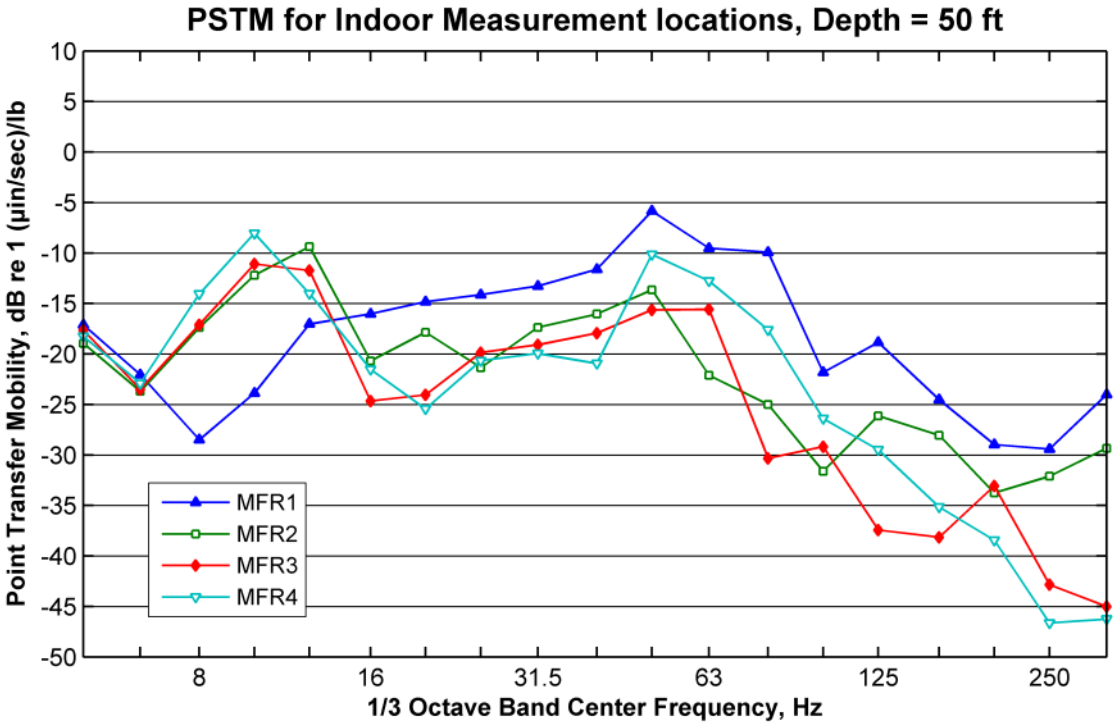


Figure D-12: Measured PSTM and Coherence at NE 4th Street Borehole, 50 ft Depth at Indoor Measurement Locations



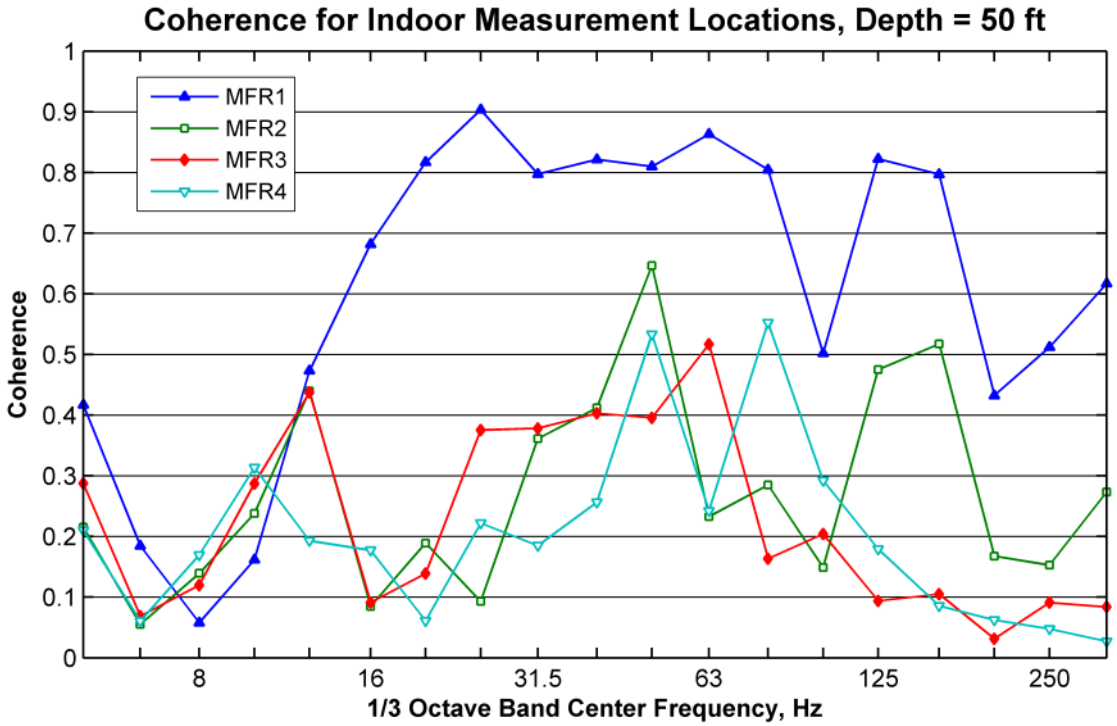


Figure D-13: LSTM and Coherence at Meydenbauer Center, Outdoor Measurement Locations

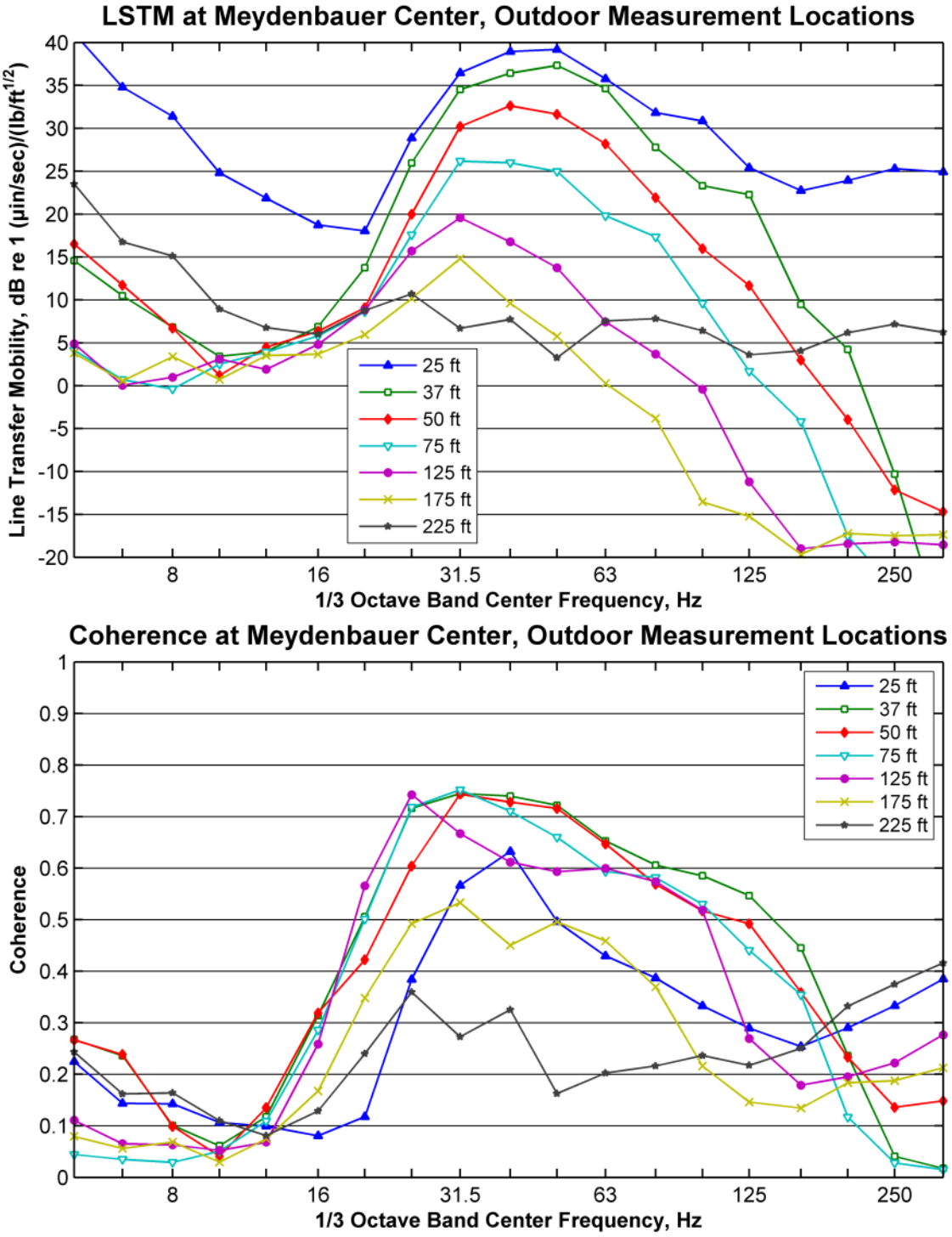


Figure D-14: LSTM and Coherence at Meydenbauer Center, Indoor Measurement Locations

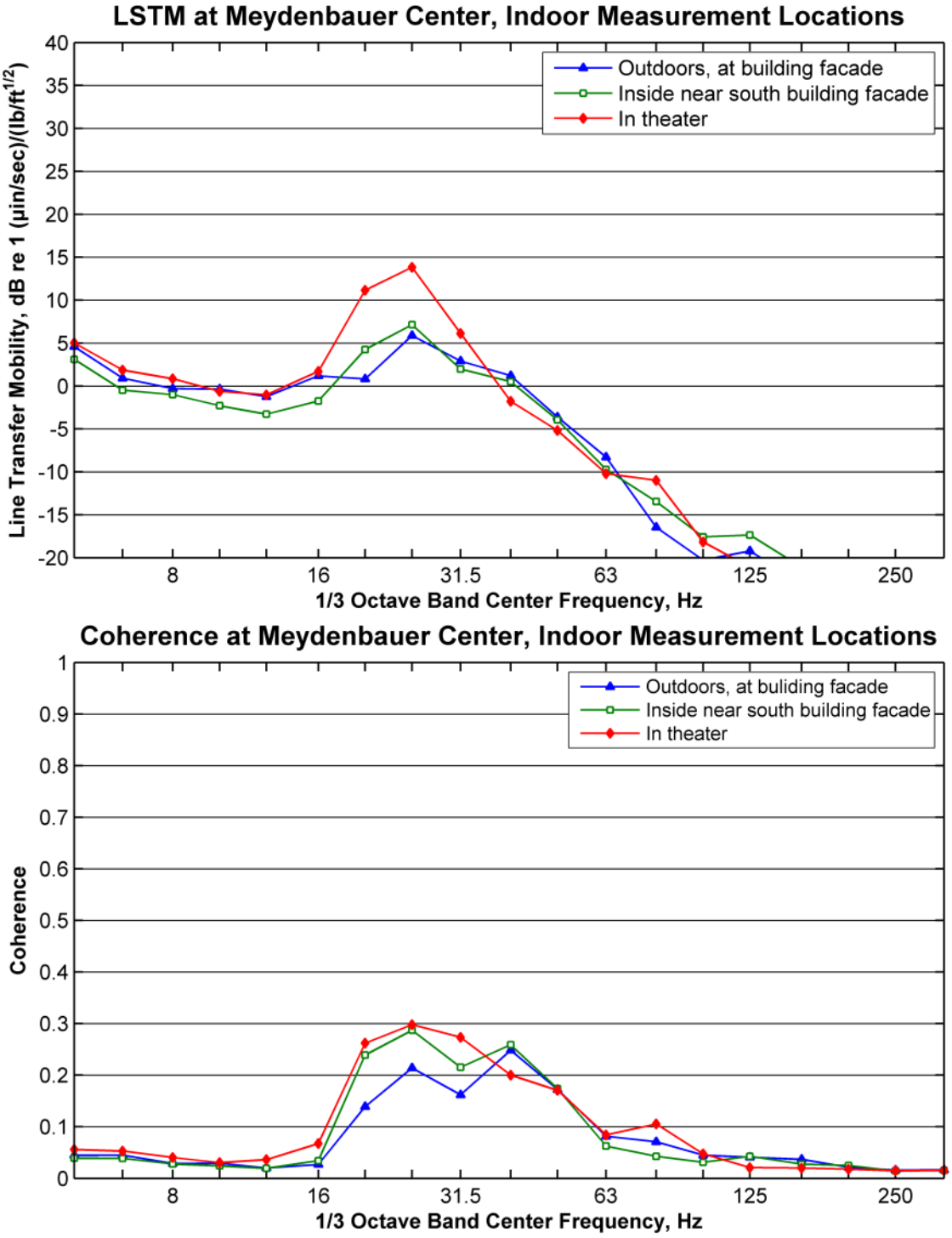
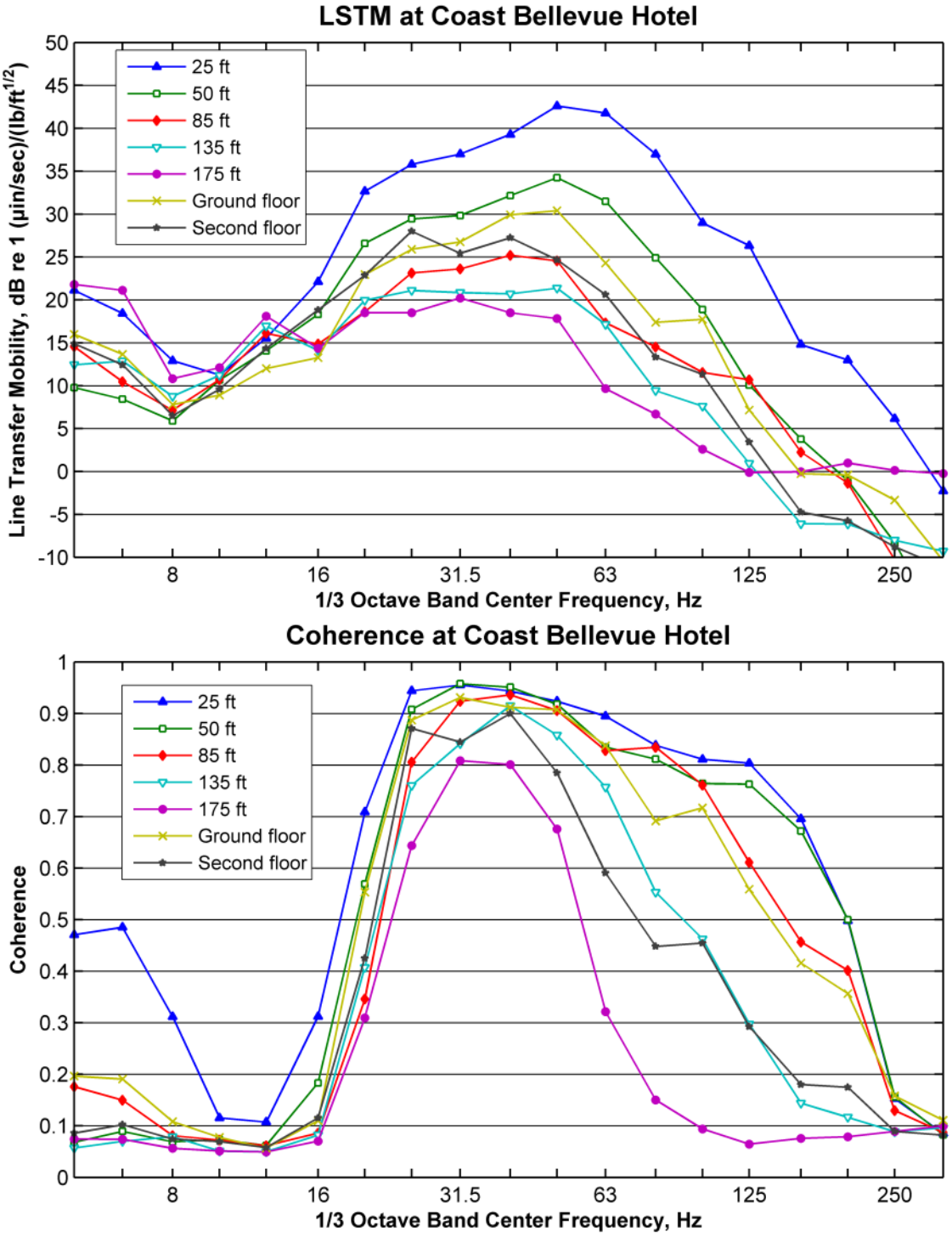


Figure D-15: Measured LSTM and Coherence at Coast Bellevue Hotel (Parcel EL242)



ATTACHMENT U

CONTRACT E330/E335 ANALYSIS OF TREE PRESERVATION AND CONTEXT SENSITIVE DESIGN – CITY OF BELLEVUE

East Link | South Bellevue to Overlake Transit Center
Contract No. RTA/AE 0143-11

Contract E330/E335
Analysis of Tree Preservation and Context Sensitive Design – City of Bellevue

September 23, 2014

SOUNDTRANSIT

Table of Contents

Figures

Appendices

MEMORANDUM

Sound Transit East Link | South Bellevue to OTC

ANALYSIS OF TREE PRESERVATION AND CONTEXT SENSITIVE DESIGN – CITY OF BELLEVUE

Date: September 23, 2014

To: Matthews Jackson, City of Bellevue

From: Justin Lacson, Sound Transit

Re: Tree Preservation and Context Sensitive Analysis – City of Bellevue Jurisdiction

1.0 Executive Summary

The East Link Regional Light Rail Transit (RLRT) Project (the Project) is a public transportation facility and the City of Bellevue developed a new overlay district, Chapter 20.25M of the City's Land Use Code (LUC), to acknowledge and govern this type of project. The inclusion of Chapter 20.25M into the City's land use code recognizes light rail as an acceptable use within the City. As a result, the Project is required to meet context-sensitive requirements under the discretion of the City of Bellevue, retain trees to the maximum extent feasible and plant trees and understory vegetation to meet new landscape development requirements established by the LUC.

The Project alignment, which was selected by Sound Transit (ST) and agreed to by the City of Bellevue, is adjacent to a number of residential neighborhoods and includes parcels of land with existing trees. The proposed RLRT corridor is limited, and in order to safely construct, operate and maintain RLRT facilities, removal of existing trees and other vegetation within the Project's footprint is unavoidable. To mitigate tree removal, ST has incorporated a variety of context-sensitive design methods into the Project, and has made design adjustments as a result of feedback from local residents and stakeholders. These methods are discussed in this memorandum and have been used to avoid and/or minimize tree removal within the Projects limits, especially in areas that have trees that are considered valuable because of their size and/or species. Areas that have a unique character or are within critical areas/critical area buffers were also considered for creative protective measures. Further detail on ecological benefits and habitats are provided in the *Critical Areas Report*. Moving beyond preservation, proposed station areas and landscape designs that adopt the contextual vision for each sub-area will provide additional mitigation for the loss of existing vegetation.

The East Link Final Design Team has strived to design RLRT facilities that will integrate into the existing context of Bellevue's residential neighborhoods and commercial areas and also respond to future development. Key elements of ST's design approach were tree preservation, new landscape areas that match the urban or ecological context, and thoughtful urban design, which included thoughtful selection of building contextual materials and the integration of engaging public art. ST respects Bellevue's *'City in a Park'* theme and has proposed diverse landscape designs that will buffer neighborhoods from RLRT facilities, provide new gathering spaces for local residents and commuters, preserve and restore community touchstones and help to preserve and enhance environmentally sensitive areas. As a result of these context-sensitive approaches, the Project meets the City of Bellevue requirements for tree retention and removal.

2.0 Purpose and Overview

The East Link Final Design Team design team has developed context-sensitive landscape and urban design solutions that limit the removal of existing trees where possible and create landscapes that respond to the character of existing neighborhoods. The purpose of this memorandum is to provide more details on how and why decisions regarding tree removal, protection and replacement were made, as a way of demonstrating the Project's context-sensitive design approach. Section 3 (Background) provides a summary of the Tree Survey Assessment methodologies that served as the Project's baseline assessment of existing trees within the Project area. Section 4 (Tree Preservation/Protection and Removal) provides detailed information about how trees were reviewed by the Project's design team, as well as information on the required clearances that are necessary for safe operation and maintenance. This section also provides an overview of tree removal in the context of construction, and outlines when and why trees will be removed once the Project moves into active construction. Section 5 (Proposed Landscape Areas) describes how trees will be replaced, and includes details on the intent and character of the various proposed landscapes that are associated with the Project. Finally, Section 6 (Policies and Context-Sensitive Approaches) provides a discussion of how ST is complying with the City of Bellevue policies and key goals within in the City of Bellevue's Comprehensive Plan.

This memorandum is intended to build upon previous information submitted to the City of Bellevue related to the Project. Please reference the *Shoreline Substantial Development Permit Application* (13 135764 WG) and the *Design and Mitigation Permit (DMP) Application* (13 135564 LD) where noted in the following sections for details on proposed elements within the Project.

3.0 Background

3.1 Memorandum Scope and Project Area Definitions

The East Link Extension – South Bellevue to Overlake Transit Center (OTC) corridor includes land within the jurisdiction of the City of Bellevue (COB), the City of Redmond (COR) and the Washington State Department of Transportation (WSDOT) (Figure 1). This memorandum and appendices focus entirely on those portions of the Project that fall within the City of Bellevue jurisdiction.

ST conducted tree survey assessments for the entire Project. For trees located within the COB jurisdiction, the tree survey assessment inventoried all trees that are 4" DBH or larger within the Project limits. The survey area was conducted within the proposed guideway and its associated elements needed for operations, construction access and staging areas, and the limits of the environmental mitigation work that is contiguous to the Project corridor. A portion of the stream mitigation work will occur off-site at Coal Creek, but tree impacts are not discussed in this memo because it is anticipated that there will be minimal or no removal of trees that are 4" DBH or larger.

ST has addressed all trees within the COB's shoreline jurisdiction in the Shoreline Substantial Development Permit submitted to COB on December 19, 2013. For information on how shoreline tree removal will be mitigated, refer to the *E320 Tree Removal and Mitigation Analysis*, which is included with this memorandum as *Appendix A*.

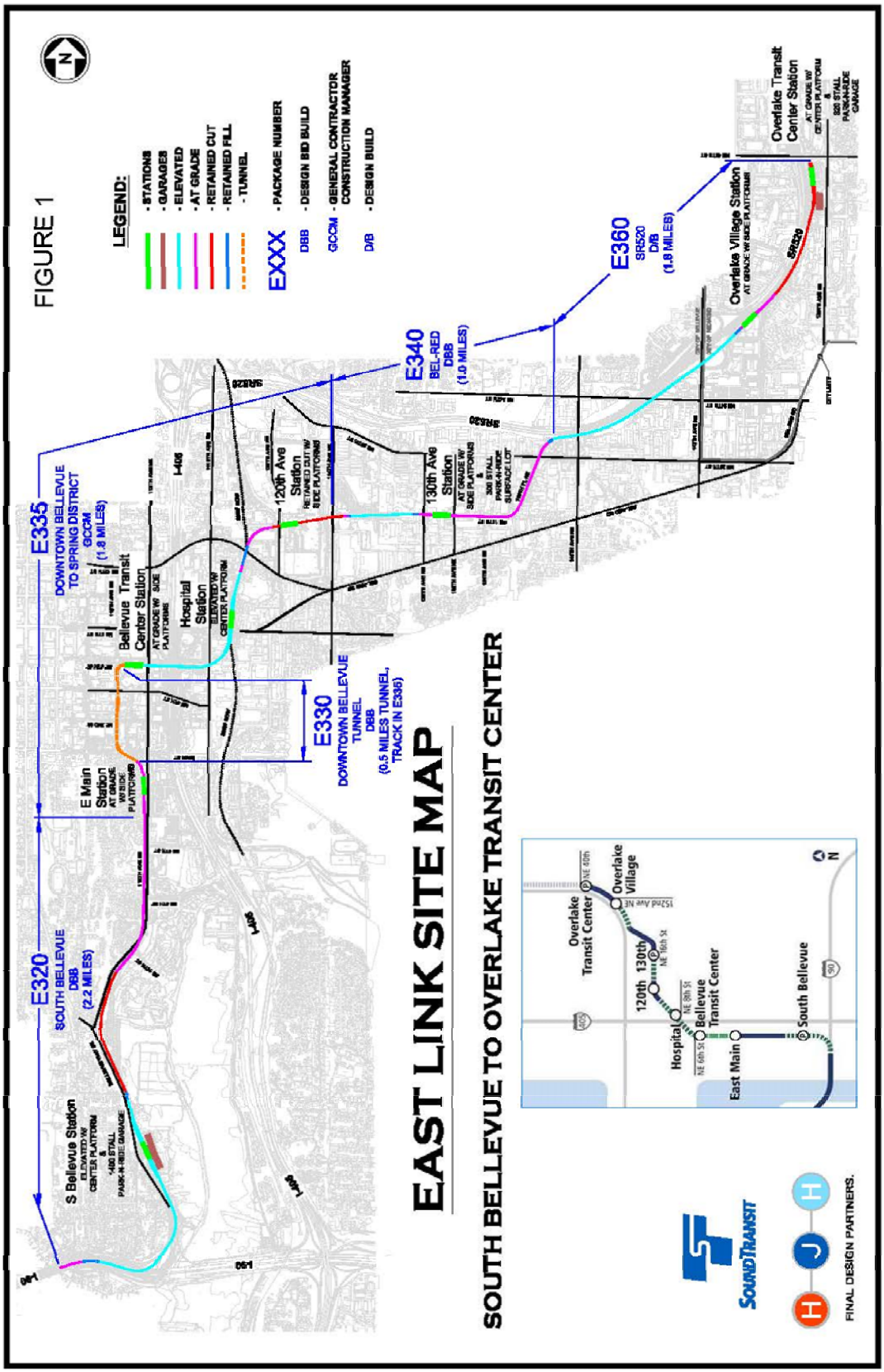


FIGURE 1
LEGEND:
- STATIONS
- GARAGES
- ELEVATED
- AT GRADE
- RETAINED CUT
- RETAINED FILL
- TUNNEL
EXXX - PACKAGE NUMBER
DBB - DESIGN BID BUILD
GCCM - GENERAL CONTRACTOR CONSTRUCTION MANAGER
D/B - DESIGN BUILD
E320
SOUTH BELLEVUE
DBB
(2.2 MILES)
E335
DOWNTOWN BELLEVUE TO SPRING DISTRICT
GCCM
(1.8 MILES)
E330
DOWNTOWN BELLEVUE TUNNEL
DBB
(0.5 MILES TUNNEL, TRACK IN E335)
E340
BEL-RED
DBB
(1.0 MILES)
E360
SR520
D/B
(1.9 MILES)
S Bellevue Station
ELEVATED W/ CENTER PLATFORM & 1400 STALL PARK-N-RIDE GARAGE
E Main Station
AT GRADE W/ SIDE PLATFORMS
Bellevue Transit Center Station
AT GRADE W/ SIDE PLATFORMS
Hospital Station
ELEVATED W/ CENTER PLATFORM
120th Ave Station
RETAINED CUT W/ SIDE PLATFORMS
130th Ave Station
AT GRADE W/ SIDE PLATFORMS
300 STALL PARK-N-RIDE SURFACE LOT
Overlake Village Station
AT GRADE W/ SIDE PLATFORMS
Overlake Transit Center Station
AT GRADE W/ CENTER PLATFORM & 600 STALL PARK-N-RIDE GARAGE
I-405
SR520
EAST LINK SITE MAP
SOUTH BELLEVUE TO OVERLAKE TRANSIT CENTER
Overlake Transit Center
Overlake Village
120th
130th
Hospital
Bellevue Transit Center
East Main
South Bellevue
SOUNDTRANSIT
FINAL DESIGN PARTNERS.

3.2 Tree Assessments

ST has completed Tree Survey Assessments for the Project, which are sorted by construction package. A full description of the tree survey and assessment methodologies is provided in *Appendix D* of this memorandum.

4.0 Tree Preservation/Protection and Tree Removal

4.1 Tree Preservation

Mature existing trees and vegetation offer numerous benefits in the urban environment, their preservation is an important aspect of context-sensitive design. However, space within the Project's alignment is limited, and in order to safely and efficiently build the RLRT facility, the Project must remove hundreds of trees within the City of Bellevue. Identifying realistic opportunities for tree preservation has been a priority for the East Link Final Design Team throughout the design process. Details on the various ways in which Tree Preservation has been and will be considered during design and construction are provided below.

4.1.1 Tree Preservation during Design

Tree preservation was identified early in the design process as an important goal for particular areas identified in the *East Link Project Final Environmental Impact Statement (July 2011)*, including the Winters House and blueberry farm access, the impacted area of Surrey Downs Park, ST-acquired properties north of Surrey Downs Park along 112th Avenue SE including the new East Main park, and the NE 2nd pocket parks. Existing trees on these sites were identified for possible preservation, then reviewed and evaluated by the design team disciplines for potential risks that may impact light rail operations. Trees with significant historic value were also considered, which resulted in the preservation of a magnolia tree at Winters House.

The preservation of trees to the maximum extent feasible continues to be a primary Project goal through all stages of design. Throughout the corridor, trees that will not be negatively impacted by construction or RLRT operations will be preserved. Members of the design team referenced the City of Bellevue's BMP T101 for Tree Preservation to help determine whether trees should be preserved and this BMP is also cited in the Tree Protection specifications. Tree protection fencing will be clearly indicated on the Project plan documents, and the East Link Final Design Team is coordinating tree preservation efforts to ensure consistency for the final bid package.

4.1.2. Tree Preservation during Construction

Prior to construction, the contractor for each design package will be responsible for submitting a detailed Tree Preservation Plan to the City of Bellevue. Giving this responsibility to the contractor ensures that there is a clear awareness of the importance of tree protection, once the project moves into construction. The contractor will also have the ability to preserve additional trees along the corridor, if doing so does not impede construction activities or the overall project schedule.

4.2 Tree Removal Overview

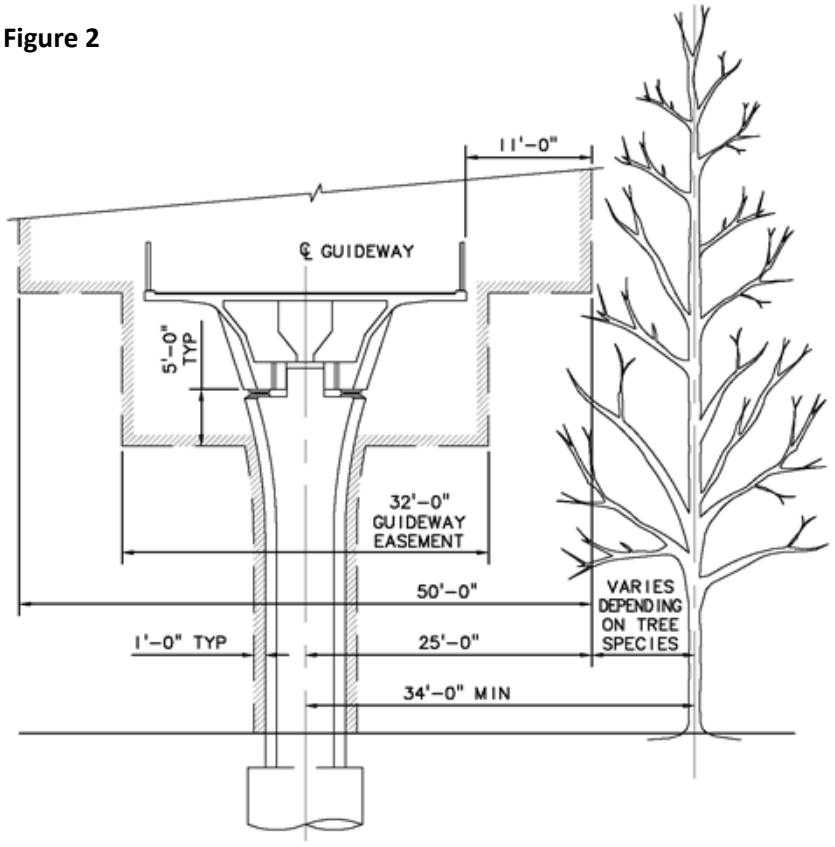
Although ST has strived to retain existing trees to the greatest extent feasible, given the location and constraints of the Project area, numerous existing trees located within the RLRT facility construction limits areas will be

removed in order to construct the Project within the alignment. Trees located within the footprint of guideway operations and the station facilities will be removed, as well as any trees located in areas needed to construct the Project (e.g. construction access, construction staging, etc.) In general, trees within public access areas deemed hazardous will be removed, as well as trees that may become hazardous as a result of construction activities. The arborist for the Project identified existing hazard trees in the field. Hazard trees located within critical areas, outside of public access areas, may be preserved, as they provide habitat and ecological value.

4.2.1 Tree Clear Zone

A Tree Clear Zone, (TCZ) measuring 34 feet from either side of the centerline of the guideway, must remain free of tree trunks, although small-medium shrubs and groundcovers will be allowable in this area. The TCZ is necessary to ensure operational and maintenance safety of the RLRT over time. (Figure 2) (For more details on proposed plantings along the RLRT, refer to the landscape plans included with the *DMP application*.) Existing trees within the TCZ will be removed, and no new trees will be planted within this area.

Figure 2



TREE CLEAR ZONE – ABOVE TOP OF RAILING

Outside of the TCZ, ST established a 30' foot buffer zone to maintain a safe operations and maintenance area for the RLRT. Trees are allowed in this area, but they must be located so that the spread of the mature canopy will not overhang or be-blown onto the guideway. If the guideway geometry allows the tree canopy to be above the height of the railing, then the tree branching shall be no closer than 11 feet to the edge of the guideway. At maturity, tree branches and elevated structure dripline may be no closer than 10-feet to the Overhead Catenary System (OCS), a network of overhead wires that supply electrical power to the light rail cars. These distances have been established to ensure the safe operation of the RLRT system, as well as the supporting equipment needed for routine operations and maintenance work.

ST Operations and Maintenance staff have carefully reviewed setbacks within the buffer zone of the TCZ and existing trees in these areas. The East Link Final Design Team selected and located proposed trees and large understory vegetation within the 30' TCZ buffer zone to minimize future conflicts with Light Rail Operations. Should tree growth over time threaten ST

Operations and Maintenance practices, trees located within the TCZ buffer zone may be removed or limbed at the discretion of ST, in order to maintain a safe operation and maintenance zone for the RLRT. For more details on the TCZ, refer to the criteria within Chapter 10 (Landscape) of the *ST Link Design Criteria Manual (Volume 3)*.

4.2.2 Tree Removal at Station Facilities

Existing trees located within the footprint of proposed station buildings and parking areas will also be removed as a result of the Project. Trees may also be removed in these areas to maintain clear vehicular, bicycle and pedestrian sightlines. However, tree preservation was also a strong design consideration at many of the station areas, as ST understands the role that trees play in successful urban design. The East Link Final Design Team looked for opportunities to preserve existing trees at the station areas, particularly at the perimeter, where existing trees contributed to the softening and buffering of station facilities. See Section 5 for information on new landscape areas, including tree plantings.

4.2.3 Timing of Tree Removal due to Construction Phasing

As is covered in previous sections, the Project must remove numerous existing trees within the City of Bellevue. Contractors for each construction package will clear the trees to be removed within the first six months from notice to proceed. These cleared areas will remain treeless for the duration of construction. Due to the need to provide safe access, staging areas and adequate room for the construction of the RLRT facilities within a single corridor, the Project is limited in the ability to meet standards for preserving areas of existing vegetation that are set forth in BMP C101. The Project will protect existing vegetation to the greatest degree feasible and follow the practices outlined in BMP C101 where possible. In areas where vegetation must be cleared, the Project will employ Temporary Erosion and Sediment Control measures, such as hydroseeding, the installation of plastic covering, silt fences, and other common temporary BMPs. Landscape installation will occur near the end of construction; approximately two to four years after initial clearing. More details on proposed landscapes, including general predictions on anticipated growth are covered in Section 5.

ST will sequence construction of each contract package E320, E330/335, and E360. Each contract package will have different construction start dates. Therefore, trees will remain along the alignment within the City to some extent. Individual contract packages may have slight internal phasing options in addition to the overall staggering of construction for the Project. One challenging area is the ground improvement work to take place in E320 in South Bellevue. Three types of ground improvements are proposed for the project:

- Stone Columns - Stone columns are placed in a close matrix to support a heavy structure. The matrix consists of stones loaded into a column below ground. The columns support the heavy load by displacing softer soils.
- Soil Pre-Loading - Soil pre-loading adds heavy soils to a large surface area to “compact” soft soil and make it suitable to support heavy loads. The heavy surface soils are left in place for up to two years to compact the soft soil below.
- Deep Soil Mixing - Deep soil mixing uses a cementation material that is mixed to a deep level to firm up soft soils. This has to be done over a large area where the heavy structure is ultimately being placed.

Ground improvement areas will be cleared prior to the start of improvement work, and no further construction or landscape work can occur in these areas during this time. Public outreach efforts will be implemented to

educate the public on the ground improvement activities and why additional construction activities will not immediately follow this change to the existing landscape.

5.0 Proposed Landscape Areas

5.1 Overview of Proposed Landscape Areas

Given that a large number of existing trees must be removed as a result of the Project, ST has sought to balance this by proposing diverse landscape designs throughout the corridor, which will provide substantial aesthetic and ecological enhancements to the adjacent neighborhoods. The landscaping designs for the corridor and station portions of the Project are focused on low-maintenance and drought-tolerant plant species to meet City requirements for all areas within the City right-of-way. The designs respond to the surrounding context, ensuring that corridor, station, and critical area designs match existing urban characteristics and ecological functions. Each type of proposed landscape design has unique characteristics, design goals, and spatial constraints/opportunities. Despite these differences, planting design was coordinated with multi-disciplinary design teams to ensure that natural and urban areas have sensible transitions. More details on each of the landscape types are provided below, and 60% plant schedules for E320 are included as Appendix E to this memorandum. For additional information, see the *DMP permit application* for each design package. Updated design information will be provided to the COB as it becomes available.

5.1.1 Corridor Landscape Areas

The corridor landscape design provides landscape continuity and character throughout the corridor, with areas of distinction at stations and key features. The surrounding context informed the corridor design. For example, the E320 corridor near the Mercer Slough has a more native plant palette, while the E335 corridor has a simple palette to reflect the civic, urban nature of the downtown. The E340 corridor landscape responds significantly to the vision outlined in the Bel-Red Corridor Plan. Key features are highlighted, such as the Winters House, portal areas, and key intersections within the Bel-Red District, with accent planting and/or a greater level of urban design treatment.

Other context sensitive design approaches that were considered during the design process included:

- Buffer, screening and street frontage landscapes followed the COB LUC code requirements
- Vegetation and architectural screening elements, such as walls, were used in combination to soften infrastructure improvements.
- The landscape design along the corridor responds to the local context, such as near the Mercer Slough area, where the corridor landscape transitions to a native plant palette.
- View corridors along the Project's alignment have been assessed and preserved
- Open space is preserved within the E340 corridor for future gateway or development improvements.
- Back-of-sidewalk areas were inventoried to ensure restoration design matches and enhances existing conditions and adjacent context.

- Adjacent capital improvements are considered and coordinated to support community goals and vision for each area.

Proposed Plant Material : Corridor Areas

Proposed deciduous trees at installation range in size from 1.5-3" caliper (approximately 5-7' in height), while proposed conifers will be 10'-12' in height at installation. Tree heights and canopy vary significantly by species and within different contexts, making future growth predictions challenging. The following are some general assumptions about the design.

- In the first year after planting streetscape tree heights (both deciduous and conifer) will vary, but average height is expected to be 10' to 15'.
- After five years, streetscape trees should be relatively established, with approximately 2' to 5' more growth in height than at time of planting.
- After twenty years, streetscape trees are expected to be between 70% and 80% of their final mature sizes.

5.1.2 Station Landscape Areas

Whereas the corridor landscape designs were used to bring continuity to the RLRT facility, landscape designs at each of the stations will vary, in order to support the unique features of the site and its users, as well as create a link between the station area and the surrounding landscape. Below are some specific details on the station designs:

South Bellevue Station

The landscape reflects the character of the surrounding Mercer Slough Park and plantings are a mix of northwest native and introduced plants. Trees were preserved along the south, east and north side of the station garage. New trees along the west side, South Bellevue Way and at the station entrances will provide landscape buffers, and soften the transitions between facilities. In addition, planting areas in the plaza will be partly irrigated with rainwater captured from the overhead station platform and guideway. Paving patterns that guide users through the ground level of the station plaza will draw inspiration from the Mercer Slough boardwalks.

East Main Station

The landscape between the station and 112th Avenue NE meets the City of Bellevue streetscape requirements and provides an identity for the station that subtly reflects the character of the historic Surrey Downs neighborhood. The landscape to the west of the station works with the sound barrier to provide a visual buffer between the station and the adjacent residences, softening the slope between the two. Vegetated swales incorporated into the design will allow soils to absorb water, reducing the need for irrigation in these areas, and slowing flows and filtering out contaminants before the water is released into the City's storm sewer system.

Bellevue Transit Center Station

Landscape design at the station entry area follows the Downtown Subarea plan and responds to Bellevue City Hall and Plaza which is adjacent to the station and reflects a more urban context. The design also preserves some of the art and special features currently located at the site.

Hospital Station
Located across I-405, the Hospital Station adheres to the Hospital overlay area outlined in the COB LUC. Landscape design at this station draws inspiration from nearby Sturtevant Creek, and some of the historical context of this area. More details will be shared with the City of Bellevue as the design progresses.

120th Avenue Station
Design for this station is currently in-development. More details will be shared with the City of Bellevue as the design progresses.

130th Avenue Station
Vegetated swales in the 130th park & ride allow soils to absorb water, slowing flows and filtering out many contaminants. The design team also integrated future development and restoration projects into the landscape design. The site's wide planting design accommodates the anticipated development by the City of Bellevue to extend Northeast 16th Street connecting 130th and 132nd Avenues. In addition, the space where the future expansion of NE 16th Street is planned has been incorporated into the design as an interim park space.

Proposed Plant Material: Station Areas
Across the all the station landscapes deciduous trees at installation range in size from 1.5"-3" (approximately 6'-8' in height) while proposed conifers will be 4'-12' in height at installation. As with the corridor landscapes, heights and canopy vary significantly by species and within different contexts, making future growth predictions challenging. The following are some general assumptions about the design.

- In the first year after planting, trees, shrubs and groundcover material will be in an initial establishment period, and reflect limited growth over their heights at installation, which range from 5'-12'.
- After five years trees and shrubs should have significant growth and plantings should be filled in with 80-100% coverage of planting beds.
- After twenty years, trees and shrubs are close to maturing, some might need maintenance pruning and some of the shrubs and groundcovers will need replacement.

5.1.3 Environmental Mitigation Landscape Areas

ST will construct and monitor environmental mitigation areas as compensation for temporary and permanent Project impacts to wetlands, streams, and their associated buffers. Sincere efforts were made through the early planning and design process to avoid and/or minimize impacts to these critical areas. These efforts resulted in a reduction in the number of trees that will be removed by the Project.

Some impacts to wetlands and streams are anticipated as a result of the Project, resulting in the need for mitigation areas. The design goal for the mitigation areas is to maintain, enhance, and/or create healthy ecosystems. The mitigation designs follow Sound Transit's commitment to a "no net loss" of wetland area and function and provide a surplus of functions to ensure the required mitigation ratios are met.

Proposed Plant Material: Mitigation Areas
The size at installation of all proposed trees within environmental mitigation areas is a 2-gallon container. Height of the plant material will vary depending on the species, but an approximate range is 1.5'-3' in height. Larger-sized plant material has proven to have a lower survival rate, and environmental mitigation landscapes are

required to meet a number of performance standards. A high survival rate is one of the performance standards established by the *Critical Areas Report*, and thus, smaller plant materials is being used within Environmental Mitigation Areas in order to promote early growth and survivability.

In addition to a one-year plant establishment period, the Project has a required monitoring/maintenance plan for all mitigation areas, which is anticipated to range from 5 to 10 years from the when the plants were installed. Details on the monitoring/maintenance plan are included in the *Critical Areas Report*.

5.1.4 Landscape Restoration Areas

These areas are specific to buildings and/or associated landscape areas that are subject to Section 4 (f) of the US Department of Transportation Act of 1966, including public parks, recreation areas, wildlife/waterfowl refuge and historic sites, as well as recreation areas subject to Section 6(f) of the Land and Water Conservation Act. These areas were identified in the East Link Project Final EIS, and include the Winters House and blueberry farm access, Surrey Downs Park, ST-acquired properties north of Surrey Downs Park along 112th Avenue SE including the proposed East Main Park, and the NE 2nd Street pocket parks. The landscape for each of these sites will use materials and plants reflective of the immediate site features and surrounding neighborhood and historic context.

The design process in these areas also identified several contextual themes that occurred along the Project's alignment. These include the Pacific Northwest native vegetation that matches the theme within the Mercer Slough Nature Park, the early twentieth century landscape designs of the historic Winters House, and the mid-century modern aesthetic typical to the architecture and landscapes in the Surrey Downs residential neighborhood.

Proposed Plant Material : Restoration Areas

Plant materials selected for these areas will respond to the unique aesthetic characteristics and function of the sites. At the Winters House, plant selection is based on plant species and form derived from historic data, pictures, and meetings with the City of Bellevue, the Eastside Heritage Center, and the State Historic Preservation Office. The adjoining parking lot landscape uses Pacific Northwest natives that is reflective of the Mercer Slough which borders the parking along the east side. The following are some general assumptions about the growth of the landscape areas over time:

- Some growth will be evident within the first year after plant installation, with exception of the newly installed plants that are required to be replaced within the one-year plant establishment phase.
- After five years, trees and other vegetation will show significant growth. Tree canopy is expected to double.
- After twenty years, trees and other vegetation are anticipated to be mature. Maintenance such as pruning of tree limbs and shrubs will be necessary to maintain Crime Prevention through Environmental Design (CPTED) requirements near public spaces, and to maintain minimum required clearances from Sound Transit operations.

5.1.5 Additional Information

For more details on the ST criteria for all proposed landscape areas, including soil preparation and planting procedures, refer to Chapter 10 of ST Link Design Criteria Manual (DCM) (Volume 3). Final technical specifications will follow the criteria set-forth in the DCM.

6.0 Policies and Context-Sensitive Approaches

6.1 Overview of Regulatory Requirements

Chapter 20.25M of the City of Bellevue's LUC recognizes RLRT facilities as an acceptable use, and governs the development of RLRT facilities within the City. As a result, the Project is required to meet context-sensitive goals under the discretion of the City of Bellevue, retain significant trees to the maximum extent feasible and plant trees and understory vegetation to meet new landscape development requirements established by the LUC.

6.1.1 Tree Removal and Replacement

Throughout the project, trees have been retained to the maximum extent feasible. ST has prepared a quantitative analysis of tree removal for each design package within the City of Bellevue (included with this memorandum as Appendices A, B & C). This analysis quantifies both the number of trees removed within each package, as well as the number of trees that will be planted along the corridor, at station areas and within mitigation sites. Where the Project removes significant trees within Critical Areas and Critical Area Buffers, the Project will replace each significant conifer removed at a 3 to 1 ratio and will replace significant deciduous trees at a 1 to 1 ratio. Outside of Critical Areas and Critical Area Buffers, the design team has taken steps to meet context-sensitive requirements established by the LUC.

Sub-section 20.25M.040.C of the City of Bellevue's LUC describes applicable landscape development requirements for the Project outside of Critical Areas and Critical Area Buffers. The purpose and intent of the landscape requirements is to provide (i) dense sight barriers between higher and lower intensity uses and (ii) visual relief and softening of transportation facilities where preservation of sight lines is important. The requirements provided in LUC 20.25M.040.C will be met through the protection/retention of significant existing trees where preservation is feasible, and by installing new landscape areas along the corridor and at the stations.

6.2 Context Sensitive Design

Context-sensitive design approaches are difficult to assess through numbers alone, and a primary goal of this memorandum is to provide a qualitative perspective on the Project's design. The City of Bellevue, through the most recent update to their Comprehensive Plan, has identified a number of goals for integrating new public transportation facilities into the context and character of the City.

6.2.1 Comprehensive Plan Discussion

Policy TR-75.12 of the City's Comprehensive Plan provides the following guidance on the development of RLRT facilities:

> *Partner with the regional transit provider to design transit stations and facilities incorporating neighborhood objectives and context sensitive design to better integrate facilities into the community. This includes, but is not limited to the following:*

1. *Incorporating superior urban design, complementary building materials, and public art and;*
2. *Providing substantial landscaping at stations and along the alignment, including retained significant trees and transplanted trees that are, at minimum, saplings*

This policy is met through a number of design approaches and decisions made by ST and the East Link Final Design Team. The Project's design has been realized through an iterative Collaborative Design Process (CDP), which ensures that the use and design is compatible with the surrounding built environment. The work of the CDP also ensures that the Project design is consistent with the City's long-term transportation and land use objectives. The City's involvement through the CDP and City Council's approval of the alignment, profile and station locations supports the very purpose of this policy and helps to balance the impacts of the Project with its overall performance.

The Project's balanced design allows for safe and efficient construction and operations, while also respecting and responding to the environmental context and community character of the surrounding neighborhoods. Urban design elements of the Project include:

- Alignment along Bellevue Way SE was adjusted in order to maintain existing trees on the slope that provide a buffer for existing neighborhoods.
- Station designs contribute to the City's public life by utilizing building materials that complement the surroundings and integrating engaging public art elements into the design.
- RLRT facilities promote and improve multi-modal transportation options, including pedestrian, bike, bus, carpools, etc.

The East Link Final Design Team has also worked to integrate different types of landscapes and diverse planting designs into the Project. These landscapes have been described in Section 5, and a summary of their benefits include:

- Landscapes that respond to the context and character of the adjacent neighborhoods and surrounding environment.
- Use of both existing and proposed vegetation to soften and buffer RLRT facilities.
- A mix of proposed plant material sizes allows the Project to balance the need to screen RLRT facilities at the end of construction, with the need to promote robust vegetation growth in the years following construction.

ST also understands that the image of the "City in a Park" is important to the people who live and work in the City of Bellevue. The East Link Final Design Team has made a great effort to minimize and mitigate the removal of existing trees and vegetation, while also developing engaging landscape designs that will become dynamic urban plazas and ecological resources for the future.

City in a Park

…Bellevue clearly fulfills its image as a "City in a Park." …The city treasures and protects natural places, maintaining more than 2,432 acres – nearly 10 percent of its land area, in city-owned open space… Even in the heart of the downtown business district, Bellevue's Downtown Park provides a green respite, an information gathering place and a popular location for special events and celebrations….

Trees will be preserved to the maximum extent possible given the prescribed alignment that was provided to the design team. The Project will replant trees in areas remaining after the RLRT is constructed. The remaining trees and the newly planted trees are expected to continue Bellevue's park-like setting and enhance the natural environment over time.

The project has maximized the space provided for street trees, landscaping, and raised planting areas where possible. ST has balanced context-sensitive needs with other Project requirements through design refinements and coordination with both the City and the Citizen's Advisory Committee (CAC).

The Project will need to remove a number of significant trees along Mercer Slough. However, re-planting and other mitigation measures such as stormwater treatment will eliminate any long-term impact to fish and wildlife habitat within the Slough. In addition, mitigation areas adjacent to the Mercer Slough Natural Area will enhance fish and wildlife habitat.

Finally, ST has partnered with the City to meet context sensitive objectives. Through numerous public meetings, high level meetings between the City and ST management, and through the City's permit process, this partnership has realized a Project that balances RLRT operational and maintenance needs with the transportation needs of the City of Bellevue's residents and workers. New landscapes associated with the Project honor the City in a Park identity by integrating new trees into the designs in such a way that will support the future growth of the City and the region.

For more details on how the project meets the policies of the City's Comprehensive Plan, refer to the Comprehensive Plan and Light Rail Best Practices Analysis sections of the *DMP application*.

MEMORANDUM- APPENDIX B

Sound Transit East Link | South Bellevue to OTC

E330/E335 TREE REMOVAL AND MITIGATION ANALYSIS WITHIN THE CITY OF BELLEVUE – 60% Design

Date: October 20, 2014

To: Mathews Jackson, City of Bellevue

From: Justin Lacson, Sound Transit

Re: East Link Light Rail Extension Project Central Bellevue (E330/E335) Design Package within the City of Bellevue

1.0 PURPOSE

This memorandum quantifies the number and extent of tree removal required to construct the Central Bellevue portion of the East Link Light Rail Extension Project (Project) located within the City of Bellevue. The number, type (e.g., deciduous, coniferous) and general location (e.g. outside critical area / buffer, within critical area / buffer) of trees which will be removed to construct the Central Bellevue portion of the Project area identified in Table 3.0-1. This memorandum also estimates the number of proposed trees that will be planted as a result of the Project. Descriptions and detailed information on tree removal, protection and replacement are covered in the main text of the *Analysis of Tree Preservation and Context Sensitive Design* dated September 23, 2014.

The scope of this memorandum is the Central Bellevue (E330 & E335) portions of the Project as it exists within the limits of the City of Bellevue (COB). Tree removal addressed below occurs entirely within the E330/E335 and the 120th Station Design and Mitigation Permit (DMP) limits. These areas include the portions of the Project from the East Main Station at approximately SE 4th Street and 112th Avenue to the west side of 120th Avenue NE. (see Figure 1) As part of the E330 contract package, approximately one-half mile of track will be constructed in a tunnel running from the south side of Main Street at 112th Avenue NE to the Bellevue Transit Center Station, on the south side of NE 6th Street at 110th Avenue NE. However, only the surface expressions associated with the tunnel are included in this DMP Application. Additionally, this report identifies the mitigation requirements pursuant to the LUC for Central Bellevue that are located solely within City of Bellevue jurisdiction.

2.0 OVERVIEW

REPORT SCOPE

The E330/E335 portion of the Project within the COB is a 1.8 mile section that begins at approximately 112th Ave SE and SE 4th St and continues north through Downtown Bellevue, east across I-405, north of the former BNSF corridor and into the E330/E335 district to approximately 124th Ave NE. The E335 design package includes the S. Main Station, Downtown Station, Hospital Station and 120th St. Stations. For purposes of this analysis, any surface work associated with E330 that impacts trees will be captured within E335. This portion of the Project will be constructed under a General Contractor-Construction Management (GCCM) contract.

Sixty percent design information regarding tree removal and replanting was used to develop this memorandum. Since none of the design packages are at one-hundred percent design level, it is anticipated that the amount and extent of tree removal and replacement may change during the City's review.

TREE DATA

The East Link Final Design Team conducted tree survey assessments for each of the Project's design packages. This tree survey identified all trees, (i.e. 4" diameter at breast height (DBH) or greater) that are located within the construction limits and potentially impacted during implementation of the Project. This effort included any critical area mitigation projects associated with construction activities, temporary equipment access and construction staging areas. The following analysis of tree retention, removal and mitigation uses the extent of this tree survey, which is consistent with the boundaries of the Light Rail Overlay area. (see COB Chapter 20.20M LUC)

This memorandum also describes mitigation opportunities to compensate for the removal of trees. Landscaping required by the City's standard landscape development requirements (LUC 20.20.520 as well as any sub-area landscape requirements) are counted towards the overall corridor mitigation compensation.

TREE REPLACEMENT CRITERIA

The Project is taking a standard, corridor-wide approach to mitigation for the removal of trees within critical areas and critical area buffers. For these areas (which include critical areas and critical area buffers within the City of Bellevue, the City of Redmond and WSDOT jurisdiction) the Project will apply standard replacement ratios for tree removal: a 3:1 replacement ratio for the removal of conifers (e.g., western hemlock), and a 1:1 tree replacement ratio for the removal of deciduous (e.g. big leaf maple) trees.

Outside of critical areas, the project is required to be context sensitive and preserve existing vegetation to a maximum extent feasible. See the *Analysis of Tree Preservation and Context Sensitive Design* for a full discussion of applicable regulation. Information on proposed landscape areas also is provided in that document, as well as the E330/E335 and the 120th Station DMP permit applications.

3.0 Analysis

Table 3.0-1 E330/E335 Tree Removal and Mitigation Summary provides a quantitative summary of tree removal, mitigation and the proposed tree plantings along the E330/E335 corridor. This data reflects the field assessments performed by ST, based on anticipated effects of construction. The analysis for E330/E335 portion of the Project is divided into three areas, as shown in Table 3.0-1. ST derived the estimate of trees required for mitigation by applying the critical area mitigation ratios to the number of trees that will be removed in those areas. The number of replacement trees is based on 60% plans and plant schedules included in the construction documents as well as the 60% cost estimate. Proposed trees include species commonly considered trees, as well as a small number of large shrub species that exhibit a growth habit and size similar to that of a small tree. (See note 4 under Table 3.0-2) At the sixty-percent design benchmark, the overall number of trees planted by the Project surpasses the number of trees required to mitigate tree removal associated with the Project. However, due to space constraints where planting areas are adjacent to the corridor, there are limited opportunities for coniferous trees within the environmental mitigation planting areas. Corridor and station landscape areas, as well as the proposed plantings at the Main St. Park, include 161 coniferous trees.

Table 3.0-1 – E330/E335 Tree Removal and Mitigation Summary

E330/E335 Tree Removal	Light Rail Overlay Areas	Critical Areas		Critical Area Buffer	
		Coniferous	Deciduous	Coniferous	Deciduous
Total Trees	1,175				
Trees by District	1,063	1	19	19	73
Total Trees Removed	345				
Trees Removed by District[1]	270[2] (+4 hazard)	1	19	7	48
Estimate of Total Trees Necessary for Mitigation[3]	91				

1. Tree counts, rather than DBH, are reported in these columns, for purposes of consistency between critical areas, critical area buffers and non-critical areas. On non-critical areas within the city of Bellevue, mitigation is based on DBH. Notes on the DBH are provided below, based on the data on trees removed within Light Rail Overlay Areas.
2. Of the 9,415" of existing tree DBH located within Light Rail Overlay Areas, (includes trees to remain as well as trees that will be removed) 2,169" DBH will be removed by the Project.
3. This number was determined by applying the tree replacement ratios to the number of trees removed within each of the relevant areas.

Table 3.0-2 – E330/E335 Tree Replanting Summary – Proposed Corridor/Station and Mitigation Plantings

E330/E335 Tree Replacement	Corridor and Station Plantings	Mitigation/Restoration Area Plantings[4]	
		Coniferous	Deciduous
Proposed Trees to be Planted	529	0[5]	34
Total Trees to be Planted[6]	563[7]		

4. Estimates of tree proposed in mitigation areas assume 1% of all 2-Gal. plants in the 60% cost estimate.
5. Due to space planting space limitations, there are limited opportunities to plant coniferous trees in environmental mitigation planting areas along the E330/E335 corridor.
6. This is a summary of all trees to be planted within proposed landscape areas.
7. Includes 161 coniferous trees to be planted along the corridor, at stations and at the Main St. Park.

MEMORANDUM – APPENDIX D

Sound Transit East Link | South Bellevue to OTC

TREE ASSESSMENT METHODOLOGY

3.2.1 Tree Assessment Methodology

The process for completing the assessments within the Project study areas involved the following steps: A) tree location survey; B) tree species identification and health classification (describing the condition of the tree as fair or hazard, etc.); and C) data processing/ quality control. These steps are described in more detail below:

A. Tree Location Survey

Licensed surveyors completed field surveys in 2013 and 2014 to electronically locate trees 4" DBH and above using a handheld GPS device. This information was loaded into the Project design files. The selected contractor will be responsible to conduct a follow-up tree assessment and survey, to be completed prior to the initiation of construction.

B. Tree Identification and Classification

An International Society of Arboriculture (ISA) Certified Arborist (#214410) led the Tree Survey Assessment. The tree survey assessment criterion provides data collection requirements regarding health, species, and locations for trees surveyed.

The Arborist recorded the following data for trees:

- Diameter-at-Breast-Height (DBH) (Multi-stem trees had each stem recorded if size and stem location were met. The largest stem was used to determine the overall DBH of multistem trees.)
- Species
- Category—coniferous or deciduous
- Category—"significant", per city code(s)
- Health Classification—excellent/good, fair, poor, or "hazard" (In the case of "hazard" trees, the Arborist provided a description of the conditions that made the tree hazardous.)

Note: When Right-of-Entry (ROE) authorizations were not received, the tree location survey could not be completed on the specified parcel. Therefore, the arborist collected tree identification and classification using GPS offsets, range finders, and binoculars to assess trees and record data from existing public right-of-ways.

C. Data Processing/Quality Control

The arborist transferred the tree survey assessment data recorded in the field from the GPS device to a tabular format using Excel spreadsheets to create unique tree identification (ID) numbers and to confirm the status assessment of each tree.

XREF LIST:
GIS-SEAL+JWL1135
XE:320-SIB-TB22x34

FORESTED BUFFER TOTALS

COMMON NAME	BOTANICAL NAME	QTY	SIZE	SPACING	NOTES
BEAKED HAZELNUT	CORYLUS CORNUTA	XX	1 GAL.	5' O.C.	NOTES
INDIAN PLUM	OEMLERIA CERASIFORMIS	XX	1 GAL.	5' O.C.	NOTES
KINNIKINNICK	ARCTOSTAPHYLOS UVA-URSI	XX	1 GAL.	5' O.C.	NOTES
SALAL	GAULTHERIA SHALLON	XX	1 GAL.	5' O.C.	NOTES
SNOWBERRY	SYMPHORICARPOS ALBUS	XX	1 GAL.	5' O.C.	NOTES
SWORD FERN	POLYSTICHUM MUNITUM	XX	1 GAL.	5' O.C.	NOTES
TALL OREGON GRAPE	MAHONIA AQUIFOLIUM	XX	1 GAL.	5' O.C.	NOTES
VINE MAPLE	ACER CIRCINATUM	XX	1 GAL.	5' O.C.	NOTES
WOODS ROSE	ROSA WOODSII	XX	1 GAL.	5' O.C.	NOTES
BIG LEAF MAPLE	ACER MACROPHYLLUM	XX	1 GAL.	10' O.C.	NOTES
BLACK HAWTHORNE	CRATAEGUS DOUGLASII	XX	1 GAL.	10' O.C.	NOTES
DOUGLAS FIR	PSEUDOTSUGA MENZIESII	XX	1 GAL.	10' O.C.	NOTES
WESTERN HEMLOCK	TSUGA HETEROPHYLLA	XX	1 GAL.	10' O.C.	NOTES
WESTERN RED CEDAR	THUJA PLICATA	XX	1 GAL.	10' O.C.	NOTES

FORESTED WETLAND TOTALS

COMMON NAME	BOTANICAL NAME	QTY	SIZE	SPACING	NOTES
HIGH BUSH CRANBERRY	VIBURNUM EDULE	XX	1 GAL.	5' O.C.	NOTES
LADY FERN	ATHYRIUM FILIX-FEMINA	XX	1 GAL.	5' O.C.	NOTES
PACIFIC NINEBARK	PHYSOCARPUS CAPITATUS	XX	1 GAL.	5' O.C.	NOTES
RED OSIER DOGWOOD	CORNUS SERICEA	XX	1 GAL.	5' O.C.	NOTES
TWINBERRY	LONICERA INVOLUCRATA	XX	1 GAL.	5' O.C.	NOTES
OREGON ASH	FRAXINUS LATIFOLIA	XX	1 GAL.	10' O.C.	NOTES
PACIFIC WILLOW	SALIX LASIANDRA	XX	1 GAL.	10' O.C.	NOTES
SITKA SPRUCE	PICEA SITCHENSIS	XX	1 GAL.	10' O.C.	NOTES
WESTERN RED CEDAR	THUJA PLICATA	XX	1 GAL.	10' O.C.	NOTES

SCRUB SHRUB BUFFER TOTALS

COMMON NAME	BOTANICAL NAME	QTY	SIZE	SPACING	NOTES
BEAKED HAZELNUT	CORYLUS CORNUTA	XX	1 GAL.	5' O.C.	NOTES
INDIAN PLUM	OEMLERIA CERASIFORMIS	XX	1 GAL.	5' O.C.	NOTES
KINNIKINNICK	ARCTOSTAPHYLOS UVA-URSI	XX	1 GAL.	5' O.C.	NOTES
LOW OREGON GRAPE	MAHONIA NERVOSA	XX	1 GAL.	5' O.C.	NOTES
NOOTKA ROSE	ROSA NUTKANA	XX	1 GAL.	5' O.C.	NOTES
SALAL	GAULTHERIA SHALLON	XX	1 GAL.	5' O.C.	NOTES
SNOWBERRY	SYMPHORICARPOS ALBUS	XX	1 GAL.	5' O.C.	NOTES
SWORD FERN	POLYSTICHUM MUNITUM	XX	1 GAL.	5' O.C.	NOTES
VINE MAPLE	ACER CIRCINATUM	XX	1 GAL.	5' O.C.	NOTES
BLACK HAWTHORNE	CRATAEGUS DOUGLASII	XX	1 GAL.	10' O.C.	NOTES
DOUGLAS FIR	PSEUDOTSUGA MENZIESII	XX	1 GAL.	10' O.C.	NOTES
WESTERN RED CEDAR	THUJA PLICATA	XX	1 GAL.	10' O.C.	NOTES

SCRUB-SHRUB WETLAND TOTALS

COMMON NAME	BOTANICAL NAME	QTY	SIZE	SPACING	NOTES
LADY FERN	ATHYRIUM FILIX-FEMINA	XX	1 GAL.	5' O.C.	NOTES
PACIFIC NINEBARK	PHYSOCARPUS CAPITATUS	XX	1 GAL.	5' O.C.	NOTES
RED OSIER DOGWOOD	CORNUS SERICEA	XX	1 GAL.	5' O.C.	NOTES
SALMONBERRY	RUBUS SPECTABLIS	XX	1 GAL.	5' O.C.	NOTES
SANDBAR WILLOW	SALIX EXIGUA	XX	1 GAL.	5' O.C.	NOTES
TWINBERRY	LONICERA INVOLUCRATA	XX	1 GAL.	5' O.C.	NOTES
OREGON ASH	FRAXINUS LATIFOLIA	XX	1 GAL.	10' O.C.	NOTES
PACIFIC WILLOW	SALIX LASIANDRA	XX	1 GAL.	10' O.C.	NOTES
WESTERN RED CEDAR	THUJA PLICATA	XX	1 GAL.	10' O.C.	NOTES

INFILL PLANTING TOTALS

COMMON NAME	BOTANICAL NAME	QTY	SIZE	SPACING	NOTES
INDIAN PLUM	OEMLERIA CERASIFORMIS	XX	1 GAL.	5' O.C.	NOTES
SALAL	GAULTHERIA SHALLON	XX	1 GAL.	5' O.C.	NOTES
SWORD FERN	POLYSTICHUM MUNITUM	XX	1 GAL.	5' O.C.	NOTES
TALL OREGON GRAPE	MAHONIA AQUIFOLIUM	XX	1 GAL.	5' O.C.	NOTES
WOODS ROSE	ROSA WOODSII	XX	1 GAL.	5' O.C.	NOTES

EMERGENT WETLAND TOTALS

COMMON NAME	BOTANICAL NAME	QTY	SIZE	SPACING	NOTES
BEAKED SEDGE	CAREX ROSTRATA	XX	XX	XX	NOTES
COMMON SPIKERUSH	ELEOCHARIS PAULSTRIS	XX	XX	XX	NOTES
DAGGER-LEAF RUSH	JUNCUS ENSIFOLIOUS	XX	XX	XX	NOTES
HARDSTEM BULRUSH	SCIRPUS ACUTUS	XX	XX	XX	NOTES
SLENDER RUSH	JUNCUS TENUIS	XX	XX	XX	NOTES
SLOUGH SEDGE	CAREX OBNUPTA	XX	XX	XX	NOTES
SMALL-FRUITED BULRUSH	SCIRPUS MICROCARPUS	XX	XX	XX	NOTES

ORIGINATED BY: / DATE:
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BACK-CHECKED BY: / DATE:
CORRECTED BY: / DATE:
VERIFIED BY: / DATE:

11/08/13 | 3:16 PM | CALDWELLJ
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60% SUBMITTAL

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: J. LONG
DRAWN BY: J. LOGAN
CHECKED BY: B.ELROD
APPROVED BY: J. SCHETTLER

STATE OF WASHINGTON
LICENSED
LANDSCAPE ARCHITECT
JASON WILLIAM LONG
LICENSE NO. 1135
EXPIRES ON

HNTB
SUBMITTED BY:

H J H FINAL DESIGN PARTNERS.
DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT
SCALE: AS NOTED
FILENAME: E320-L85-LMD103
CONTRACT No.: RTA/LR XXXX-XX
DATE: 12/06/2013

EAST LINK EXTENSION
CONTRACT E320
SOUTH BELLEVUE

LANDSCAPE
SITE RESTORATION DETAILS

DRAWING No.: L8□-LMD103
LOCATION ID: E12
SHEET No.: 808
REV: 0

PLANT SCHEDULE & NOTES

SYM	QTY	BOTANICAL NAME	COMMON NAME	SIZE / REMARKS
TREES				
	46	ACER CIRCINATUM	VINE MAPLE	8'-10' HT; B&B; FULL, WELL BRANCHED & WELL ROOTED; MIN 3 TRUNKS
	38	ACER RUBRUM `FRANKSRED`	RED SUNSET MAPLE	2 1/2" CAL; B&B; FULL, WELL BRANCHED & WELL ROOTED; STRAIGHT CENTRAL LEADER & SINGLE TRUNK; SYMMETRICAL BRANCHING HABIT; MIN 7' BRANCHING HEIGHT
	2	BETULA PAPYRIFERA	PAPER BIRCH	2 1/2" CAL; B&B; FULL, WELL BRANCHED & WELL ROOTED; STRAIGHT CENTRAL LEADER & SINGLE TRUNK; MIN 5' BRANCHING HEIGHT
	4	CARPINUS BETULUS 'FASTIGIATA'	PYRAMIDAL EUROPEAN HORNBEAN	2 1/2" CAL; B&B; FULL, WELL BRANCHED & WELL ROOTED; STRAIGHT CENTRAL LEADER & SINGLE TRUNK; MIN 7' BRANCHING HEIGHT
	29	CORNUS KOUSA X NUTTALLII `VENUS`	VENUS DOGWOOD	2 1/2" CAL; B&B; FULL, WELL BRANCHED & WELL ROOTED; STRAIGHT CENTRAL LEADER & SINGLE TRUNK; MIN 5' BRANCHING HEIGHT
	108	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	10'-12' HT; B&B; FULL, WELL BRANCHED & WELL ROOTED; STRAIGHT CENTRAL LEADER & SINGLE TRUNK; SYMMETRICAL BRANCHING HABIT; NOT SHEARED
	64	THUJA PLICATA	WESTERN RED CEDAR	10'-12'; B&B; FULL, WELL BRANCHED & WELL ROOTED; STRAIGHT CENTRAL LEADER & SINGLE TRUNK; NOT SHEARED
	188	TILIA CORDATA `GREENSPIRE`	GREENSPIRE LITTLELEAF LINDEN	2 1/2" CAL; B&B; FULL, WELL BRANCHED & WELL ROOTED; STRAIGHT CENTRAL LEADER & SINGLE TRUNK; SYMMETRICAL BRANCHING HABIT; MIN 7' BRANCHING HEIGHT
SHRUBS/GROUNDCOVERS				
AA	3	AMELANCHIER ALNIFOLIA	SERVICEBERRY	1 GAL CONT; FULL & WELL ROOTED
	231	POLYSTICHUM MUNITUM	WESTERN SWORD FERN	1 GAL CONT; FULL & WELL ROOTED; MIN 3 GREEN FRONDS
	320	PRUNUS LAUROCERASUS 'OTTO LUYKEN'	LUYKENS LAUREL	1 GAL CONT; FULL & WELL ROOTED; 18" OFFSET FROM PAVING EDGE
RS	229	SPIRAEA BETULIFOLIA `TOR`	BIRCHLEAF SPIREA	1 GAL CONT; FULL & WELL ROOTED; 12" OFFSET FROM PAVING EDGE
	3,117 SF	CORNUS SERICEA `KELSEYI`	KELSEYI DOGWOOD	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 24" OC, WITH 12" OFFSET FROM PAVING EDGE
	1,333 SF	FRAGARIA CHILOENSIS	BEACH STRAWBERRY	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 24" OC, , WITH 12" OFFSET FROM PAVING EDGE
	3,028 SF	HAKONECHLOA MACRA `AUREOLA`	GOLDEN JAPANESE FOREST GRASS	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 24" OC, WITH 12" OFFSET FROM PAVING EDGE
	370 SF	HEMEROCALLIS `STELLA DE ORO`	DAYLILY	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 18" OC, WITH 9" OFFSET FROM PAVING EDGE
	597 SF	LIRIOPE SPICATA	CREEPING LILY TURF	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 18" OC, WITH 9" OFFSET FROM PAVING EDGE
	1,294 SF	MAHONIA AQUIFOLIUM `COMPACTA`	COMPACT OREGON GRAPE	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 36" OC, WITH 18" OFFSET FROM PAVING EDGE, OR WALL
	292 SF	MAHONIA REPENS	CREEPING MAHONIA	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 24" OC, WITH 12" OFFSET FROM PAVING EDGE
	723 SF	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY'	LITTLE BUNNY FOUNTAIN GRASS	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING SPACING @ 24" OC, WITH 12" OFFSET FROM PAVING EDGE
	3,044 SF	ROSA RUGOSA 'PINK PAVEMENT'	PINK PAVEMENT ROSE	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 36" OC, WITH 18" OFFSET FROM PAVING EDGE
	4,464 SF	RUBUS CALYCINOIDES	BRAMBLE `EMERALD CARPET`	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 24" OC, WITH 18" OFFSET FROM PAVING EDGE

SYM	QTY	BOTANICAL NAME	COMMON NAME	SIZE / REMARKS
	37,284 SF	MIX: NATIVE FOREST BUFFER		36" OC TRIANGULAR SPACING; INTERMIX PLANTS WITH CONSISTENT DISTRIBUTION; OFFSET 18" FROM PAVING, FENCING, WALL OR GRAVEL
	15%	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY	5 GAL CONT; 42" HT; FULL & WELL ROOTED
	15%	POLYSTICHUM MUNITUM	WESTERN SWORD FERN	1 GAL CONT; FULL & WELL ROOTED; MIN 3 GREEN FRONDS
	25%	GAULTHERIA SHALLON	SALAL	1 GAL CONT; FULL & WELL ROOTED
	15%	RIBES SANGUINEUM	RED FLOWERING CURRANT	
	15%	SPIRAEA BETULIFOLIA `TOR`	BIRCHLEAF SPIREA	
	15%	SYMPHORICARPOS ALBUS	COMMON WHITE SNOWBERRY	
	20,338 SF	MIX: NATIVE BUFFER		36" OC TRIANGULAR SPACING; INTERMIX PLANTS WITH CONSISTENT DISTRIBUTION; OFFSET 18" FROM PAVING, FENCING, WALL OR GRAVEL
	20%	CORNUS SERICEA `KELSEYI`	KELSEYI DOGWOOD	1 GAL CONT; FULL & WELL ROOTED
	20%	GAULTHERIA SHALLON	SALAL	
	20%	POLYSTICHUM MUNITUM	WESTERN SWORD FERN	
	20%	RIBES SANGUINEUM	RED FLOWERING CURRANT	
	20%	SYMPHORICARPOS ALBUS	COMMON WHITE SNOWBERRY	
	2,465 SF	MIX: LOW SHRUB		24" OC TRIANGULAR SPACING; INTERMIX PLANTS WITH CONSISTENT DISTRIBUTION; OFFSET 12" FROM PAVING OR GUARDRAIL
	25%	ARCTOSTAPHYLOS UVA-URSI	KINNIKINNICK	1 GAL CONT; FULL & WELL ROOTED
	50%	MAHONIA REPENS	CREEPING MAHONIA	
	25%	SEDUM DIVERGENS	SPREADING STONECROP	
	2,017 SF	MIX: TPSS PLANTING 1		36" OC TRIANGULAR SPACING; INTERMIX PLANTS WITH CONSISTENT DISTRIBUTION; OFFSET 18" FROM PAVING OR GUARDRAIL
	50%	GAULTHERIA SHALLON	SALAL	1 GAL CONT; FULL & WELL ROOTED
	50%	SYMPHORICARPOS ALBUS	COMMON WHITE SNOWBERRY	1 GAL CONT; FULL & WELL ROOTED
	1,176 SF	MIX: TPSS PLANTING 2		36" OC TRIANGULAR SPACING; INTERMIX PLANTS WITH CONSISTENT DISTRIBUTION; OFFSET 18" FROM PAVING, GUARDRAIL, FENCE, OR WALL
	10%	GAULTHERIA SHALLON	SALAL	1 GAL CONT; FULL & WELL ROOTED
	10%	MAHONIA AQUIFOLIUM	OREGON GRAPE	
	50%	MYRICA CALIFORNICA	PACIFIC WAX MYRTLE	
	30%	SYMPHORICARPOS ALBUS	COMMON WHITE SNOWBERRY	
	101,194 SF	MIX: WSDOT HIGH SHRUB		48" OC TRIANGULAR SPACING; INTERMIX PLANTS WITH CONSISTENT DISTRIBUTION; OFFSET 12" FROM BOTTOM OF SEEDED SWALE
	50%	ARBUTUS UNEDO 'COMPACTA'	COMPACT STRAWBERRY BUSH	1 GAL CONT; FULL & WELL ROOTED
	20%	HOLODISCUS DISCOLOR	OCEAN-SPRAY	
	30%	SYMPHORICARPOS ALBUS	COMMON WHITE SNOWBERRY	
	9,238 SF	MIX: WSDOT LOW SHRUB		48" OC TRIANGULAR SPACING; INTERMIX PLANTS WITH CONSISTENT DISTRIBUTION;
	40%	GAULTHERIA SHALLON	SALAL	1 GAL CONT; FULL & WELL ROOTED
	20%	MAHONIA REPENS	CREEPING MAHONIA	
	40%	SYMPHORICARPOS ALBUS	COMMON WHITE SNOWBERRY	
	20,205 SF	MIX: WSDOT TREE		10' OC TRIANGULAR SPACING; INTERMIX PLANTS WITH CONSISTENT DISTRIBUTION; OFFSET 4' FROM PROPOSED 10'-12' HT TREES
	30%	ACER CIRCINATUM	VINE MAPLE	1 GAL CONT; FULL & WELL ROOTED
	20%	AMELANCHIER ALNIFOLIA	SERVICEBERRY	
	40%	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	
	10%	THUJA PLICATA	WESTERN RED CEDAR	
	9,131 SF	PRIVATE PROPERTY RESTORATION		TO BE DETERMINED; RESTORE PLANTING & IRRIGATION TO MATCH PRE-CONSTRUCTION CONDITIONS
	38,599 SF	SEED MIX		SEE SPECIFICATIONS
	709 SF	WSDOT SWALE SEED MIX		SEE WSDOT SPECIFICATION 9-14.2
	4,742 SF	MULCH ONLY		SEE SPECIFICATIONS
	6,144 SF	QUARRY SPALLS		12" DEPTH

NOTES:

1. ALL WSDOT PLANT MIXES SHALL HAVE OFFSETS PER DETAIL 4 SHEET STD-LPD102.
2. ALL PRIVATE PROPERTY RESTORATION AREAS SHALL RECEIVE TYPE 2 SOIL PREPARATION. SEE DETAIL 2 DWG STD-LPD101.
3. ALL CORRIDOR PLANTING AREAS SHALL RECEIVE TYPE 1 SOIL PREPARATION. SEE DETAIL 1 DWG STD-LPD101.

XREF LIST:
xE320-GIS-TB22x24
GIS-SEAL-JBV857

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60% SUBMITTAL

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: J. VONG
DRAWN BY: M. OVIIR
CHECKED BY: D. KOONTS
APPROVED BY: J. SCHETTLER

STATE OF WASHINGTON LICENSED LANDSCAPE ARCHITECT
JULIET B. VONG LICENSE NO. 857
EXPIRES ON _____

HBB LANDSCAPE ARCHITECTURE
215 WESTLAKE AVENUE NORTH SEATTLE, WA 98109 206.682.3031 phone 206.682.3245 fax

SUBMITTED BY: | DATE: | REVIEWED BY: | DATE:

FINAL DESIGN PARTNERS.

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: NTS
FILENAME: E320-L85-LPS100
CONTRACT No.: RTA/LR XXXX-XX
DATE: 12/06/2013

EAST LINK EXTENSION
CONTRACT E320
SOUTH BELLEVUE

LANDSCAPE
PLANTING SCHEDULE, NOTES & LEGEND
CORRIDOR

DRAWING No.: L8□-LPS100
LOCATION ID: E12
SHEET No.: 858
REV: 0

PLANT SCHEDULE & NOTES

SYM	QTY	BOTANICAL NAME	COMMON NAME	SIZE / REMARKS	
PLANTING ENLARGEMENT 1 (SELECTION A)					1 / L85-LPD100
	4,816 SF	FRAGARIA CHILOENSIS	BEACH STRAWBERRY	1 GAL CONT; FULL & WELL ROOTED;	
		CORNUS SERICEA `KELSEYI`	KELSEYI DOGWOOD	1 GAL CONT; FULL & WELL ROOTED;	
PLANTING ENLARGEMENT 1 (SELECTION B)					1 / L85-LPD100
	3,875 SF	FRAGARIA CHILOENSIS	BEACH STRAWBERRY	1 GAL CONT; FULL & WELL ROOTED;	
		SPIRAEA BETULIFOLIA `TOR`	BIRCHLEAF SPIREA	1 GAL CONT; FULL & WELL ROOTED;	
PLANTING ENLARGEMENT 2					2 / L85-LPD100
	4,841 SF	EPIMEDIUM X VERSICOLOR 'SULPHUREUM'	SULPHUREUM BARRENWORT	1 GAL CONT; FULL & WELL ROOTED;	
		POLYSTICHUM MUNITUM	WESTERN SWORD FERN	1 GAL CONT; FULL & WELL ROOTED; MIN 3 FRONDS; NO BROWN FRONDS	
PLANTING ENLARGEMENT 3					3 / L85-LPD100
	3,517 SF	HAKONECHLOA MACRA 'AUREOLA'	GOLDEN JAPANESE FOREST GRASS	1 GAL CONT; FULL & WELL ROOTED;	
		PRUNUS LAUROCERASUS `OTTO LUYKEN'`	OTTO LUYKEN LAUREL	1 GAL CONT; FULL & WELL ROOTED;	
PLANTING ENLARGEMENT 4 (SELECTION A)					4 / L85-LPD100
	2,237 SF	PENNISETUM ALOPECUROIDES `LITTLE BUNNY`	LITTLE BUNNY FOUNTAIN GRASS	1 GAL CONT; FULL & WELL ROOTED;	
		RUBUS CALYCINOIDES `EMERALD CARPET`	BRAMBLE	1 GAL CONT; FULL & WELL ROOTED;	
PLANTING ENLARGEMENT 4 (SELECTION B)					4 / L85-LPD100
	2,103 SF	FRAGARIA CHILOENSIS	BEACH STRAWBERRY	1 GAL CONT; FULL & WELL ROOTED;	
		HAKONECHLOA MACRA 'AUREOLA'	GOLDEN JAPANESE FOREST GRASS	1 GAL CONT; FULL & WELL ROOTED;	
PLANTING ENLARGEMENT 5					□ / L85-LPD100
	2,752 SF	MAHONIA REPENS	CREEPING MAHONIA	1 GAL CONT; FULL & WELL ROOTED;	
		ROSA RUGOSA 'PINK PAVEMENT'	PINK PAVEMENT ROSE	1 GAL CONT; FULL & WELL ROOTED;	
		SPIRAEA BETULIFOLIA `TOR`	BIRCHLEAF SPIREA	1 GAL CONT; FULL & WELL ROOTED;	

1. ANY DISCREPANCIES WITH THE DWGS AND/OR SPECS AND SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF LA PRIOR TO PROCEEDING WITH CONSTRUCTION.
2. WHERE QUANTITIES ARE NOT SHOWN IN THE PLANT SCHEDULE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE QUANTITIES REQUIRED TO MEET THE SPECIFIED PLANT SPACING. PERCENTAGES LISTED INDICATE PERCENTAGE OF TOTAL PLANTING AREA TO RECEIVE PLANT MATERIALS.
3. PLANT MATERIAL LOCATIONS SHALL BE COORDINATED WITH SPRINKLER IRRIGATION HEAD LOCATIONS TO AVOID ANY CONFLICTS.
4. INSTALL GROUNDCOVERS IN A TRIANGULAR PATTERN AT SPACING SHOWN IN THE PLANT SCHEDULE. WHERE GROUNDCOVER ABUTS CURBING, WALLS, OR WALKS, MIN PLANTING DISTANCE SHALL BE NINE (9) INCHES FROM SAME, UNLESS OTHERWISE NOTED. INSTALL GROUNDCOVERS CONTINUOUS IN BETWEEN SHRUB PLANTINGS.
5. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COORDINATION WITH SUB-CONTRACTORS AS REQUIRED TO ACCOMPLISH PLANTING OPERATIONS.
6. TREE LOCATIONS SHOWN ON PLANTING PLANS (SHEETS LPP103 TO 138B) ARE APPROXIMATE; IF FIELD ADJUSTMENTS ARE NECESSARY, THE FOLLOWING MIN SETBACKS FOR CENTERLINE OF TREE TRUNKS TO EDGE OF DRIVEWAY, FACE OF CURB OR INTERSECTION AND TO CENTER OF ALL OTHERS SHOWN SHALL APPLY:

A.	STREET LIGHTS	25'
B.	DRIVEWAYS	10'
C.	INTERSECTIONS	30'
D.	UNDERGROUND SEWER & WATER LINES	5'
E.	UNDERGROUND GAS LINES	1'
F.	UNDERGROUND HIGH PRESSURE GAS LINES	3'
G.	UTILITY/POWER POLES	5'
H.	UNDERGROUND FIBER CABLE	2'
I.	FACE OF CURB	2' MINIMUM OR CENTERED IN PLANTER STRIP
J.	GUARDRAIL BARRIERS	5'

XREF LIST:
xE320-GIS-TB22x34
GIS-SEAL-JBV857

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60% SUBMITTAL

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: J. VONG
DRAWN BY: M. OVIIR
CHECKED BY: D. KOONTS
APPROVED BY: J. SCHETTLER

STATE OF WASHINGTON
LICENSED
LANDSCAPE ARCHITECT
JULIET B. VONG
LICENSE NO. 857
EXPIRES ON _____

HBB LANDSCAPE ARCHITECTURE
215 WESTLAKE AVENUE NORTH SEATTLE, WA 98109 206.682.3051 phone 206.682.3245 fax

H J H FINAL DESIGN PARTNERS.

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SUBMITTED BY:
DATE:
REVIEWED BY:
DATE:

SCALE: NTS
FILENAME: E320-L85-LPS100B
CONTRACT No.: RTA/LR XXXX-XX
DATE: 12/06/2013

EAST LINK EXTENSION
CONTRACT E320
SOUTH BELLEVUE

LANDSCAPE
PLANTING SCHEDULE, NOTES & LEGEND
CORRIDOR

DRAWING No.: L8□-LPS100B
LOCATION ID: E12
SHEET No.: 859
REV: 0

INTERS HOUSE PARKIN LOT PLANT SCHEDULE E320-L8-LPP114

SYM.	QTY.	BOTANICAL	COMMON NAME	SIZE
		DECIDUOUS TREES		
	18	ACER CIRCINATUM	VINE MAPLE*	MIN 3 STEMS @ 1-1/2" CAL EACH, MIN 8' HT
	5	ACER PALMATUM 'SANGO KAKU'	CORAL BARK JAPANESE MAPLE*	MIN 2" CAL
		DECIDUOUS SHRUBS		
HD	6	HOLODISCUS DISCOLOR	OCEAN SPRAY	MIN 24" HT, 5 GAL
RS	8	RIBES SANGUINEUM	RED FLOWERING CURRANT*	MIN 24" HT, 4 CANES
		EVERGREEN SHRUBS		
V	70	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY*	MIN 18" HT, 12" SPREAD
		PERENNIALS, GRASSES AND GROUNDCOVERS		
	325	CAREX TESTACEA	ORANGE NEW ZEALAND SEDGE*	4" POTS, 18" OC
	138	MAHONIA REPENS	CREEPING MAHONIA*	MIN 12" HT, 18" SPREAD, 24" OC
	1,670 SF	BLUEBERRY/SEDUM MIX		
		CAMASSIA QUAMASH	COMMON CAMAS*	1 GAL, WELL ROOTED
		SEDUM DIVERGENS	SPREADING STONECROP*	4" POTS
		SEDUM OREGANUM	OREGON STONECROP*	4" POTS
		VACCINIUM ANGUSTIFOLIUM 'BURGUNDY'	BURGUNDY LOWBUSH BLUEBERRY*	2 GAL, FULL AND WELL ROOTED
		VACCINIUM CRASSIFOLIUM 'WELL'S DELIGHT'	CREEPING BLUEBERRY*	2 GAL., FULL AND WELL ROOTED

* INDICATES DROUGHT TOLERANT AND/OR NORTHWEST NATIVE SPECIES

INTERS HOUSE PLANT SCHEDULE E320-L8-LPP114

SYM.	QTY.	BOTANICAL	COMMON NAME	SIZE
		EVERGREEN TREES		
	4	CUPRESSUS SEMPERVIRENS 'MONSHEL' TINY TOWER	TINY TOWER ITALIAN CYPRESS	MIN 10'-12' HT
	7	TSUGA MERTENSIANA	MOUNTAIN HEMLOCK*	MIN 12'-14' HT
		DECIDUOUS TREES		
	1	ACER CIRCINATUM	VINE MAPLE*	3 STEMS @ 1-1/2" CAL EACH, MIN 8' HT
	5	MAGNOLIA VIRGINIANA VAR. AUSTRALIS	SWEETBAY MAGNOLIA*	3 STEMS @ 1-1/2" CAL EACH, MIN 8' HT
		DECIDUOUS SHRUBS		
AF	32	AZALEA 'FRAGRANT STAR'	FRAGRANT STAR AZALEA*	MIN 18" HT, 12" SPREAD
RO	9	RHODODENDRON OCCIDENTALE	WESTERN AZALEA*	MIN 18" HT, 12" SPREAD
		EVERGREEN SHRUBS		
h	9	HEBE 'PATTY'S PURPLE'	PATTY'S PURPLE HEBE*	MIN 18" HT, 12" SPREAD
ME	77	MAHONIA EURYBRACTEATA 'SOFT CARESS'	MAHONIA 'SOFT CARESS'*	MIN 24" HT, 18" SPREAD
RM	13	RHODODENDRON MACROPHYLLUM	PACIFIC RHODODENDRON*	MIN 24" HT, 3 STEMS
RY	6	ROSMARINUS SPP.	ROSEMARY*	MIN 18" HT, 12" SPREAD
		PERENNIALS, GRASSES AND GROUNDCOVERS		
ED	4	EUPHORBIA CHARACIAS 'DWARF'	DWARF MEDITERRANEAN SPURGE*	MIN 12" HT, 12" SPREAD
EW	12	EUPHORBIA CHARACIAS 'WULFENII'	MEDITERRANEAN SPURGE*	MIN 18" HT, 12" SPREAD
PT	15	PHORMIUM TENAX	NEW ZEALAND FLAX*	5 GAL, MIN 24" HT
	73	POLYSTICHUM MUNITUM	SWORD FERN*	1 GAL, MIN 18" HT
	1,900 SF	LAWN		
	1,180 SF	FLOWERING BULB MIXED BORDER		

ABOVEGROUND PLANTING RATIO (ENTIRE HATCHED AREA)

60%	BLECHNUM PENNA-MARINA	ALPINE WATER FERN*	4" POTS, 12" OC
40%	SEDUM DIVERGENS	SPREADING STONECROP*	4" POTS, 12" OC

UNDERGROUND PLANTING RATIO - SPACE MIX OF 6-10 BULBS 24" OC (SAME HATCHED AREA)

25%	NARCISSUS 'ERLICHEER'	DAFFODIL 'ERLICHEER'*	BULB, FIRM AND SOLID
25%	NARCISSUS 'TETE A TETE'	DAFFODIL 'TETE A TETE'*	BULB, FIRM AND SOLID
50%	TULIPA TURKSTANICA	SPECIES TULIP*	BULB, FIRM AND SOLID

* INDICATES DROUGHT TOLERANT AND/OR NORTHWEST NATIVE SPECIES

112TH AT SURRE DO NS PLANT SCHEDULE E320-L8-LPP12-126

SYM.	QTY.	BOTANICAL	COMMON NAME	SIZE
		EVERGREEN TREES		
	13	ABIES GRANDIS	GRAND FIR*	MIN 10'-12' HT
	22	CALOCEDRUS DECURRENS	INCENSE CEDAR*	MIN 10'-12' HT
	15	PSEUDOTSUGA MENZIESII	DOUGLAS FIR*	MIN 10'-12' HT
	10	THUJA PLICATA	WESTERN RED CEDAR*	MIN 10'-12' HT
		DECIDUOUS TREES		
	13	ACER CIRCINATUM	VINE MAPLE*	MIN 3 STEMS @ 1-1/2" CAL EACH, MIN 8' HT
	33	ACER GLABRUM	DOUGLAS MAPLE*	MIN 1-1/2" CAL
	33	AMELANCHIER GRANDIFLORA 'PRINCESS DIANA'	'PRINCESS DIANA' SERVICEBERRY*	MIN 3 STEMS @ 1-1/2" CAL EACH, MIN 8' HT
	20	CERCIS OCCIDENTALIS	WESTERN REDBUD*	MIN 3 STEMS @ 1-1/2" CAL EACH, MIN 8' HT
		DECIDUOUS SHRUBS		
CS	31	CORNUS SERICEA	REDTWIG DOGWOOD*	MIN 24" HT, 5 CANES
	835	CORNUS STOLONIFERA 'KELSEYI'	KELSEY DOGWOOD*	MIN 12" HT, 5 CANES, 30" OC
RS	102	RIBES SANGUINEUM	RED FLOWERING CURRANT*	MIN 24" HT, 4 CANES
SB	88	SPIRAEA BETULIFOLIA 'TOR'	WHITE SPIREA*	MIN 18" HT
		PERENNIALS, GRASSES AND GROUNDCOVERS		
	430	SISYRINCHIUM IDAHOENSSE	BLUE EYED GRASS*	1 GAL, MIN 18" HT
		MITIGATION PLANTING MIX		
	14,700 SF	DENSE PLANTING	SEE BELOW	SPACING: 3' OC
	15,250 SF	REGULAR PLANTING	SEE BELOW	SPACING: 5' OC
	20%	AMELANCHIER ALNIFOLIA	SHRUB SERVICEBERRY*	MIN 36" HT
	10%	GARRYA ELLIPTICA	COAST SILK TASSEL*	MIN 42" HT
	20%	HOLODISCUS DISCOLOR	OCEANSPRAY*	MIN 36" HT
	10%	LONICERA INVOLUCRATA	BLACK TWINBERRY*	MIN 36" HT
	20%	MAHONIA AQUIFOLIUM	TALL OREGON GRAPE*	MIN 42" HT
	20%	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY*	MIN 42" HT

UNDERPLANT DECIDUOUS SHRUBS WITH GROUPINGS OF 12, ALTERNATE BETWEEN:

ARCTOSTAPHYLOS UVA-URSI	KINNIKINNICK*	1 GAL, 18" OC
MAIANTHEMUM DILATATUM	FALSE LILY OF THE VALLEY*	1 GAL, 18" OC

* INDICATES DROUGHT TOLERANT AND/OR NORTHWEST NATIVE SPECIES

NOTES

1. SEE PLANT SCHEDULE FOR PLANT SPECIES.
2. SOIL IN ALL PLANTING BEDS TO BE PREPARED PER TYPE 1 SOIL PREPARATION DETAIL AND SPECS. (1 STD-LPD101)
3. ALL PLANTING BEDS TO RECEIVE 3" MINIMUM DEPTH OF MULCH.
4. ALL EXISTING TREES TO REMAIN SHALL HAVE PROTECTIVE FENCING.
5. ALL DISTURBED LANDSCAPE AREAS NOT INDICATED FOR PAVING OR PLANTING SHALL RECEIVE 3" DEPTH OF MULCH.

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VERIFIED BY: / DATE:

60% SUBMITTAL

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: M. YAMAGUCHI
DRAWN BY: H. BAUMANN
CHECKED BY: I. OTTESEN
APPROVED BY: J. SCHETTLER

STATE OF WASHINGTON LICENSED LANDSCAPE ARCHITECT
MASATOSHI YAMAGUCHI LICENSE NO. 371
EXPIRES ON _____

NAKANO ASSOCIATES LANDSCAPE ARCHITECTS
853 Hiawatha Place S. Seattle, WA 98144 Tel: 206.292.9392 www.nakanoassociates.com

SUBMITTED BY:

FINAL DESIGN PARTNERS.

DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: NTS
FILENAME: E320-L85-LPS101
CONTRACT No.: RTA/LR XXXX-XX
DATE: 12/06/2013

EAST LINK EXTENSION
CONTRACT E320
SOUTH BELLEVUE

LANDSCAPE
PLANTING SCHEDULE, NOTES & LEGEND
PARK MITIGATION

DRAWING No.: L8-LPS101
LOCATION ID: E12
SHEET No.: 860
REV: 0

SOUTH BELLEVUE STATION PLANTING SCHEDULE

SYM	QTY	BOTANICAL	COMMON NAME	SIZE	REMARKS
		EVERGREEN TREES			
	7	ABIES GRANDIS	GRAND FIR *	8'-10' HT, B&B/CONT,	
	6	CALOCEDRUS DECURRENS	INCENSE CEDAR *	8'-10' HT, B&B/CONT,	
	21	PINUS CONTORTA VAR. CONTORTA	SHORE PINE *	8'-10' HT, B&B/CONT,	
	12	THUJA PLICATA	WESTERN RED CEDAR *	8'-10' HT, B&B/CONT,	
	33	TSUGA HETEROPHYLLA	WESTERN HEMLOCK *	6'-8' HT, B&B/CONT	
	18	TSUGA MERTENSIANA	MOUNTAIN HEMLOCK *	6'-8' HT, B&B/CONT	
		DECIDUOUS			
	46	ACER CIRCINATUM	VINE MAPLE *	7'-8' HT, B&B, MULTISTEM, WELL BRANCHED & WELL ROOTED	
	11	AMELANCHIER GRANDIFLORA 'PRINCESS DIANA'	PRINCESS DIANA SERVICEBERRY	2" CAL; MIN 10-12' HT; B&B; FULL, WELL BRANCHED & WELL ROOTED; STRAIGHT CENTRAL LEADER & SINGLE TRUNK; SYMMETRICAL BRANCHING; 5' MIN BRANCH HT	
	12	CARPINUS BETULUS `FASTIGIATA'	PYRAMIDAL EUROPEAN HORNBEAM *	3" CAL; MIN 12-14' HT; B&B; FULL, WELL BRANCHED & WELL ROOTED; STRAIGHT CENTRAL LEADERS & SINGLE TRUNK; SYMMETRICAL BRANCHING; 6' MIN BRANCH HT	
	9	CORNUS KOUSA X NUTTALLII 'VENUS'	VENUS DOGWOOD	2" CAL; MIN 10-12' HT; B&B; FULL, WELL BRANCHED & WELL ROOTED; STRAIGHT CENTRAL LEADERS & SINGLE TRUNK; SYMMETRICAL BRANCHING; 5' MIN BRANCH HT	
	48	GINKGO BILOBA 'FASTIGIATA'	MAIDENHAIR TREE *	2" CAL; MIN 12-14' HT; B&B; FULL, WELL BRANCHED & WELL ROOTED; STRAIGHT CENTRAL LEADERS & SINGLE TRUNK; SYMMETRICAL BRANCHING; 4' MIN BRANCH HT	
	11	GINKGO BILOBA 'JADE BUTTERFLY'	JADE BUTTERFLY GINKGO *	6'-7' HT; B&B; MULTISTEM; FULL, WELL BRANCHED & WELL ROOTED	
		LARGE SHRUBS			
HD	9	HOLODISCUS DISCOLOR	OCEAN SPRAY *	5 GAL; MIN 36" HT; 4 CANES; FULL & WELL ROOTED	
MA	12	MAHONIA AQUIFOLIUM	TALL OREGON GRAPE *	5 GAL; MIN. 30" HT; FULL & WELL ROOTED	
PL	9	PHILADELPHUS LEWISII	MOCK ORANGE *	5 GAL; MIN 36" HT; 4 CANES; FULL & WELL ROOTED	
PM	17	PINUS MUGO 'MUGO'	MUGO PINE *	5 GAL; MIN. 24" HT; FULL & WELL ROOTED	
RO	43	RHODODENDRON OCCIDENTALE	WESTERN AZALEA *	5 GAL; MIN 18" HT; 5 CANES; FULL & WELL ROOTED	
RS	18	RIBES SANGUINEUM	RED FLOWERING CURRENT *	5 GAL; MIN 30" HT; 4 CANES; FULL & WELL ROOTED	
SB	382	SPIREA BETULIFOLIA 'TOR'	BIRCH LEAF SPIREA *	5 GAL; MIN 18" HT; 5 CANES; FULL & WELL ROOTED	
SA	224	SYMPHORICARPOS ALBUS	SNOWBERRY *	2 GAL; MIN 18" HT; 3 CANES; FULL & WELL ROOTED	
VJ	418	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY *	5 GAL; MIN 18" HT; FULL & WELL ROOTED	
VB	84	VACCINIUM 'SUNSHINE BLUE'	SUNSHINE BLUEBERRY	5 GAL; MIN 24" HT; 4 CANES; FULL & WELL ROOTED	
VA	17	VIBURNUM OPULUS VAR. AMERICANUM	AMERICAN CRANBERRY BUSH	5 GAL; MIN 36" HT; 5 CANES; FULL & WELL ROOTED	
		SMALL SHRUBS AND GROUNDCOVER			
	4520 SF	ARCTOSTAPHYLOS UVA-URSI	KINNIKINNICK *	1 GAL; FULL & WELL ROOTED; TRIANGULAR SPACING @ 18" OC	
	1652 SF	ASARUM CAUDATUM	WESTERN WILD GINGER *	1 GAL; FULL & WELL ROOTED; TRIANGULAR SPACING @ 15" OC	
	2247 SF	CAREX TESTACEA	ORANGE NEW ZEALAND SEDGE *	1 GAL; FULL & WELL ROOTED; TRIANGULAR SPACING @ 18" OC	
	2121 SF	CAREX OBNUPTA	SLOUGH SEDGE *	1 GAL; FULL & WELL ROOTED; TRIANGULAR SPACING @ 24" OC	
	9454 SF	GAULTHERIA SHALLON	SALAL *	1 GAL, MIN 8" SPREAD; FULL & WELL ROOTED; TRIANGULAR SPACING @ 24" OC	
	972 SF	JUNCUS EFFUSUS VAR. PACIFICUS	SOFT RUSH *	1 GAL; FULL & WELL ROOTED; TRIANGULAR SPACING @ 24" OC	
	2148 SF	KALMIOPSIS LEACHIANA LEPINIEC FORM	NORTH UMPQUA KALMIOPSIS *	2 GAL; MIN 12" SPREAD; FULL & WELL ROOTED; TRIANGULAR SPACING @ 24" OC	
	6908 SF	MAHONIA REPENS	CREEPING MAHONIA *	1 GAL; TRIANGULAR SPACING @ 18" OC	
	719 SF	PACHYSANDRA TERMINALIS	JAPANESE SPURGE *	4" POTS; TRIANGULAR SPACING @ 12" OC	
PX	121	PAXISTIMA MYRSINITES	OREGON FALSEBOX *	2 GAL; MIN 18" HT; 12" SPREAD; FULL & WELL ROOTED	
	141	POLYSTICHUM MUNITUM	SWORD FERN *	1 GAL; FULL & WELL ROOTED	
PT	233	POTENTILLA FRUTICOSA 'GOLD STAR'	GOLD STAR CINQUEFOIL *	5 GAL; MIN 18" HT; 5 CANES; FULL & WELL ROOTED	
	767 SF	RUBUS CALCINOIDES	BRAMBLE *	1 GAL; FULL & WELL ROOTED; TRIANGULAR SPACING @ 24" OC	

SYM	QTY	BOTANICAL	COMMON NAME	SIZE	REMARKS
	3418 SF	PLANTING ENLARGEMENT 1 - BLUEBERRY MIX			1 / L85-LPD200
		CAMASSIA QUAMASH	COMMON CAMAS *	1 GAL; WELL ROOTED	
		SEDUM DIVERGENS	SPREADING STONECROP *	4" POTS	
		SEDUM OREGANUM	OREGON STONECROP *	4" POTS	
		VACCINIUM ANGUSTIFOLIUM 'BURGUNDY'	BURGUNDY LOWBUSH BLUEBERRY	2 GAL; FULL & WELL ROOTED	
		VACCINIUM CRASSIFOLIUM 'WELL'S DELIGHT	CREEPING BLUEBERRY	2 GAL; FULL & WELL ROOTED	
	2118 SF	PLANTING ENLARGEMENT 2 - STREETSCAPE MIX			2 / L85-LPD200
		ARCTOSTAPHYLOS UVA-URSI	KINNIKINNICK *	1 GAL; FULL & WELL ROOTED	
		CAREX TESTACEA	ORANGE NEW ZEALAND SEDGE *	1 GAL; FULL & WELL ROOTED	
		MAHONIA REPENS	CREEPING MAHONIA *	1 GAL; FULL & WELL ROOTED	
		POTENTILLA FRUTICOSA 'GOLD STAR'	GOLD STAR CINQUEFOIL *	5 GAL; MIN 18" HT; FULL & WELL ROOTED	
		SPIREA BETULIFOLIA 'TOR'	BIRCH LEAF SPIREA *	5 GAL; MIN 18" HT; 5 CANES; FULL & WELL ROOTED	
	7752 SF	FERN MIX 1			30" OC TRIANGULAR SPACING,; RANDOM & EVEN DISTRIBUTION OF SPECIES
	30%	ATHYRIUM FILIX-FEMINA	LADY FERN *	1 GAL; FULL & WELL ROOTED	
	30%	BLECHNUM SPICANT	DEER FERN *	1 GAL; FULL & WELL ROOTED	
	40%	POLYSTICHUM MUNITUM	SWORD FERN *	1 GAL; FULL & WELL ROOTED	
	2366 SF	FERN MIX 2			24" OC TRIANGULAR SPACING; RANDOM & EVEN DISTRIBUTION OF SPECIES
	30%	BLECHNUM SPICANT	DEER FERN *	1 GAL; FULL & WELL ROOTED	
	30%	GYMNOCARPIUM DISJUNCTUM	COMMON OAK FERN *	1 GAL; FULL & WELL ROOTED	
	40%	POLYSTICHUM POLYBLEPHARUM	JAPANESE TASSEL FERN *	1 GAL; FULL & WELL ROOTED	
	1843 SF	NATURAL DRAINAGE AREA MIX 1			15" OC TRIANGULAR SPACING; RANDOM & EVEN DISTRIBUTION OF SPECIES
	20%	ATHYRIUM FILIX-FEMINA	LADY FERN *	1 GAL; FULL & WELL ROOTED	
	20%	CAMASSIA LEICHTLINII	GREAT CAMAS *	1 GAL; FULL & WELL ROOTED	
	40%	CAREX DEWEYANA	DEWEY'S SEDGE *	1 GAL; FULL & WELL ROOTED	
	20%	IRIS DOUGLASIANA	DOUGLAS IRIS *	1 GAL; FULL & WELL ROOTED	
		VINES			
	48	PARTHENOCISSUS TRICUSPIDATA	BOSTON IVY *	1 GAL	

* INDICATES DROUGHT TOLERANT AND/OR PACIFIC NORTHWEST NATIVE SPECIES

NOTES

1. ANY DISCREPANCIES WITH THE DWGS AND/OR SPECS AND SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF LA PRIOR TO PROCEEDING WITH CONSTRUCTION.
2. PLANT MATERIAL LOCATIONS SHALL BE COORDINATED WITH SPRINKLER IRRIGATION HEAD LOCATIONS TO AVOID ANY CONFLICTS.
3. INSTALL GROUNDCOVERS IN A TRIANGULAR PATTERN AT SPACING SHOWN IN THE PLANT SCHEDULE. WHERE GROUNDCOVER ABUTS CURBING, WALLS, OR WALKS, MIN PLANTING DISTANCE SHALL BE NINE (9) INCHES FROM SAME, UNLESS OTHERWISE NOTED. INSTALL GROUNDCOVERS CONTINUOUS IN BETWEEN SHRUB PLANTINGS.
4. ALL PLANTING BEDS TO RECEIVE 3" MINIMUM DEPTH OF MULCH.
5. ALL DISTURBED LANDSCAPE AREAS NOT INDICATED FOR PAVING OR PLANTING SHALL RECEIVE 3" DEPTH OF MULCH.

XREF LIST:
GB=SEAL-MY371
xE320-L85-TB22X24

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60% SUBMITTAL

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: I. OTTESEN
DRAWN BY: P. GILMOUR
CHECKED BY: A. WEST
APPROVED BY: J. SCHETTLER

STATE OF WASHINGTON LICENSED LANDSCAPE ARCHITECT
MASATOSHI YAMAGUCHI LICENSE NO. 371
EXPIRES ON _____

NAKANO ASSOCIATES LANDSCAPE ARCHITECTS
853 Hiawatha Place S. Seattle, WA 98144 Tel: 206.292.9392 www.nakanoassociates.com

SUBMITTED BY:

H J H FINAL DESIGN PARTNERS.

DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: NTS
FILENAME: E320-L85-LPS200
CONTRACT No.: RTA/LR XXXX-XX
DATE: 12/06/2013

EAST LINK EXTENSION
CONTRACT E320
SOUTH BELLEVUE

LANDSCAPE
PLANTING SCHEDULE, NOTES & LEGEND
SOUTH BELLEVUE STATION

DRAWING No.: L8□-LPS200
LOCATION ID: E09
SHEET No.: 861
REV: 0

PARK MITIGATION - REFERENCE DRAWING L85-LPP333

SYM	QTY	BOTANICAL	COMMON NAME	SIZE	REMARKS
		EVERGREEN TREES			
	5	PINUS CONTORTA VAR. CONTORTA	SHORE PINE *		6-8" HT, B&B/CONT,
	6	PSEUDOTSUGA MENZEISII	DOUGLAS FIR *		6-8" HT, B&B/CONT,
		SHRUBS			
CS	7	CORNUS SERICEA	RED TWIG DOGWOOD *		2 GAL, MIN 24" HT; 4 CANES; FULL & WELL ROOTED
LI	10	LONICERA INVOLUCRATA	BLACK TWINBERRY *		2 GAL, MIN 24" HT; 4 CANES; FULL & WELL ROOTED
m	44	MYRICA GALE	SWEET GALE *		2 GAL, MIN 24" HT; 4 CANES; FULL & WELL ROOTED
OC	3	OEMLERIA CERASIFORMIS	INDIAN PLUM *		2 GAL, MIN 24" HT; 4 CANES; FULL & WELL ROOTED
	3968 SF	GROUNDCOVER/LOW SHRUB MIX			24" OC TRIANGULAR SPACING, RANDOM & EVEN DISTRIBUTION OF SPECIES EXCEPT SNOWBERRY MIN 3' OFFSET FROM PAVING
	40%	GAULTHERIA SHALLON	SALAL *		1 GAL, FULL & WELL ROOTED
	30%	MAHONIA REPENS	CREEPING MAHONIA *		1 GAL, FULL & WELL ROOTED
	30%	SYMPHORICARPOS ALBUS	COMMON WHITE SNOWBERRY *		1 GAL, FULL & WELL ROOTED, PLANTED U
	9527 SF	EROSION CONTROL HYDROSEED MIX	(APPLICATION RATE: X LBS/ACRES)		% WEIGHT / % PURITY / %GERMINATION
		AGROSTIS ALBA OR AGROSTIS OREGONSIS	REDTOP OR OREGON BENTGRASS *		25 / 92 / 85
		RED FESCUE	FESTUCA RUBRA *		75 / 98 / 90
	4077 SF	EMERGENT MIX			24" OC TRIANGULAR SPACING, RANDOM & EVEN DISTRIBUTION OF SPECIES
	15%	CAREX OBNUPTA	SLOUGH SEDGE *		1 GAL, FULL & WELL ROOTED
	15%	ELEOCHARIS PALUSTRIS	SPIKE RUSH *		1 GAL, FULL & WELL ROOTED
	15%	JUNCUS ENSIFOLIUS	DAGGERLEAF RUSH *		1 GAL, FULL & WELL ROOTED
	10%	OENANTHE SARMENTOSA	WATER PARSLEY *		1 GAL, FULL & WELL ROOTED
	15%	SCIRPUS ACUTUS	HARDSTEM BULRUSH *		1 GAL, FULL & WELL ROOTED
	15%	SCIRPUS ATROCINCTUS	WOOLGRASS *		1 GAL, FULL & WELL ROOTED
	15%	SCIRPUS MICROCARPUS	SMALL-FRUITED BULRUSH *		1 GAL, FULL & WELL ROOTED
	2665 sf	SEASONALLY WET ZONE MIX			24" OC TRIANGULAR SPACING, RANDOM & EVEN DISTRIBUTION OF SPECIES
	15%	ATHYRIUM FILIX-FEMINA	LADY FERN *		1 GAL, FULL & WELL ROOTED
	20%	CAREX OBNUPTA	SLOUGH SEDGE *		1 GAL, FULL & WELL ROOTED
	15%	CAREX STIPATA	SAWBEAK SEDGE *		1 GAL, FULL & WELL ROOTED
	20%	DESCHAMPSIA CESPITOSA	TUFTED HAIRGRASS *		1 GAL, FULL & WELL ROOTED
	15%	GLYCERIA OCCIDENTALIS	WESTERN MANNAGRASS *		1 GAL, FULL & WELL ROOTED
	15%	SCIRPUS ATROCINCTUS	WOOLGRASS *		1 GAL, FULL & WELL ROOTED
	3030 SF	MEADOW MIX			

* INDICATES DROUGHT TOLERANT AND/OR PACIFIC NORTHWEST NATIVE SPECIES

PARK MITIGATION - REFERENCE DRAWING L85-LPP300

SYM	QTY	BOTANICAL	COMMON NAME	SIZE	REMARKS
	21,284 SF	MEADOW MIX			

NOTES

1. ANY DISCREPANCIES WITH THE DWGS AND/OR SPECS AND SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF LA PRIOR TO PROCEEDING WITH CONSTRUCTION.
2. PLANT MATERIAL LOCATIONS SHALL BE COORDINATED WITH SPRINKLER IRRIGATION HEAD LOCATIONS TO AVOID ANY CONFLICTS.
3. ALL PLANTING AREAS EXCEPT AREAS SEEDED WITH MEADOW MIX OR EROSIONS CONTROL HYDROSEEED MIX SHALL RECEIVE 4" MINIMUM ARBORIST DEPTH OF MULCH EXCEPT
4. ALL DISTURBED LANDSCAPE AREAS NOT INDICATED FOR PAVING OR PLANTING SHALL RECEIVE 4" DEPTH OF MULCH.

60% SUBMITTAL

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: I. OTTESEN
DRAWN BY: P. GILMOUR
CHECKED BY: A. WEST
APPROVED BY: J. SCHETTLER

STATE OF WASHINGTON LICENSED LANDSCAPE ARCHITECT
MASATOSHI YAMAGUCHI LICENSE NO. 371
EXPIRES ON _____

NAKANO ASSOCIATES LANDSCAPE ARCHITECTS
853 Hiawatha Place S. Seattle, WA 98144 Tel: 206.292.9392 www.nakanoassociates.com

SUBMITTED BY:

H J H FINAL DESIGN PARTNERS.

DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: NTS
FILENAME: E320-L85-LPS300
CONTRACT No.: RTA/LR XXXX-XX
DATE: 12/06/2013

EAST LINK EXTENSION
CONTRACT E320
SOUTH BELLEVUE

LANDSCAPE
PLANTING SCHEDULE, NOTES & LEGEND
PARK MITIGATION BY SOUTH BELLEVUE STATION

DRAWING No.: L8□-LPS300
LOCATION ID: E12
SHEET No.: 862
REV: 0

PLANT SCHEDULE

SYM	QTY	BOTANICAL NAME	COMMON NAME	SIZE / REMARKS
TREES				
	154	CARPINUS BETULUS `FASTIGIATA`	PYRAMIDAL EUROPEAN HORNBEAM	2 1/2" CAL; B&B; FULL, WELL BRANCHED & WELL ROOTED; STRAIGHT CENTRAL LEADER & SINGLE TRUNK; SYMMETRICAL BRANCHING HABIT; MIN 7' BRANCHING HEIGHT
+	9	FRAXINUS PENNSYLVANICA `SUMMIT`	SUMMIT ASH	2 1/2" CAL; B&B; FULL, WELL BRANCHED & WELL ROOTED; SYMMETRICAL BRANCHING HABIT; MIN 7' BRANCHING HEIGHT
	105	LAGERSTROEMIA INDICA	CRAPE MYRTLE	2 1/2" CAL; B&B; FULL, WELL BRANCHED & WELL ROOTED; SYMMETRICAL BRANCHING HABIT; MULTI TRUNK
	8	QUERCUS ROBUR	ENGLISH OAK	2 1/2" CAL; B&B; FULL, WELL BRANCHED & WELL ROOTED; STRAIGHT CENTRAL LEADER & SINGLE TRUNK; SYMMETRICAL BRANCHING HABIT; MIN 7' BRANCHING HEIGHT
	10	TILIA CORDATA `GREENSPIRE`	GREENSPIRE LITTLELEAF LINDEN	2 1/2" CAL; B&B; FULL, WELL BRANCHED & WELL ROOTED; STRAIGHT CENTRAL LEADER & SINGLE TRUNK; SYMMETRICAL BRANCHING HABIT; MIN 7' BRANCHING HEIGHT
SHRUBS/GROUNDCOVERS				
PLANTING ENLARGEMENT 1 (1 / L77-LPD100)				
	1,769 SF	CROCOSMIA X `GEORGE DAVIDSON`	GEORGE DAVIDSON CROCOSMIA	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 18" OC
		LIRIOPE SPICATA	CREEPING LILY TURF	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 12" OC
		SPIRAEA JAPONICA `GOLDFLAME`	GOLDFLAME SPIREA	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 24" OC
PLANTING ENLARGEMENT 2 (2 / L77-LPD100)				
	5,908 SF	EPIMEDIUM X VERSICOLOR 'SULPHUREUM'	SULPHUREUM BARRENWORT	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 18" OC
		HEBE X `RED EDGE`	RED EDGE HEBE	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 18" OC
		NANDINA DOMESTICA `MOON BAY` TM	MOON BAY HEAVENLY BAMBOO	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 24" OC
PLANTING ENLARGEMENT 3 (3 / L77-LPD100)				
	13,340 SF	BERBERIS THUNBERGII `GRHOZAM`	GREEN HORNET BARBERRY	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 24" OC
		HEMEROCALLIS 'STELLA DE ORO'	STELLA DE ORO DAYLILY	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 24" OC
		VERONICA PEDUNCULARIS `GEORGIA BLUE`	GEORGIA BLUE SPEEDWELL	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 18" OC
PLANTING ENLARGEMENT 4 (4 / L77-LPD100)				
	4,056 SF	BERBERIS THUNBERGII `GOLDEN NUGGET`	GOLDEN NUGGET BARBERRY	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 24" OC
		FRAGARIA CHILOENSIS `LIPSTICK`	LIPSTICK BEACH STRAWBERRY	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 18" OC
		GERANIUM X `ANN FOLKARD`	ANN FOLKARD CRANESBILL	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 18" OC

SYM	QTY	BOTANICAL NAME	COMMON NAME	SIZE / REMARKS
SHRUBS/GROUNDCOVERS				
PLANTING ENLARGEMENT 5 (5 / L77-LPD100)				
	5,050 SF	CORNUS SERICEA 'KELSEYI'	KELSEYI DOGWOOD	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 18" OC
		HEMEROCALLIS FLAVA	LEMON DAYLILY	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 18" OC
		LIRIOPE SPICATA	CREEPING LILY TURF	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 18" OC
	2,155 SF	CORNUS SERICEA 'KELSEYI'	KELSEYI DOGWOOD	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 18" OC
	1,372 SF	GAULTHERIA SHALLON	SALAL	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 18" OC
	1,874 SF	HEMEROCALLIS FLAVA	LEMON DAYLILY	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 18" OC
	2,338 SF	LIRIOPE SPICATA	CREEPING LILY TURF	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 18" OC
	21,435 SF	PRIVATE PROPERTY RESTORATION		TO BE DETERMINED - RESTORE PLANTING & IRRIGATION TO MATCH PRE-CONSTRUCTION CONDITIONS

NOTE:

ALL PRIVATE PROPERTY RESTORATION AREASSHALL RECEIVE TYPE 2 SOIL PREPARATION. SEE DETAIL 2 SHEET STD-LPD101. ALL CORRIDOR PLANTING AREAS SHALL RECEIVE TYPE 1 SOIL PREPARATION. SEE DETAIL 1 SHEET STD-LPD101.

XREF LIST:
xE340-GB-TB22x34
GB-SEAL<.BV□:7

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60% SUBMITTAL

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: J. VONG
DRAWN BY: M. OVIIR
CHECKED BY: J. HOWARD
APPROVED BY: J. VONG

STATE OF WASHINGTON LICENSED LANDSCAPE ARCHITECT
JULIET B. VONG LICENSE NO. 857
EXPIRES ON _____

HBB LANDSCAPE ARCHITECTURE
215 WEST LAKE AVENUE NORTH SEATTLE, WA 98109 206.682.3031 phone 206.682.3245 fax

SUBMITTED BY:

H J H FINAL DESIGN PARTNERS.

DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: NTS
FILENAME: E340-L87-LPS100
CONTRACT No.: RTA/LR XXXX-XX
DATE: 07/15/2013

EAST LINK EXTENSION
CONTRACT E340
BEL-RED
LANDSCAPE PLANTING
CORRIDOR
PLANT SCHEDULE

DRAWING No.: L87-LPS100
LOCATION ID: TBD
SHEET No.: 553
REV: 0

120TH STATION PLANT SCHEDULE

SYM	QTY	BOTANICAL NAME	COMMON NAME	SIZE / REMARKS
TREES				
+	5	GINKGO BILOBA	GINKGO	2" CAL; B&B; FULL, WELL BRANCHED & WELL ROOTED; STRAIGHT CENTRAL LEADER & SINGLE TRUNK; SYMMETRICAL BRANCHING HABIT, 7' MIN BRANCH HT
▲	1	CORNUS KOUSA X NUTTALLII 'VENUS'	VENUS DOGWOOD	2" CAL; B&B; FULL, WELL BRANCHED & WELL ROOTED; STRAIGHT CENTRAL LEADER & SINGLE TRUNK; SYMMETRICAL BRANCHING HABIT
SHRUBS/GROUNDCOVERS				
h	28	HEBE 'PATTY'S PURPLE'	PATTY'S PURPLE HEBE	2 GAL CONT; FULL & WELL ROOTED;
pf	41	POTENTILLA FRUTICOSA 'GOLD STAR'	GOLD STAR POTENTILLA	3 GAL CONT; FULL & WELL ROOTED;
	31	ARCTOSTAPHYLOS UVA-URSI	KINNIKINNICK	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 18" OC
	51	ARMERIA MARITIMA	SEA THRIFT	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 18" OC
	136	ASTER 'PROFESSOR KIPPENBURG'	PROFESSOR KIPPENBURG ASTER	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 12" OC
	60	HEMEROCALLIS X 'STELLA DE ORO'	STELLA DE ORO DAYLILY	1 GAL CONT; FULL & WELL ROOTED; TRIANGULAR SPACING @ 18" OC

NOTE:

ALL PRIVATE PROPERTY RESTORATION AREAS SHALL RECEIVE TYPE 2 SOIL PREPARATION. SEE DETAIL 2 SHEET STD-LPD101. ALL CORRIDOR PLANTING AREAS SHALL RECEIVE TYPE 1 SOIL PREPARATION. SEE DETAIL 1 SHEET STD-LPD101.

XREF LIST:
xE340-GB-TB22x34
GB-SEAL<.BV□7

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60% SUBMITTAL

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: J. VONG
DRAWN BY: M. OVIIR
CHECKED BY: J. HOWARD
APPROVED BY: J. VONG

STATE OF WASHINGTON
LICENSED
LANDSCAPE ARCHITECT
JULIET B. VONG
LICENSE NO. 857
EXPIRES ON _____

HBB
LANDSCAPE ARCHITECTURE
215 WESTLAKE AVENUE NORTH SEATTLE, WA 98109
206.682.3001 phone
206.682.3245 fax

SUBMITTED BY:

H J H
FINAL DESIGN PARTNERS.

DATE:
REVIEWED BY:
DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: NTS
FILENAME: E340-L87-LPS101
CONTRACT No.: RTA/LR XXXX-XX
DATE: 07/15/2013

EAST LINK EXTENSION
CONTRACT E340
BEL-RED
LANDSCAPE
120TH STATION
PLANTING SCHEDULE

DRAWING No.: **L87-LPS101**
LOCATION ID: TBD
SHEET No.: 554
REV: 0

PLANT SCHEDULE

SYM.	QTY.	BOTANICAL NAME	COMMON NAME	SIZE
		EVERGREEN TREES		
	5	CHAMAECYPARIS NOOTKATENSIS	WEEPING YELLOW CEDAR*	MIN 12'-14' HT
	8	PINUS CONTORTA VAR. CONTORTA	SHORE PINE*	MIN 12'-14'
	8	PINUS NIGRA	AUSTRIAN PINE*	MIN 12'-14' HT
	21	TSUGA MERTENSIANA	MOUNTAIN HEMLOCK*	MIN 12'-14' HT
		MEDIUM DECIDUOUS TREES		
	19	GINGKO BILOBA	GINGKO*	MIN 2 1/2" CAL, 12'-14' HT
		SMALL/ORNAMENTAL DECIDUOUS TREES		
	11	ACER CIRCINATUM	VINE MAPLE*	MIN 3 STEMS @ 1-1/2" CAL EACH, MIN 8' HT
	18	ACER GRISEUM	PAPERBARK MAPLE*	MIN 2" CAL
	4	ACER PALMATUM 'SANGO-KAKU'	CORAL BARK MAPLE*	MIN 2" CAL
	22	AMELANCHIER GRANDIFLORA 'PRINCESS DIANA'	PRINCESS DIANA SERVICEBERRY*	MIN 2" CAL
	13	MALUS FUSCA	PACIFIC CRABAPPLE*	MIN 2" CAL
		LARGE DECIDUOUS SHRUBS		
AA	24	AMELANCHIER ALNIFOLIA	SHRUB SERVICEBERRY*	MIN 36" HT
OC	9	OEMLERIA CERASIFORMIS	INDIAN PLUM*	MIN 36" HT
PL	28	PHILADELPHUS LEWISII	MOCK ORANGE*	MIN 36" HT, 5 CANES
RS	36	RIBES SANGUINEUM	RED FLOWERING CURRANT*	MIN 24" HT, 4 CANES
SA	170	SYMPHORICARPOS ALBUS	SNOWBERRY*	MIN 36" HT
		LARGE EVERGREEN SHRUBS		
AU	15	ARBUTUS UNEDO 'COMPACTA'	COMPACT STRAWBERRY TREE*	MIN 30" HT
MA	63	MAHONIA AQUIFOLIUM	TALL OREGON GRAPE*	MIN 30" HT
		SMALL DECIDUOUS SHRUBS		
	106	CORNUS STOLONIFERA 'KELSEYI'	KELSEY DOGWOOD*	MIN 18" HT, 5 CANES
sb	62	SPIRAEA BETULIFOLIA 'TOR'	BIRCH LEAF SPIREA	MIN 18" HT

* INDICATES DROUGHT TOLERANT AND/OR NORTHWEST NATIVE SPECIES

SYM.	QTY.	BOTANICAL NAME	COMMON NAME	SIZE
		SMALL EVERGREEN SHRUBS		
	1,401	GAULTHERIA SHALLON	SALAL*	MIN 12" HT, 8" SPREAD, 24" OC
PM	50	PAXISTIMA MYRSINITES	FALSEBOX*	MIN 18" HT, 12" SPREAD
R	46	ROSMARINUS SPP.	ROSEMARY*	MIN 18" HT, 12" SPREAD
V	143	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY*	MIN 18" HT, 12" SPREAD
		PERENNIALS AND GROUNDCOVERS		
	4,218	ARCTOSTAPHYLOS UVA-URSI	KINNIKINICK*	1 GAL, 18" OC
	152	ATHYRIUM FILIX-FEMINA	LADY FERN*	1 GAL, 24" OC
	139	BLECHNUM SPICANT	DEER FERN *	1 GAL, MIN 12" HT
	60	CAREX TESTACEA	ORANGE NEW ZEALAND SEDGE*	4" POTS, 36" OC
	34	ECHINACEA PURPUREA	PURPLE CONEFLOWER*	4" POTS, 18" OC
	1,007	FRAGARIA CHILOENSIS	BEACH STRAWBERRY*	4" POTS, 18" OC
	141	HEMEROCALLIS 'STELLA DE ORO'	DAYLILY*	1 GAL, 24" OC
	1,817	IRIS DOUGLASIANA	DOUGLAS IRIS*	1 GAL, 12" OC
	456	MAHONIA REPENS	CREEPING MAHONIA*	1 GAL, 24" OC
	639	POLYSTICHUM MUNITUM	SWORD FERN*	1 GAL, MIN 18" HT
	2,352	RUBUS CALYCINOIDES	BRAMBLE*	1 GAL, 18" OC
	520 sf	NATURAL DRAINAGE SYSTEM MIX 1/3 CAREX OBNUPTA / SLOUGH SEDGE 1/3 JUNCUS EFFUSUS VAR. PACIFICUS / SOFT RUSH 1/3 JUNCUS ENSIFOLIUS / DAGGER-LEAF RUSH		
		VINES		
	14	LONICERA CILIOSA	WESTERN TRUMPET HONEYSUCKLE*	1 GAL

* INDICATES DROUGHT TOLERANT AND/OR NORTHWEST NATIVE SPECIES

NOTES

1. SEE CIVIL FOR PAVING AND HARDSCAPE.

XREF LIST:
xE340-E23-LPP100
GB-SEAL-MY371
xE340-GB-TB22X34

ORIGINATED BY: / / DATE:
CHECKED BY: / / DATE:
BACK-CHECKED BY: / / DATE:
CORRECTED BY: / / DATE:
VERIFIED BY: / / DATE:

07/08/13 | 12:56 PM | CALDWELLJ
C:\USERS\PUBLIC\DOCUMENTS\CALDWELLJ\CALDWELLJ\HTTPS%3AREPOINT.SOUNDTRANSIT.ORG%443SITES\CAD\EL\BELREDIE340\DRAWINGS\E340-L87-LPS102.DWG

60% SUBMITTAL

No.	DATE	DSN	CHK	APP	REVISION

DESIGNED BY: I. OTTESEN
DRAWN BY: H. BAUMANN
CHECKED BY: A. WEST
APPROVED BY: M. YAMAGUCHI

STATE OF WASHINGTON LICENSED LANDSCAPE ARCHITECT
MASATOSHI YAMAGUCHI LICENSE NO. 371
EXPIRES ON _____

NAKANO ASSOCIATES LANDSCAPE ARCHITECTS
853 Hiawatha Place S. Seattle, WA 98144 Tel: 206.292.9392 www.nakanoassociates.com

HJH FINAL DESIGN PARTNERS.

SUBMITTED BY: | DATE: | REVIEWED BY: | DATE:

LINE IS 1" AT FULL SCALE

SOUNDTRANSIT

SCALE: NTS
FILENAME: E340-L87-LPS102
CONTRACT No.: RTA/LR XXXX-XX
DATE: 07/15/2013

EAST LINK EXTENSION
CONTRACT E340
BEL-RED
LANDSCAPE
130TH STATION
PLANTING SCHEDULE

DRAWING No.: L87-LPS102
LOCATION ID: TBD
SHEET No.: 555
REV: 0