



Seattle Department of Transportation

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NL 147

Gregory J. Nickels, Mayor

Grace Crunican, Director

January 29, 2004

James Irish
Link Environmental Manager
Sound Transit
Union Station
401 S. Jackson Street
Seattle, WA 98104

Re: City of Seattle's Comments on the North Link Draft SEIS

Dear Mr. Irish:

Thank you for the opportunity to comment on the North Link Draft Supplemental Environmental Impact Statement (SEIS). The North Link project is an important transportation investment for the City of Seattle and the region. This document reflects the strong partnership between Sound Transit and the City of Seattle on the initial segment of Link Light Rail, and the many years of work Sound Transit staff have invested in this project.

In general, the North Link Draft SEIS is a very thorough and well researched document. However, there remain a few issues which the City would like to see addressed in greater detail for the Final SEIS and in Sound Transit's subsequent work with City staff. These issues are presented in this letter, with more detailed comments on the Draft SEIS attached in a separate memorandum.

Bicycle and Pedestrian Accessibility

The City and Sound Transit continue to disagree on the evaluation of bicycle and pedestrian needs, impacts, and mitigation around light rail stations. As noted in past reviews of Sound Transit Link Light Rail environmental documents, the City continues to be concerned that not enough bicycle parking is proposed at stations, and that the adequacy of existing bicycle facilities to provide access to the stations has not been properly evaluated. Similarly, the adequacy of existing sidewalks and street crossings to handle the amount of pedestrian traffic anticipated with light rail stations has not been properly evaluated, particularly with respect to school-walking routes and other key pedestrian destinations in Seattle's neighborhoods. These issues are more fully detailed in the City's comments on section 3.2.2 in the attached memorandum.

As occurred with the initial segment of Link Light Rail, the City anticipates more detailed discussions with Sound Transit to determine the extent of pedestrian and bicycle needs around each station to establish baseline parameters for the project design. This work for the Southeast Seattle Stations and on Beacon Hill Station was detailed in a document entitled, Link Commitments to Pedestrians and Bicyclists (January 2002), and was the result of a series of



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meetings between City and Sound Transit staff. A similar effort should inform Sound Transit's design team once a Locally Preferred Alignment (LPA) is chosen.

Truck Haul Routes and Condition of Pavement

The construction section of the Draft SEIS does not mention potential damages to city streets from truck hauling activities. The City is concerned that the large amount of excavation and materials needed to construct North Link and the associated truck trips will impact arterial streets which may not have been originally designed to accommodate such loads. City staff have proposed using a non-destructive deflection test to measure the actual impact to the working life of City streets as a basis for mitigation. Details of this proposal are included in the City's comments on section 4.17.2 in the attached memorandum. This is also an issue with the initial segment of Link Light Rail, where excavation and truck hauling associated with the Beacon Hill tunnel will similarly impact City streets.

Impacts to City Infrastructure and Facilities

The Draft SEIS identifies a number of instances where impacts to City-owned utilities, infrastructure, and facilities will need to be addressed in detail through the design process. These include impacts to water and sewer pipes, electrical transmission and distribution lines, Lincoln Reservoir/Cal Anderson Park, and other City-owned facilities. City staff have identified five additional 115 kV powerlines that may be impacted by North Link (please see comments on section 4.17.14 in the attached memorandum), and additional impacts to existing utilities and facilities may be uncovered as the North Link project is designed. City staff are prepared to work with Sound Transit through subsequent design and engineering efforts to resolve conflicts and respond to all parts of the project proposal.

The City anticipates entering into an agreement for North Link design review services similar to agreements reached for the initial segment of Link Light Rail. Experience with the initial segment has shown that reaching agreement in advance on the codes and standards to be applied to the project (particularly in identifying which version/year of a given code applies), and mapping out anticipated permit requirements, will assist Sound Transit's designers as they begin final design and engage the City in design review.

Coordination of Construction

The North Link Draft SEIS identifies several other transportation projects in the early planning stages, including the Alaska Way Viaduct and Seawall Replacement, the Seattle Monorail Project, SR 520 Bridge Replacement, and other freeway corridor studies. Although few direct impacts to these projects are projected (potential direct impacts to the SR 520 Bridge Replacement project are noted in the SEIS), coordinating construction activity will be crucial to minimize impacts to Seattle's transportation systems. As North Link and other transportation projects near construction, the City anticipates working with Sound Transit and other agencies in a coordinated construction management program.


Transit-Oriented Development and Land Use

The City recognizes the link between transportation and land use, and views North Link and other transit improvements as a key part of the City's growth management strategy. The City hopes that North Link will help spur transit-oriented development around the stations and encourages Sound Transit to consider future redevelopment potential in the design process. The Sound Transit Board adopted a Transit-Oriented Development policy as part of its mission, and established a Transit-Oriented Development program. This policy should be reflected in the North Link Draft SEIS.

In addition, the City made zoning and land use changes around the First Hill, Capitol Hill, and University District Stations as part of the Station Area Planning effort for the original Central Link LPA in 2001. The City anticipates reviewing these changes, and considering additional land use and zoning changes if warranted, once a North Link LPA is selected. Sound Transit participated in funding these efforts for Central Link, and should continue to do so in this next phase.

The City looks forward to working with Sound Transit as you continue your design, engineering, and environmental process for the North Link project.

Sincerely,


Grace Crunican
Director

Attachment: Memorandum – Detailed City of Seattle Comments on North Link SEIS

cc: Mayor Greg Nickels
Councilmember Richard McIver
Councilmember Richard Conlin
Calvin Chow, SDOT
Darnell Cola, SCL
Rich Smith, SPU
Bob Laird, DPD
Michael Woodland, Parks
Geoff Getchman, Police
John Nelsen, Fire




Gregory J. Nickels, Mayor

Seattle Department of Transportation

Grace Crunican, Director

MEMORANDUM

To: James Irish, Sound Transit

From: Calvin Chow, SDOT 

Date: January 29, 2004

Subject: Detailed City of Seattle Comments on North Link Draft SEIS

This memo details the City's specific comments on the North Link Draft SEIS and the Transportation Technical Report. These comments are organized by section, and reflect the review of the Seattle Department of Transportation, Seattle Public Utilities, Seattle City Light, the Department of Parks and Recreation, the Department of Planning and Development, the Seattle Fire Department, and the Seattle Police Department. If you have any questions please feel free to contact me at 206-684-4652.

Executive Summary

(Table S-5, page ES-13) The summary table characterizes "Parking: Potential Spillover Impacts" in terms of "low" and "medium." These characterizations are not found in the text of the document under Parking Impacts in section 3.3.2 (page 3-32). The document should provide the basis for such assessments.

Transportation Impacts and Mitigation

(3.3.1 Parking Supply and Demand, page 3-26, 1st paragraph) Please note that the correct title of the City's parking study is the "1999 Comprehensive Neighborhood Parking Study."

(3.3.2 Access and Circulation and Nonmotorized Facility Impacts, page 3-30 through 3-32, and 3-41 through 3-43) The City and Sound Transit continue to disagree on the evaluation of bicycle and pedestrian needs, impacts, and mitigation. As noted in past reviews of Sound Transit Link Light Rail environmental documents, SDOT continues to be concerned with:

- Bicycle Parking at Stations: While there is a commitment to providing some bicycle parking at stations, there is no attempt to determine the number of bicycle parking spaces that will be needed at the various stations. The final EIS must include an assessment of demand to ensure that adequate space is available to accommodate future demand for bicycle parking.
- Adequacy of Existing Bicycle Facilities to Access Stations: While there is recognition of existing bicycle facilities, there is no attempt to assess their adequacy for access to stations. The mere presence of a bicycle or pedestrian facility is not an indicator of adequacy, and does not indicate what is appropriate mitigation. The DEIS seems to rely on the City of Seattle Bicycle Guidemap for determining adequacy; while showing selected routes frequently used

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by bicyclists, this map makes no representation of the adequacy of these streets, including the adequacy of routes to access proposed stations. The increased levels of bicycle activity associated with transit system development need to be thoroughly analyzed and then accommodated through appropriate facility development.

5 cont

- Adequacy of Existing Sidewalks for Pedestrians: There is no analysis of the adequacy of existing sidewalks near stations. The document simply notes where sidewalks do and do not exist but does not indicate whether there is adequate width to handle capacity, nor indicate what is appropriate mitigation. The increased levels of pedestrian activity associated with transit system development need to be thoroughly analyzed and then accommodated through appropriate facility development.

6

- Impacts to Bicycle Routes/Facilities: There is no assessment of the impacts that the construction of new transit stations will have on streets (and other bicycle facilities) currently used by bicyclists. New stations are likely to generate substantial bus, carpool, and other motor vehicle traffic in and around station areas that may degrade the safety and desirability of these facilities. Acknowledging that there will be impacts in the SEIS does not indicate the level of impact and what is appropriate mitigation.

7

- Impacts to Pedestrian Crossings: There is inadequate assessment of the impacts that the construction of new transit stations and at-grade rail lines will have on the safety of pedestrian crossing streets. Acknowledging that there may be problems that require mitigation does not indicate the severity of the problem and what is appropriate mitigation.

8

- Impacts to School-Walking Routes: There is inadequate assessment of the impacts that the construction of stations and tracks will have on school-walking routes. The mere presence of a school-walking route is not an indicator of adequacy, and does not indicate what is appropriate mitigation. New stations are likely to generate substantial traffic that may degrade the safety of certain routes. Acknowledging that there may be problems that require mitigation does not indicate the severity of the problem and what is appropriate mitigation.

9

The City anticipates focussed discussions with Sound Transit on bicycle and pedestrian mitigation to be completed as part of the North Link project to set parameters for final design. A similar effort was completed on the Initial Segment for the Southeast Seattle and Beacon Hill Stations.

10

(3.3.2 Segment A Mitigation – Congestion, page 3-34; Segment B Mitigation – Congestion, 3-44, and 4.17.13 Public Services Mitigation, page 4-180) Traffic impacts resulting from all Build Alternatives or construction could be partially mitigated through the use of intelligent traffic signal control technology approved by SFD and SDOT. This should be identified as a potential mitigation for construction and long-term operation of the North Link system.

11

(3.3.2 Segment A Mitigation – Parking, page 3-34) Please note that the City and Sound Transit have reached agreement on mitigation principals for addressing hide-and-ride issues around light rail stations (Letter of Concurrence dated August 25, 2003). The SEIS should reflect this understanding.

12

(3.3.2 Access and Circulation, page 3-41) The SEIS notes the potential conflicts caused by station entrances in close proximity to the Burke-Gilman Trail which would need to be resolved in further design. SDOT has additional concerns with the Pacific, Capitol Hill, and First Hill

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Stations. The north entrance of the Pacific Station would anticipate significant traffic to and from the UW campus and place significant demand for a mid-block crossing of 15th Ave NE. Pedestrian volumes are high enough to potentially generate unacceptable delay with an at-grade mid-block signal. A bridged pedestrian crossing of 15th Ave NE should be considered as part of this alternative.

13 cont.

In addition, the Capitol Hill Station options show a north station entrance on the corner of Broadway and E. John Street (southwest corner for the Broadway option, southeast corner for the Nagle option). This intersection has one of the highest pedestrian counts within the City of Seattle. Given this fact, placement of a station entrance at this location has the strong potential of causing significant disruption to traffic and safe pedestrian movements. It would be highly desirable to include a second entrance across Broadway connected by an underground mezzanine to minimize impacts to pedestrian safety and delay to traffic moving through the intersection.

First Hill Station includes entrances on Madison Street between Boylston and Summit Avenues. In the past, the City has commented that pedestrian space in this area between these two entries is quite limited. It is reasonable to anticipate large pedestrian volumes in this area and pedestrian improvements may be required to support these pedestrian volumes.

(3.3.2 Segment B – Parking Impacts, page 3-44) The text regarding the U-District states that “there is little potential for hide-and-ride impacts.” The AM parking data results do not necessarily support this conclusion. The restricted parking spaces noted in this study area are not restricted at the time of the counts. The Transportation Technical Report (page 4-48) states that around U-District stations, the parking utilization is quite low in the early AM, “between 7:00 and 9:00 am on-street restricted parking spaces have a supply of 2,017 parking spaces, and 994 parking spaces are used, which is equivalent to a parking utilization of 49 percent.” Parking meters start at 8 am, which explains why they are half-empty. It seems that hide-and-ride (when light rail riders are community to work) may be possible, or the text should note why it's not, even though the utilization of restricted spaces is low. In any case, enforcement will be needed in these areas to make sure that people do not park at time-limit restricted areas or any existing RPSs.

14

Land Use and Economic Activity

(4.2 Land Use and Economic Activity, page 4-6) Please note that this section does not provide any discussion of specific land use impacts of interim termini. If no land use or economic activity impacts are anticipated, the SEIS should state that.

15

(4.2.1 Regional Land Use Patterns and Trends, page 4-6; and Northgate Station, page 4-7) Proposed square footage for Northgate development should be updated to reflect the latest development plans and King County's proposed TOD development. Also, please note that the City has removed GDP language from the Land Use Code (Ordinance 121362).

16

(4.2.2 Consistency with Local Land Use Plans and Zoning, page 4-14) With regards to neighborhood plans, it should be noted that some neighborhood plan recommendations were incorporated into the City's Comprehensive Plan by ordinance, while other recommendations were left as advisory and adopted with the neighborhood plans by resolution.

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In addition, suggest edits to the last line, 3rd paragraph of page 4-15, "...this analysis assumes the City would review and consider SAODs, rezones, or similar land use tools for light rail station areas ~~adopt SAODs and rezones for specific stations similar to the ones previously adopted.~~"

17 cont.

(4.2.2 Regional Land Use Impacts, page 4-15) The discussion in this section should provide more specificity about how light rail implementation would enable jurisdictions to meet stated objectives.

18

(4.2.2 NE 45th Station, page 4-17) Suggest edit to sentence, "Possible future development consistent with neighborhood plans and land use regulations ~~a City Station Area Overlay and rezones for this area~~ would reinforce the existing transit-friendly land use pattern."

19

(4.2.2 Summary of Indirect Impacts on Land Use and Development Patterns, page 4-20 through 4-21) The statement is made that "In general, development and redevelopment will be relatively more likely where the following criteria are met." This statement appears to address development or redevelopment in general (as do the first and fifth criteria), but the following discussion (and other criteria) apply more specifically to TOD. The SEIS should reference Sound Transit's adopted TOD policies.

20

The ratings referenced in Table 4.2-1 and discussed on page 4-21 are somewhat unclear. The discussion may be aided by discussing general development or redevelopment influences separately from TOD influences. Is there any likelihood that North Link will encourage non-TOD redevelopment? In addition, the table lists the possible range or effects for a given location without identifying what specific impact is related to a specific alignment option. The subsequent discussion may be easier to follow if the table or text is more specific about the potential impacts.

Also, please note that the reference to "hide-and-ride parking" in this section should point the reader to a discussion of that topic elsewhere in the document.

(4.2.2 Impacts to Local Tax Base, page 4-23) The loss of parking meter revenue to the City of Seattle should be noted if parking meters are proposed to be removed. Parking meters are located in Roosevelt, University District, Broadway, First Hill, and Convention Place station areas and may be in areas where on-street parking will be removed.

21

(4.2.2 Indirect Local Economic Impacts, page 4-25) Discussion that references "hide-and-ride parking" should point the reader to a discussion of this topic elsewhere in the document.

22

Neighborhoods and Populations 4.3

(4.3.1 University District, page 4-30 through 4-32) Text should be updated to reflect recent development activity. For example, the UW Law School construction referenced at the top of page 4-31 is complete.

23

(4.3.2 Changes in Neighborhood Quality – Segment A, page 4-35) The statement, "Redevelopment of the area would increase its function as a community center and social gathering place" seems speculative and unsupported without specific development proposals or policies in place. These outcomes are certainly possible, but not conclusions at this point.

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(4.3.2 Changes in Neighborhood Quality – Segment B, page 4-35 through 4-37) The statement is made (page 4-35) that, "attendant increases in noise, traffic, dust, visual clutter...could negatively affect neighborhood character...and these adverse impacts could persist beyond the construction period if properties are allowed to decline." It seems unlikely that construction impacts (noise, dust, etc) could persist beyond the construction period. Perhaps the intent of this sentence is that construction impacts could precipitate future decline in property management?

25

On page 4-36, the statement is made that "...an abrupt transition to the nearby residential neighborhood west of Broadway..." Is this statement correct? There are residential neighborhoods on both sides of Broadway and the "abrupt transition" seems to better characterize the area east of Broadway as there are businesses continuing west down Olive Way from the Broadway & John intersection. Is this section relevant to statements in 4.17.4 (page 4-162) that east of Broadway is a comparatively low-area activity area and, as such, construction impacts in that location would be less disruptive?

26

Visual Resources and Aesthetics

(4.4.2 Impacts, page 4-42 through 4-48) The potential visual impacts of North Link have been adequately documented, however certain key system components warrant specific comment:

- The blank facades of the fan rooms, electrical/communications, and TPSS facilities are consistently and highly visually obtrusive.
- As documented, the impacts from the Harrison Street pedestrian bridge will substantially reduce scenic quality, as seen from any high sensitivity foreground or middleground viewpoint. For purposes of impact analysis, a below grade connection option should be included.
- The potential overhead structures and station located at NE Ravenna Blvd will have significant visual impacts on this historic Olmstead Boulevard. Every expectation is that the visual and aesthetic mitigations employed here will be similar to those used at the Initial Segment crossing of MLK Way S and Cheasty Blvd. Preservation of mature street trees is a particularly important consideration.

27

Ultimately, the review of specific and appropriate mitigation for visual impacts falls under the purview of the City of Seattle's Light Rail Review Panel.

Water Resources 4.8

(4.8.2 Water Resources – Impacts, page 4-87) Flow control (i.e. detention) and water quality requirements per the City's Stormwater Code and associated Technical Manuals must be met or exceeded for any construction project within the City limits. Please note that SPU has not adopted the Ecology manual described in the text as the City's official stormwater rule, and that the SEIS should reference City code as the relevant regulatory standard. The City of Seattle is currently revising the City's Stormwater Code and associated technical manuals.

28

(4.8.2 Segment A, page 4-87) The first paragraph notes that "The capacity of the existing drainage system would be verified during final design and permitting." Please note that specific technical information on any proposed connection to both drainage and sewer systems in relation to capacity will need to be submitted as part of design review and permitting to determine if there

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is a potential capacity related problem (since surcharging of either system could contribute to environmental problems). The following is the minimum list of information that must be submitted for approval for each proposed connection to a City drainage or sewer system:

1. proposed connection point to City system (drainage or sewer),
2. proposed receiving water body (for drainage) or discharge point into King County Metro sewer system (for sewer),
3. estimated peak flow into City system for proposed service drain, combined side sewer, or sanitary side sewer,
4. table listing pipe segment information (diameter, slope, material, length, and pipe full flow) from the point of connection into the City system to the point of discharge into a receiving waterbody or sewer system. The relevant pipe segment information from SPU Drainage Facility Maps will be made available (for purchase) by Sound Transit or their agents.

29 cont.

(4.8.4 Segment A, page 4-89) Text in the first paragraph notes that, "Detention would not be required before discharge to Lake Union or Portage Bay. However, detention may be required to prevent downstream drainage capacity problems, according to the City of Seattle regulations, for runoff from projects that would create more than 5,000 square feet of impervious surface." This text should be revised to state, "Discharge of stormwater runoff into Lake Union or Portage Bay via a public storm drain (as compared to discharge via a riparian corridor or combined sewer outflow) would not require detention of no potential capacity problems are identified in the public storm drain system downstream of the proposed connection point. However, if a capacity problem is identified, detention of stormwater runoff will be required for projects that create 2,000 square feet or more of new and/or replaced impervious surface."

30

Public Services

(4.13.2 Fire and Emergency Medical Services, page 4-114) Impacts on emergency response times may result from placement of columns supporting elevated guideways within the right-of-way, particularly if columns are located in the center of the street. In addition, the SEIS should note that emergency responses (including fire, rescue, and other medical emergencies) which occur in the tunnels during construction will require specialized training and equipment in accordance with applicable state and federal regulations.

31

(4.13.2 Law Enforcement Impacts – Segment A, page 4-116) Regarding "Mutual Aid Agreements" between UW and SPD, please note that the UW also assists SPD upon request, and occasionally with on-view situations involving disturbances at fraternity housing and crowd control within a few blocks of the UW campus border.

32

(4.13.3 Mitigation, page 4-118) Regarding the work of the Fire/Life Safety Committee, the Committee should include evaluation of "specialized equipment and training to detect and respond to emergencies and security concerns..."

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Utilities

(4.14.2 Systemwide Impacts, page 4-119 through 4-120) Please note that pipelines and other water utility infrastructure may be impacted by stray current corrosion, settlement, vibration, and parallel deep trenches. These impacts are especially harmful to cast iron pipes with lead joints. Similarly, impacts of proposed crossings over or under underground electrical transmission and distribution lines cannot be fully assessed based on available information. The most notable issue is possible impacts stray DC current may have on the passive cathodic protection system. A qualified engineering study should identify any additional effects of the DC current used for the Sound Transit system on the HPFF pipe-type underground transmission systems. Mitigation to the cathodic protection system would be considered a Sound Transit expense, if the proposed project would result in the need for changes to the system. Overhead transmission lines may also require improvements to meet the National Electric Safety Code (such as taller transmission poles or installation of new steel structures rather than wood). The City anticipates working with Sound Transit through subsequent design work to examine the potential impacts and work on protection and/or replacement of impacted facilities once a preferred alignment is chosen.

34

With regard to work on transmission lines, please note that due to system constraints both within SCL and the Western Electric Coordinating Council (WECC) area, transmission outages must be scheduled no later than 120 days in advance. If the outage is extended, this should be scheduled the previous year. Outages are not guaranteed and are revocable if system conditions require the clearance to be removed. In addition, obtaining clearances for work near or on transmission lines involves SCL working with the WECC and the Northwest Power Pool. Transmission clearance approval should be included in the permits and approvals section of the SEIS. Please note a decision on when a clearance can be scheduled is not entirely within the control of SCL.

35

Transmission line relocations are multi-year engineering efforts and construction can last multiple months. Underground transmission line relocations are extremely costly and have long procurement time frames for new cable orders. It is not possible to take more than one transmission line out at a time and other transmission outages could take precedence over the requested outage. This would potentially affect construction scheduling as the scheduling of the outages would be serialized and may not be consecutive. Clearances may be required for various reasons including: contact with an underground transmission line, work within the clearance envelope of a 115 kV overhead transmission line for cranes setting piles or sheeting, relocation work, and various other normal construction practices.

In addition, alternative B1.A shows a station under, or very close to, the UW West Electric substation. Replacement of electromechanical relays with solid state equivalents may be needed to minimize false operations that could be caused by vibrations from the passage of the trains.

Historic and Archaeological Resources^{4.15}

(Page 4-121 through 4-132) Please note that in 2003, the park property on Capitol Hill which surrounds Lincoln Reservoir, and includes Bobby Morris Playfield, was renamed Cal Anderson Park. All references to this park should reflect this name change. Bobby Morris Playfield refers to the playfield facility south of Lincoln Reservoir. Both Lincoln Reservoir and Bobby Morris Playfield are facilities within Cal Anderson Park.

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Parklands

(Page 4-132 through 4-141) Please note that in 2003, the park property on Capitol Hill which surrounds Lincoln Reservoir, and includes Bobby Morris Playfield, was renamed Cal Anderson Park. All references to this park should reflect this name change. Bobby Morris Playfield refers to the playfield facility south of Lincoln Reservoir. Both Lincoln Reservoir and Bobby Morris Playfield are facilities within Cal Anderson Park.

Construction Impacts

(4.17.1 Construction Assumptions, page 145) Regarding spoils removal, barging spoils had previously been identified as an option. If this hauling method is still being considered, it should be referenced in this document and be described in terms of potential impacts.

(4.17.2 Transportation Impacts, page 4-147) The construction section does not mention potential damages to city streets from truck hauling activities. Heavy trucks will make many thousands of trips on city streets to transport construction materials and debris. The trucks will operate over primary and alternate haul routes and impact city street that may not have sufficient structure to support heavy hauling. This also remains an issue with respect to truck hauling activity around the Beacon Hill Station in the initial segment of Link Light Rail.

Compensation for haul route damage has been established in other regions of the country. The Bay Area Rapid Transit (BART) expansion in San Francisco is one example. BART is currently expanding its system into the South Peninsula area of San Francisco and has negotiated construction agreements with the jurisdictions through which the extension will pass. This agreement includes provisions to mitigate damages from construction including haul route damage.

The methodology for calculating the damages associated with the loss of street life is to establish a baseline estimate of the useful life of the haul routes at the beginning of the project, then to collect data on their condition as usage of the haul routes is completed. Sound Transit would then compensate the city for the documented loss of useful life. The City of Seattle would use the funds received to rebuild, repair and renew the haul route streets.

Baseline data and estimates would be based on the following assessments:

1. Conduct non-destructive deflection testing, Falling Weight Deflectometer (FWD) Technique, on the proposed haul route segments to establish their remaining service life.
2. Use the analysis of the remaining street service life and estimates of truck weights and traffic provided by Sound Transit to estimate loss of useful street life from the construction project.
3. Convert the estimate of loss of useful life to an estimate of the cost to restore the streets, using standard industry conversions.

As Sound Transit completes its use of haul routes, a second round of deflection testing can be undertaken. The post-construction testing for each segment of haul route can be compared with the pre-construction testing. The loss of useful street life can be converted to an estimate of the cost to restore each segment of street.

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The approach of an initial estimate of mitigation costs, with actual mitigation expenses based on before-and-after testing works to the advantage of both Sound Transit and SDOT. It brings predictability to the process and assures each party that mitigation costs are limited to and sufficient for covering actual damages to the streets. The initial estimates are also useful for budgeting and strategic planning purposes. Initial testing and analysis would cost approximately \$50-100k, and could be completed within two months. The City would anticipate that Sound Transit pay for this work, since estimating damage and restoring the City of Seattle's streets are essential elements of the North Link construction project. SDOT could manage the contracted work effort on behalf of Sound Transit.

(4.17.2 Mitigation, page 4-157) Please note that standard construction safety measures for projects in the City of Seattle reference the Traffic Control Manual, and that uniformed police officers are used to assist with traffic control when signals are countermanded. The SEIS should reflect this and Sound Transit's work with SPD on the initial segment construction for Link Light Rail. UW and SPD patrol officer input on security measures at employee parking areas and equipment storage locations would also be useful.

With regard to coordinating with public school officials, please note that private schools should also be provided advance and ongoing notice concerning construction activity.

(4.17.7 Noise and Vibration, page 4-165 through 4-170) The statement is made on page 4-165 that light rail noise is exempt from the City's Noise Ordinance. Please identify under what authority light rail noise is exempt.

The section on "General Equipment Criteria" describes the hours of construction, but not the way in which noise is to be measured. Text should state that noise is measured from the real property of another person or at the distance of 50 feet from the equipment, whichever is greater. Similarly, the section on "Haul Route Criteria" needs to identify a distance of how far away from the vehicle the truck noise measurement is to be taken. The distance from the equipment at which the measurement was taken should be noted in Table 4.17-10)

The first two paragraphs under Table 4.17-10 seem to contradict each other. The first speaks to no nighttime levels for construction activities, the second speaks to acquiring a noise variance from nighttime noise regulations so that construction can take place. The Noise Ordinance does have specific noise levels for nighttime, and construction can take place during the nighttime. The difference is where the noise is measured and the removal of the exceedences that allow construction to make more noise than the zone allows. The language "measured from the real property of another person or 50 feet from the equipment, whichever is greater" is not in affect at night. Removal of the exceedences and the 50 feet or further does limit most outdoor construction activities.

Please note that the maximum noise levels for pile driving represented on page 4-168 in the second paragraph (105 dBA at a distance of 100 feet) does not meet the Noise Ordinance. Maximum level allowed in the Noise Ordinance is 99 dBA Leq measured at the property line or 50 feet, whichever is greater.

Potential construction hours for Vent Shafts and TPSS construction should be noted on page 4-169, particularly if shaft construction is 24 hours a day/7 days a week. If a technical noise variance is anticipated for construction of the shaft and tunnel it should be noted in the SEIS.

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Please note under "Noise Mitigation" (page 4-170) that strobe lights can be used as an alternative to back up alarms at night, and indicate what types of noise variance Sound Transit would seek from the City of Seattle (temporary, technical, or economic).

49

(4.17.9 *Water Quality and Quantity*, page 4-174) Note that a construction dewatering plan will need to be submitted for review and approval as part of the City permitting process for North Link construction. As part of this review, SPU will conduct a capacity analysis and contact King County Metro if a connection to a combined sewer is requested or is necessary. Please contact Jeff Smith (684-4615), SPU Engineering Services, for more information regarding construction dewatering requests. The plan should include, at a minimum, the following information (for each specific site requiring dewatering):

1. location/site address,
2. schedule/duration,
3. proposed dewatering system (e.g. perimeter wells, localized wells, perimeter drains, trench work, etc.),
4. proposed temporary discharge point (existing site side sewers/service drains are preferred),
5. estimated temporary flow rate and total volume,
6. potential contamination information,
7. proposed treatment system,
8. proposed permanent discharge point (if applicable), and
9. proposed permanent flow rate (if applicable).

50

If saturated soils from excavation or tunneling work will be staged within the project limits, a decant plan must be developed and submitted as part of the City permitting process for North Link construction. The plan should include the same information as required for the dewatering plan noted above. Two separate plans (dewatering and decant) are required because the environmental regulations related to the discharge from the two activities are different.

The SEIS notes on page 4-174 that, "...storm drains could be temporarily cut or plugged during construction of the cut-and-cover tunnels associated with Segment B Alternatives. Temporary mitigation may include pumping stormwater around the site until the impacted pipe can be replaced or providing detention." Please note that a site specific plan for each of these proposed activities will need to be submitted as part of the City permitting process for North Link construction.

51

(4.17.11 *Geology and Soils – Dewatering*, page 4-175) This section notes that, "Dewatering effluent would likely be discharged to the sanitary sewer." SPU considers discharge from temporary dewatering activities (including drainage from spoils) to a sanitary sewer as a last resort and, for the most part, allowed only due to contamination issues. Such an action will need to be authorized jointly by SPU and King County as part of the permitting process for North Link construction. If discharge from temporary dewatering activities (including drainage from spoils) is likely to exceed State water quality standards due to soil and/or groundwater contamination, treatment options to allow discharge to a storm drain system must be explored before requesting a connection to a sanitary sewer.

52

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(4.17.14 *Utilities – Impacts*, page 4-180) Please note that pipelines and other water utility infrastructure may be impacted by stray current corrosion, settlement, vibration, and parallel deep trenches. These impacts are especially harmful to cast iron pipes with lead joints. SPU anticipates future design work with Sound Transit to examine the potential impacts and work on protection and/or replacement of impacted facilities once a preferred alignment is chosen. In addition, an additional bullet should be added in the "Mitigation" section to state, "Work with Seattle Public Utilities to maintain flows through the sewer systems to provide continuous service to their customers during construction."

53

Similarly, impacts of proposed crossings of North Link alternatives over or under SCL's underground transmission and distribution cannot be fully assessed based on available information and will need to be addressed through subsequent design work. The most notable issue is possible impacts the DC power may have on the passive cathodic protection system, which protects the pipe – pipe integrity is essential to operation of the system. Potential visual impacts, construction impacts, and the time needed to relocate or alter existing transmission should also be taken into account in overall evaluation of project impacts. Revisions to SCL electrical distribution system and/or services in the public right-of-way and private property will be required when Sound Transit construction or facilities conflict with existing and/or planned electrical infrastructure and may require relocation and/or protection of the system. Revisions will be designed and constructed per SCL's Construction Guidelines and applicable National Electrical Safety Codes. In some cases this may require taller poles or more underground facilities. These will be dealt with on a case-by-case basis.

54

Alternative B1.A shows a station under, or very close to, the UW West Electric Substation. Replacement of electromechanical relays with solid state equivalents may be needed to minimize false operations that could be caused by vibrations from construction.

55

(Table 4.17-14, page 4-182) Footnote 4 of this table defines major powerlines as "greater than 26 kV." SCL suggests that this definition include powerlines of "26 kV or greater sized at 600 amps or greater" and that the table and text be revised accordingly.

56

Please note that tunnel routes B3.D and B3.G cross the BR-EP 115 kV High-Pressure Fluid-Filled (HPFF) cable system at Eastlake Ave E. and E. Denny Way. Upgrading this line to 230 kV is planned when a South Lake substation is constructed. Since the cable system is built into the E. Denny Way overpass, these routes need to be investigated in further detail if such an alignment is selected.

57

Tunnel routes B1.D and B4.D cross the BR-EP 115 kV HPFF cable system at Broadway and Denny and include a potential station at Broadway or Nagle. Tunneling under the HPFF line is a concern and special provisions will need to be engineered to keep the cable in place during construction. Electrical safety impacts associated with transmission cables going through or near the station need to be analyzed as well. The life of the cable is dependent on maintenance of the cathodic protection system.

58

Routes A2.1b and A2.1c cross the UN-NO 115 kV HPFF cable system just south of NE 65th St. and 8th Ave. NE and include an elevated Roosevelt station at this location. Similar electrical safety impacts associated with the transmission cables and maintenance of the cathodic protection system are concerns.

59

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Routes A2.1b and A2.1c are also along the alignment of the BO-UN 115 kV overhead transmission line. This line is located on 8th Ave NE. These facilities should be located on the base maps and most likely have distribution underbuild. 60

Routes A2.1b and A2.1c, north of Lake City Way, are along the SH-NO 115 kV line for a short segment. This line starts at about NE 76th St. and proceeds northwest along Banner Way NE and then north on 5th Ave NE. 61

(4.17.15 Historic Archaeological Resources – Mitigation, page 4-185) Mitigation measures for Cal Anderson Park (referenced as Lincoln Reservoir Park in the Draft SEIS) should reflect the possibility of compensation for temporary occupancy of property. 62

(4.17.16 Parklands – Mitigation, page 4-188) Cal Anderson Park (referenced as Lincoln Reservoir/Bobby Morris Playfield in the Draft SEIS) is currently under redevelopment as part of the work to lid Lincoln Reservoir. Most of the park-related improvements will be constructed Spring through Fall 2004, with completion of the project in Spring 2005. Mitigation of impacts to parklands should include plans for consultation with Parks project management staff to assure these improvements are coordinated to the greatest extent possible with Sound Transit plans for temporary use of a portion of the park. The mitigation measures should reflect the possibility of compensation for temporary occupancy of property. 63

North Link SEIS Appendices

(Appendix F References, page F-17) References to Major Institution Master Plans should be checked to reflect the most recent versions here and in the body of the document (particularly where addressed as Land Use Impacts or Cumulative Impacts, and described in detail in Appendix P4.2, pages P4.2-23 through P4.2-30). 64

(Appendix H.4.2 Lincoln Reservoir and Bobby Morris Playfield, page H-2) Please note that in 2003, the park property on Capitol Hill which surrounds Lincoln Reservoir, and includes Bobby Morris Playfield, was renamed Cal Anderson Park. All references to this park should reflect this name change. Bobby Morris Playfield refers to the playfield facility south of Lincoln Reservoir. Both Lincoln Reservoir and Bobby Morris Playfield are facilities within Cal Anderson Park. 65

(Appendix H.5.2, page H-5) The Seattle Department of Parks and Recreation concurs with the Draft SEIS (and SHPO) that the impacts to Cal Anderson Park, during construction only, constitute a temporary occupancy of the parkland. 66

(Appendix H.7.2, page H-7) Cal Anderson Park is currently under redevelopment as part of the work to lid Lincoln Reservoir. Most of the park-related improvements will be constructed Spring through Fall 2004, with completion of the project in Spring 2005. Measures to minimize harm should include plans for consultation with Parks project management staff to assure these improvements are coordinated to the greatest extent possible with Sound Transit plans for temporary use of a portion of the park. These measures should also reflect the possibility of compensation for temporary occupancy of property. 67

(Appendix P4.2 Land Use – Discussion, page P4.2-12) Discussion should be updated to reflect the current status of the City's station area planning work (the City's Station Area Planning 68

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program completed its work in 2001) and expectations for future work to review land use, zoning, or similar land use tools for the revised stations. 68 cont.

(Appendix P4.2, page P4.2-17, University Community Urban Center Plan – Discussion) Please note that an interim terminus at a Montlake Station would not be consistent with the UCUC plan. 69

(Appendix P4.2, page P4.2-23, City of Seattle Station Area Overlay Plans/Zoning – Discussion) Suggest edit to sentence, "...this analysis assumes the City would review and consider SAODs, rezones, or similar land use tools for light rail station areas adopt SAODs and rezones for specific stations similar to the ones previously adopted." 70

(Appendix P4.10, page P4.10-2) The "Steep Slope and Landslide Hazard Areas" section references Figures P4.10-1 and P4.10-2 which show landslide hazard areas and other geologic critical areas. Those figures were not included in the document and must be provided for review. 71

North Link Transportation Technical Report:

(Page 4-7, Regional Transit Operation) Text should reflect updated Sounder service to Everett. 72

(Page 4-21, Hours of Service) The discussion of hours of service seems to combine two distinct concepts: the length of time throughout the day when service is available (service span), and the hours of service operation with the most frequent service (service intensity). It may be useful to evaluate these concepts separately. 73

(Page 4-23, Reliability) The text indicates that reliability in the southbound direction varies from LOS A to LOS F at the Northgate Transit Center. The poorest LOS at the Northgate Transit Center shown in Table 4.1-13 is LOS E. 74

In addition, the discussion of southbound route 67 states that "when the route reaches the South Campus and Pacific Stations, reliability worsens to LOS F." Table 4.1-13 indicates that route 67 operates at LOS B at these stations, but LOS F at the 45th Street Station. 75

(Page 4-24, Table 4.1-15) Please note if data in this table is for the PM peak hour. 76

(Page 4-26 and 4-34, Pedestrian and Bicycle Circulation) Bicycle facility terminology used in these sections is incorrect. "Regional trails" and "bicycle paths" should be replaced with "shared use paths." While streets commonly used by bicyclists are identified in the City of Seattle Bicycling Guide Map, the City does not recommend any particular street for bicycle use. 77

(Page 4-26 and 4-36, Pedestrian Circulation) Text in these sections refers to the City of Seattle's GIS system as the source for identifying missing sections of sidewalk. This is a concern if the sidewalks were not field checked as the database was constructed from aerial photographs and is highly inaccurate. In addition, while missing sections of sidewalk are identified, there is no inventory of other barriers to walking (for example, there are typically locations where pedestrians have a difficult time crossing the street). 78

(Page 4-28, Figure 4.2-1) If the intention of this figure is to reflect the bicycle lanes and streets commonly used by bicyclists shown in the Seattle Bicycling Guide Map, then some bicycle lanes 79

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and highlighted streets are missing. A similar map, or additional information on this map, showing pedestrian circulation with signalized crossing locations and missing sidewalks on arterial streets would be extremely useful. 79 cont.

(Page 4-30, *Pedestrian Circulation, 1st Paragraph*) The description of the NE 117th St overpass is confusing. The text should note that the overpass connects N. 117th St and 1st Ave NE on the west side of I-5 to 1st Place NE and 1st Ave NE on the east side of I-5. In addition, please note that the NE 117th St. overpass also provides bicyclists with east-west access across I-5. The Washington State Department of Transportation has recently rebuilt this facility and, as an ADA-accessible facility, bicyclists do not have to dismount (or carry their bicycles while walking up/down steps). 80

(Page 4-30, *Bicycle Circulation, 2nd Paragraph*) Ravenna Blvd., east of 12th Ave NE, is not classified by the City as a bicycle route. It is identified as an arterial commonly used by bicyclists. 81

(Page 4-30, *Bicycle Circulation, 3rd Paragraph*) Sound Transit Regional Express buses are also equipped with racks that can carry up to two bicycles. King County Metro is evaluating bus racks that can carry up to three bicycles. 82

(Page 4-30, *Bicycle Circulation, 4th and 5th Paragraphs*) Please delete the "bicycle route" terminology. The Seattle Bicycling Guide Map does not actually have a "bicycle route" classification and does not state that any particular route is preferred over any other. Appropriate classifications are: shared-use paths, bicycle lanes, and arterial and non-arterial streets commonly used by bicyclists. A new version of the Seattle Bicycling Guide Map is available. (Note that this comment applies to other bicycle circulation sections on pages 4-38, 5-30, and 5-54). 83

(Page 4-31 and 4-41, *Traffic Accidents*) Text indicates that only signalized intersections were reviewed. This may miss locations where there are significant bicycle and pedestrian safety problems. In addition, while the City's HAL threshold of 10 accidents per year at signalized intersections and 5 accidents per year at unsignalized intersections is appropriate for motor vehicles accidents, it is too high for pedestrian and bicycle crashes. In general, three or more per year at any location would be considered high for accidents involving pedestrians and bicyclists. The State's Pedestrian Accident Level (PAL) threshold may also be an appropriate standard to identify high pedestrian crash locations. 84

(Page 4-35, *Figure 4.2-2*) This map should be updated to reflect the latest version of the Seattle Bicycling Guide Map. In particular, please note the addition of the "Pedestrian Pathway" classification – facilities on which bicyclists are allowed, but are designed primarily for pedestrian use. Similarly to comments on Figure 4.2-1, this map shows little information about pedestrian facilities and barriers to walking. Topography combined with major roads such as I-5 and other arterials may make it difficult to directly access stations from certain directions. 85

(Page 4-38, *Bicycle Circulation*) Please delete references to the Potlatch Trail as this project is not moving forward. 86

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(Page 4-42, *Traffic Accidents*) Although the accident rate at Broadway and Olive/John does not exceed the City's HAL threshold, it would seem to suggest further attention given the proximity to the Capitol Hill Station entrances. 87

(Page 4-46, *Northgate Station – On-Street Parking*) Note that the description of the Northgate Station parking survey area does not match Figure 4.3-1. Also, with no pedestrian crossing of I-5, would any station-based parking demand be reasonable using spaces west of I-5? 88

(Page 4-47, *Roosevelt Stations – On-Street Parking*) Text in this section states that "Restricted on-street parking is primarily signed for 1-to 2-hours, with permitted neighborhood residents exempt..." This description seems to exclude the parking meters along NE 65th St. and Roosevelt Way NE in the Roosevelt commercial district. In addition, exempting residents from parking restrictions is specifically accomplished by RPZs in the area. Parking assessments for each station, and associated tables, should indicate how much of the restricted parking is metered. 89

(Page 4-48, *University District Station*) It is unclear why, "a single study area around the four UW stations was evaluated to avoid double counting parking on streets located at adjacent stations." Individual station parking analyses which contained the some overlapping blocks would not seem to impede comparisons of parking utilization rates. Such comparisons could show enough variability to be useful in selecting among various station alternatives. 90

(Page 4-48, *University District Station – On-Street Parking*) This section references three study areas; however Figure 4.3-2 shows four potential stations at five potential locations, so this reference is unclear. In addition, references to the City of Seattle's "primary impact zone" needs more elaboration, as many readers may not be familiar with the concept. 91

(Page 4-48, *Table 4.3-3*) This table should note that these are mid-day counts, since there is also AM period parking data discussed in the text but not reflected in this table. 92

(Page 4-51, *Table 4.3-5*) The % Utilization Subtotal for On-Street Unrestricted and Off-Street Public Parking should be 92% (not the 89% reported). 93

(Page 4-51, *Harrison Station – On-Street Parking*) Text in this section states that there is "Restricted parking, signed as 2-hours between 7:00 AM and 6:00 PM, with permitted neighborhood residents exempt..." This area has 1-hour and 2-hour signed parking restrictions, and residents are not exempt as there is no RPZ in this area west of I-5. 94

(Page 4-51, *Harrison Station – Off-Street Parking*) The sentence, "Off-street parking in the north portion of the study area is lower and therefore less utilized," is unclear. Off-Street Public parking utilization data for Harrison Station should be collected if it is being proposed as a possible station. 95

(Page 4-53, *Convention Place Station – On-Street Parking*) The description of the parking area for the Convention Place Station indicates that the western boundary of the study area is Western Ave. This does not match the boundaries shown in Figure 4.3-2. 96

(Page 4-53, *Convention Place Station – Off-Street Parking*) Off-Street Public parking utilization data for Convention Place station should be collected if it is being proposed as a possible station. 97

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(Page 5-6, <i>Service Frequency</i>) Suggest edit to the first sentence, "...by company combining average transit headways..."	98
(Page 5-8, <i>Reliability</i>) The Reliability LOS measure allows routes arriving (and presumably departing) up to five minutes early to be considered on-time. This is not a reasonable characterization of on-time performance, as early departures can cause riders to wait for the next arrival (a time equal to the average headway, assuming the next coach is on-time). Also, the report notes (on page 5-9) that the St. Louis LRT system evaluation considers any vehicle arriving more than one minute early to be a late arriving vehicle. Why is this standard not part of the reliability construct used in this report?	99
(Page 5-11, <i>Transit Travel Times</i>) Please note a typo in the sentence "In most cases, travel times with the North Link project are fewer <u>shorter</u> than without the project..."	100
(Page 5-13, <i>Transfers</i>) This section should mention the conditions that promote good, safe transfers, including: transfers located on the same side of the street where possible, minimizing conflicts between major pedestrian circulation routes, adequate waiting areas that do not conflict with bicyclists accessing bike racks, etc.	101
(Page 5-19, <i>Capitol Hill/South Lake Union</i>) Text should note that the "pedestrian bridge" connecting the western residential edge of Capitol Hill is a proposed improvement and does not currently exist.	102
(Page 5-22 and 5-40, <i>Traffic Volume Forecasts</i>) These sections should provide estimates of how many riders will be bicycling to the stations and bringing bicycles on-board light rail vehicles. If bicyclists will be required to use a restraining system, will there be enough capacity on the trains to meet demand?	103
(Page 5-22, <i>Table 5.3-1a</i>) Footnote 2 in these tables indicates that, "The existing Greenlake Park-and-Ride lot was assumed to be at capacity without light rail implementation; therefore traffic impacts at the Roosevelt station are not affected by park-and-ride use." This may not necessarily be the case as additional light rail riders may compete with current park-and-ride patrons, resulting in full utilization at earlier times in the day. Characterizing the Roosevelt Station as having no Park & Ride Demand seems misleading.	104
(Page 5-22, 5-23, and 5-41, <i>Tables 5.3-1a, 5.3-1b, 5.4-1a, and 5.4-1b</i>) Tables should include numbers on bicycle ridership in addition to "walk" and "transit."	105
(Page 5-25 and 5-46, <i>Level of Service Analysis</i>) Please note that the City of Seattle considers LOS D acceptable, not LOS E.	106
(Page 5-26, <i>Table 5.3-4b</i>) Note that this table shows significant traffic impacts in the year 2030 at the following intersections: <ul style="list-style-type: none"> NE 103rd St/1st Ave NE (Alternatives A1.1 and A2.1c) NE Northgate Way/5th Ave NE (Alternatives A1.1 and A2.1c) NE 65th St/8th Ave NE (Alternative A2.1b) 	107

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(Page 5-28, <i>Interim Termini and Deferred Stations</i>) The last sentence of the first paragraph indicates that "all intersections near the Roosevelt Station would operate at LOS C or better with all alternatives in the year 2015 and 2030." This is incorrect as, depending on the alternative, the intersection of NE 65 th St/8 th Ave NE could operate at LOS D in 2015 and LOS E in 2030.	108
(Page 5-30, <i>Bicycle Circulation</i>) Text refers to a "qualitative and phased approach to accommodating bicycle parking demand," but does not provide the methodology. The number of proposed bicycle parking racks is inadequate and arbitrary. Failure to provide adequate bicycle parking will result in safety and accessibility issues for pedestrians as bicyclists are forced to lock up to railings, trees, and other street furniture. The Roosevelt station, in particular, is in a high bike-use area and will have high demand for bicycle parking.	109
(Page 5-31, <i>Pedestrian Circulation</i>) Using the methodology from the Highway Capacity Manual (HCM) does not adequately measure pedestrian Level Of Service (LOS). It fails to look at queuing space need for transit users and it does not consider signal timing, push buttons, or other factors that may delay/prevent pedestrians from crossing the streets and thereby create a need for more standing space.	110
(Page 5-31, 5 th paragraph and Page 5-63, 1 st paragraph) Note that the initial existing condition analysis or the "travelshed" areas of 1 mile and ½ mile for bicyclists and pedestrians have been reduced to ½ and ¼ mile in this discussion. The travelshed for bicyclists is much larger than a ½ mile around each station, particularly for stations at the terminus. An appropriate radius for bicycle improvements is in the 2-3 mile range. Similarly, a ½ mile radius is appropriate for the pedestrian travelshed. Also, note that sidewalk widths immediately adjacent to stations must be wide enough to safely accommodate both pedestrians and bicyclists. The AASHTO minimum for a shared-use facility is 10 feet.	111
(Page 5-35, <i>Northgate Station</i>) Note that there are no "designated bicycle routes" within the proposed Northgate station vicinity. Furthermore, proximity of bicycle facilities to stations does not necessarily mean that there would be safe, adequate access. In addition, there are currently no established pedestrian crossings of NE 100 th Street to the office park other than the intersections at 1 st Ave NE and 5 th Ave NE.	112
(Page 5-35, <i>Roosevelt Station</i>) Please modify the sentence, "Bicycle facilities adequately serve areas surrounding all of the proposed Roosevelt stations..." as no basis of adequacy is provided. There is only one bicycle facility in the immediate area – the Ravenna Blvd bicycle lanes – which provide a good northwest/southeast corridor for bicyclists, but one that is several blocks away from the proposed stations. A more careful analysis of barriers to cyclists coming from all directions should be done.	113
(Page 5-36, <i>Segment A – Parking Impacts; and Page 5-67, Segment B – Parking Impacts</i>) These sections should note if any of the parking spaces lost are metered parking, and how many are lost.	114
(Page 5-38, <i>Traffic Safety; and Page 5-39, Mitigation</i>) Any structures associated with the elevation of Link that are placed in the street right-of-way could impact the safety of bicyclists and pedestrians by blocking sight distance. Mitigation of these safety concerns should be provided.	115

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(Page 5-39 and 5-71, *Non-Motorized Facilities*) Text states that "no additional mitigation is necessary beyond design improvements...immediately adjacent to North Link stations." It is hard to imagine how a project of this magnitude will have no impact of walking and bicycling that will require mitigation. It's like saying "we are building this multi-billion dollar facility but no one will use it so there are no impacts." The conclusion that no mitigation is necessary is based on the inadequate analysis of existing conditions which conclude that facilities are fully adequate to handle future volumes. In reality, places like Northgate are currently not great for bicycling and walking and will only be made more difficult by the increased traffic generated by this project.

116

(Page 5-39, *Mitigation – Traffic Operations*) As the City of Seattle considers LOS E unacceptable, significant impacts and potential mitigation at NE 103rd St/1st Ave NE and NE 65th St/8th Ave NE should be included.

117

(Page 5-40, *Mitigation – Parking*) This section should note the recent agreement between the City of Seattle and Sound Transit on hide-and-ride mitigation (concurrence letter dated August 25, 2003).

118

(Page 5-47, *Table 5.4-4a*; and Page 5-49, *Table 5.4-4b*) Note that these tables show significant traffic impacts in the year 2015 and 2030 at the following intersections:

119

- NE 45th St/15th Ave NE (all alternatives)
- NE Pacific Pl/Montlake Blvd NE (Alternatives B1.D, B3.D, and B4.D)

(Page 5-63, *NE 45th Station and Brooklyn Station*) The nearest bicycle trail is 5+ blocks away. Proximity should not be confused with accessibility. A more careful analysis of the barriers to accessing these stations by bicycle should be done

120

(Page 5-64, *Pacific Station and Southwest Campus Station*) Bicyclists have a very strong tendency to park their bicycles as close to station entrances as possible. Providing station entrances away from the Burke-Gilman Trail while installing racks close to the trail may not operate as intended. A 5 foot pathway connecting the Burke-Gilman Trail to the station is not wide enough to accommodate bicyclists and pedestrians (ASHTO minimum width for a shared-use facility is 10 feet). In addition, although the Burke-Gilman Trail and Brooklyn Ave may serve bicyclists coming from the south, west, and north, there is a significant barrier for bicyclists coming from the south via the University Bridge – the transition zone from the University Bridge to 11th Ave with the NE 40th St and Campus Parkway turn-offs.

121

(Page 5-65, *Montlake Station*) Note that any ADA-accessible pedestrian bridge will likely also be used by bicyclists.

122

(Page 5-66, *First Hill Station*) Please modify the sentence, "Although the bicycle network is adequate for areas surrounding the First Hill station..." as no basis of adequacy is provided.

123

(Page 5-66, *Harrison Station*) Note that the proposed pedestrian bridge will also attract bicyclists, since crossing I-5 in this neighborhood is currently a significant barrier.

124

(Page 5-67, *Convention Place Station*) Note that proximity to bicycle facilities does not necessarily equal accessibility.

125

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(Page 5-67 through 5-70, *Parking Impacts*) Text throughout this section notes that little potential for hide-and-ride impacts exist where parking utilization rates are high. High utilization rates indicate that even a modest increase in parking demand may have a noticeable or substantial impacts, as new vehicles wait for a space to be vacated, circulate through an area seeking an empty space, or park further away, thereby expanding the area or impact. In addition, station users arriving early may displace vehicles that currently arrive later. Although high utilization rates may discourage some light rail users from driving to the stations, those who do attempt to park will have hide-and-ride impacts.

126

(MC Page 5-68) "Existing utilization of on-street unrestricted parking in this station area is 92 percent during the midday survey period. In the early morning hours, on-street unrestricted parking spaces were 98 percent utilized." Please note that parking restrictions are not in affect in the early morning hours.

127

(Page 5-71, *Mitigation – Traffic Operations*) As the City of Seattle considers LOS E unacceptable, significant impacts and potential mitigation at NE 45th St/15th Ave NE and NE Pacific St/NE Pacific Pl should be included.

128

(Page 5-71, *Mitigation – Parking*) Please note that references to Segment B hide-and-ride mitigation being "the same" as described under Segment A in Section 5.4.2 is slightly confusing as hide-and-ride impacts do vary by station. In any case, the recent City of Seattle and Sound Transit agreement on hide-and-ride mitigation should be referenced.

129

(Page 5-72, *Regional Transportation Projects*) Note that replacing the Alaskan Way Viaduct and Seawall presents an opportunity to improve bicycling access to/from downtown Seattle.

130

(Page 5-73, *Major Development Projects*) Please note that the requirement for a General Development Plan for large sites in the Northgate area is being removed from the Land Use Code.

131

(Page 5-74, *Construction Impacts and Page 5-88, Mitigation*) Impacts from construction affect bicyclists more than motorists. Closures, detours, and management of construction sites must carefully minimize these impacts. For example, bicyclists should never be detoured along a route with steep grades; steel plates must always be shimmed and should always be treated with a skid resistant coating; and bicycle lanes and paths should not be used as construction storage areas unless adequate alternate facilities are provided.

132

(Page 5-81, *Table 5.4-12*) A number of construction locations are expected to produce "medium" levels of neighborhood traffic intrusion due to traffic detours. Please describe or characterize what is anticipated to be a medium-level impact. Footnote 3 does not provide enough detail for this to be a meaningful measurement.

133

(Page 5-88, *Mitigation*) Regular, written updates on construction activities near schools should be provided to private schools as well as public schools.

134

NL 147 Seattle Department of Transportation/Grace Crunican

NL 147-1

Sound Transit welcomes the comments from SDOT. We agree with SDOT's statement that North Link is an important transportation investment for the City of Seattle and the region and represents a strong relationship between Sound Transit and the City.

NL 147-2

Since publication of the 2003 Draft SEIS, Sound Transit has prepared bicycle-parking demand estimates based on the methodology developed by PSRC. Based on the results of the analysis, the provision of 24 bicycle spaces plus expansion areas at most stations, as recommended in the North Link SEIS, was determined to be reasonable for accommodating the projected bicycle demand at most North Link stations. With regard to pedestrian traffic, the Highway Capacity Manual (HCM) and Transit Capacity and Quality of Service Manual (TCQSM) methodologies were used to evaluate the adequacy of existing sidewalks for accommodating existing and future pedestrian volumes. In addition, the signalized and unsignalized intersection level of service (LOS) analysis conducted using the Synchro 5.0 software program takes into account pedestrian volumes at crosswalks when evaluating intersection operations. To evaluate typical weekday conditions, school walk routes and other key pedestrian destinations were taken into account in this analysis to the extent that pedestrian volumes from these generators are captured in peak hour counts used for the LOS analysis.

NL 147-3

Sound Transit welcomes more detailed discussions regarding pedestrian and bicycle needs at stations and will continue to coordinate with the City of Seattle.

NL 147-4

Sound Transit would repair any public right-of-way at Sound Transit work sites that are damaged during construction to substantially the same condition.

NL 147-5

The SEIS identifies specific impacts to major utilities potentially affected by the project. Sound Transit will address potential impacts to City-owned utilities, infrastructure, and facilities in additional detail through the final design process in coordination with the City of Seattle and utility providers to avoid, minimize, and mitigate for potential impacts to utilities.

The five new 115 kV powerlines identified by City staff have been added to the table in Section 4.17.4.

Sound Transit concurs that advance agreement on codes and standards will facilitate final design.

NL 147-6

Sound Transit will coordinate with the City of Seattle Department of Transportation and Washington Department of Transportation throughout final design and construction to provide for coordinated construction management with other projects.

March 2006

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NL 147-7

On April 9, 1998, the Sound Transit Board approved Motion No. 98-25 adopting transit oriented development (TOD) policies to guide staff work and development on and around Sound Transit station areas and transit centers. The Motion included adoption of policy recommendations to guide development on Sound Transit facilities, established policy for working with others on development that occurs surrounding Sound Transit facilities, and described how TOD work will be incorporated into the Sound Transit work programs. The North Link Final SEIS, Section 4.2, has been updated to reflect this policy; TOD policies are also outlined in Chapter 2.

NL 147-8

Station area planning for stations included in University Link was previously completed and further work is not anticipated. First Hill is not included in the Preferred Alternative but if it is included in the project, it is in the same location as in the original project. Capitol Hill Station is in substantially the same location as it was during previous station area planning efforts, and the University of Washington Station is entirely on University of Washington property. The funding and timing of final design or other activities for the remainder of North Link, north of the University of Washington station, is not certain at this time. Sound Transit and the City could revisit station area planning at the north University District station if its location is substantially different from the location identified in the Preferred Alternative.

NL 147A SDOT/Calvin Chow

NL 147A-1

Sound Transit thanks SDOT for the consolidated comments on the North Link 2003 Draft SEIS and Transportation Technical Report from the Department of Transportation, Seattle Public Utilities, Seattle City Light, Department of Parks and Recreation, Department of Planning and Development, and the Seattle Fire and Police Departments.

NL 147A-2

The Final SEIS describes potential spillover impacts.

NL 147A-3

The Final SEIS reflects the full correct title of the City's parking study, "1999 Comprehensive Neighborhood Parking Study."

NL 147A-4

Please see response to comment NL 147-2. Area has been provided at each station for additional bicycle parking if required, as there is no formal or accepted methodology for forecasting bicycle access demand.

NL 147A-5

The City of Seattle Bicycle Guide map was used to identify routes that are currently being used by bicycles and pedestrians in the project area. This level of information is appropriate to provide a basis for a qualitative assessment of project impacts to non-motorized facilities in the area. Please refer to response to comment NL 147-2.

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NL 147A-6

City of Seattle GIS maps and field reviews were used to generally review where sidewalk segments are missing. The Highway Capacity Manual (HCM) and Transit Capacity and Quality of Service Manual (TCQSM) (Transportation Research Board 2001) pedestrian analysis methodology was used to identify the potential for sidewalk capacity issues with the addition of pedestrian trips to and from proposed stations.

NL 147A-7

There are adequate bicycle routes and facilities to serve each station. Bicycle storage and station area improvements will be provided to accommodate bicycle access. Sound Transit does not expect the project to impact bicycles during normal operations. Text has been added to Section 4.17.2 of the Final SEIS to identify the potential for bicycle route impacts and the need to minimize impacts during construction activities. The 2003 Draft SEIS, on page 3-31, does acknowledge that, “The North Link alternatives would result in some increases in vehicular, transit, bicycle, and pedestrian activity in the vicinities of the proposed stations.” However, it also states that, “These stations would be designed to provide safe and easy access for all travel modes.” Please see the responses to comments NL 147A-5 and 147-2.

NL 147A-8

The signalized and unsignalized intersection LOS analysis conducted using the Synchro 5.0 software program takes pedestrian volumes at crosswalks into account when evaluating intersection operations. None of the North Link alignment alternatives would be constructed at-grade with crossing streets, all retained surface sections within Segment A would be located within WSDOT ROW; therefore, no pedestrian safety issues are expected to result from the light rail alignment alternatives.

NL 147A-9

Please refer to Tables 5.3-3a, 5.3-3b, 5.4-3a, and 5.4-3b of the Transportation Technical Report for vehicle trip generation estimates for all North Link station options. Vehicular trips generated by the light rail system do not represent a significant increase over No-Build volumes along the arterials and at intersections near the stations, as confirmed by the intersection level of service (LOS) analysis results described in Section 3.3.2 of the 2003 Draft SEIS, and thus would not be expected to impact the safety of existing school walk routes. In addition, no significant changes to the existing transportation infrastructure would be made with light rail implementation that would adversely affect school walk routes that are already in place. Improvements that would be made with system integration (i.e., to improve station area access), and to mitigate project impacts (i.e., to traffic operations, existing transit facilities) would likely also improve school walk routes in the area.

NL 147A-10

Sound Transit will continue to coordinate with the City of Seattle, University of Washington, and others to determine the extent of pedestrian and bicycle improvements around North Link stations with the goal of providing effective pedestrian and bicycle accessibility to the system. The SEIS describes significant pedestrian and bicycle impact and identifies mitigation where appropriate.

NL 147A-11

The mitigations proposed in the SEIS are adequate to address project impacts. Sound Transit may consider the use of intelligent traffic signal control technology where appropriate and cost-effective to reduce emergency response times and improve transit travel times. Opticom emergency pre-empt

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equipment could be installed at traffic signal locations on arterial streets where travel times are significantly impacted by light rail construction to improve incident response times.

NL 147A-12

Section 3.3.2 of the SEIS will be revised to reflect the understanding that the City and Sound Transit have reached agreement on mitigation principals for addressing hide-and-ride issues around light rail stations (Letter of Concurrence dated August 25, 2003).

NL 147A-13

The Final SEIS Section 3.3.2, includes additional discussion of potential impacts to users of the Burke-Gilman Trail for all of the Southwest campus area stations, and notes that an optional station entrance or other measures could help reduce impacts. Sound Transit has also identified specific measures to reduce impacts for the Preferred Alternative University of Washington Station.

NL 147A-14

Thank you for the comment. Parking impact and hide and ride discussions have been updated in the Final SEIS and the Transportation Technical Report.

NL 147A-15

Comment noted. As noted in the 2003 Draft SEIS (Section 2.5), any of the stations except First Hill could serve as an interim terminus. The potential impacts represent a subset of impacts identified for construction of the complete system. Depending on the route and station location, this would include property acquisitions and displacements (discussed in Section 4.1) as well as related construction impacts (Section 4.17). Overall land use impacts (changes in the mix and types of uses) are not expected to be significant. The Final SEIS reflects this clarification.

NL 147A-16

Proposed square footage for Northgate development will be updated in Section 4.2.1 to reflect the latest development plans and King County’s proposed TOD development. “GDP” language will also be revised to reflect current City Land Use Code (Ordinance 121362).

NL 147A-17

Section 4.2.2 of the SEIS, will be revised to clarify that the City of Seattle’s 2004 Comprehensive Plan Update incorporated neighborhood plans.

NL 147A-18

Section 4.2.2 of the SEIS, will be revised to provide more specificity about how light rail implementation would enable jurisdictions to meet stated objectives.

NL 147A-19

Comment noted.

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NL 147A-20

SEIS Section 4.2.2 has been revised to reference Sound Transit’s adopted TOD policies in Chapter 2 and in Section 4.2.

The ratings referenced in Table 4.2-1 reflect an assessment of general development or redevelopment influences from TOD influences or from other market factors.

“Hide-and-ride parking” references will direct the reader to other areas in the document where these impacts are discussed.

NL 147A-21

On-street parking loss was described in Section 3.3 of the 2003 Draft SEIS and is updated in the Final SEIS. The range of loss is under 100 for all alternatives, and considering overall supply was not considered significant. Loss of revenue would also be insignificant considering overall fiscal conditions for the City of Seattle and its multiple sources of revenue.

NL 147A-22

Text in SEIS Section 4.2.2 has been revised so that “hide-and-ride parking” references will direct the reader to other areas in the document where these impacts are discussed.

NL 147A-23

SEIS Section 4.3.1 has been updated to reflect recent development activity, such as completion of the University of Washington Law School.

NL 147A-24

The statement has been removed from the SEIS.

NL 147A-25

The text in Section 4.3.2 of the SEIS has been revised (deleted) to reflect this comment. The SDOT has accurately interpreted the intent of the sentence.

NL 147A-26

The Final SEIS removes “abrupt” to clarify the sentence.

NL 147A-27

Comment noted. TPSS vents and other facilities will be screened or designed to reduce potential visual impacts. A below-grade crossing of I-5 is cost-prohibitive and would have safety and access constraints. The SEIS identifies visual impacts to Ravenna Boulevard. Mature trees would be preserved as possible.

NL 147A-28

Sound Transit is aware of the City’s Stormwater Code has been under revision. At permitting, Sound Transit would expect to comply with the adopted code in force at that time.

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NL 147A-29

Thank you for stating the information requirements of the City for design and permitting. This information will be investigated and provided during the permitting and design process as stated in the text.

NL 147A-30

Text in SEIS Section 4.8.4 first paragraph has been revised as suggested.

NL 147A-31

The placement of a support column in a street would not necessarily affect emergency response times and depends on the roadway design. North Link does not propose support columns in the street. The Final SEIS notes that emergency responses that occur in tunnels during construction will require specialized training and equipment in accordance with applicable state and federal regulations.

NL 147A-32

Regarding “Mutual Aid Agreements” between University of Washington and SPD, text will be revised in Section 4.13.2 of the SEIS to note that the University of Washington also assists SPD upon request.

NL 147A-33

Sound Transit has revised Section 4.13.3 of the SEIS.

NL 147A-34

Sound Transit acknowledges the potential impacts to utilities. Sound Transit foresees coordination with the City to develop design criteria that would minimize impacts, and establish replacement procedures and standards of facilities as applicable.

In regard to pipelines and other water utility infrastructure being affect by project construction, the 2003 Draft SEIS acknowledges and discusses this issue and Sound Transit commits to working “with utility providers to ensure that underground utilities are adequately protected” (2003 Draft SEIS Section 4.14.2, page 4-120, first full paragraph). Fully assessing potential impacts of proposed crossings over and under underground electrical transmission and distribution lines cannot be fully assessed in an environmental document; this level of detailed analysis is to be done during the design phase of the project. The SEIS identifies significant adverse environmental impacts that might arise from the proposed project, and identifies appropriate mitigation.

As stated in the 2003 Draft SEIS (page 4-102, first full paragraph), light rail system design features and proposed mitigation measures would reduce stray current to levels where significant damage would not occur.

Sound Transit would fund cathodic protection of underground utilities, as reasonable.

The Draft SEIS states (page 4-120, first line) that “transmission lines may need to be realigned or relocated as a result of this project” and that Sound Transit would work with Seattle City Light to ensure that all work meets the standards set forth in the National Electric Safety Code. The DEIS also states (page 4-120, paragraph 5) that “there is the potential that some aboveground utilities, such as electrical transmission or distribution lines directly impacted by light rail construction, would be relocated underground.”

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NL 147A-35

Sound Transit recognizes the transmission outage requirements and ramifications associated with transmission line relocation. Transmission clearance approval will be included in the permits and approval section of the Final SEIS. Sound Transit has committed to work with the utility providers as described in Sections 4.14.3 and 4.17.14 of the 2003 Draft SEIS.

NL 147A-36

Text in the Final SEIS has been revised to reflect the new name of the park property on Capitol Hill as Cal Anderson Park.

NL 147A-37

Please see the response to comment NL 147A-36.

NL 147A-38

Barging is no longer being considered.

NL 147A-39

Sound Transit would repair any public rights-of-way at Sound Transit work sites that are damaged during construction to substantially the same condition.

NL 147A-40

See response to NL 147A-39.

NL 147A-41

See response to NL 147A-39.

NL 147A-42

The Final SEIS references the traffic control manual and provides updated information on construction traffic control plans, including detours. As described in Section 4.17.2, Sound Transit will finalize detailed construction mitigation plans in close coordination with the City of Seattle, WSDOT, King County Metro, and other affected agencies and organizations.

NL 147A-43

The text in Section 4.17.2, has been revised to include coordinating with private schools to provide notice concerning construction activity.

NL 147A-44

The statement noted has been deleted in the Final SEIS.

NL 147A-45

Construction noise discussions have been updated for the Final SEIS to provide additional detail on general equipment and noise measurements.

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NL 147A-46

In Section 4.17.7 on page 4-167 of the 2003 Draft SEIS, text has been revised to state that the City's noise ordinance does have specific nighttime noise level restrictions, and construction activities are allowed. The language "measured from the real property of another person or 50 feet from the equipment, whichever is greater" will be removed since that requirement is not in affect during nighttime hours.

NL 147A-47

The text in Section 4.17.7 of the Final SEIS has been updated to provide additional detail on a variety of noise producing construction techniques. The section also notes the need for a variance in some circumstances.

NL 147A-48

During construction of the ventilation facility and TPSS facilities, the contractor may want to work extended hours. A noise variance may be needed because of the hours of work or level of activity.

NL 147A-49

Section 4.17.7, page 4-170, has been revised to indicate that warning lights can be used as an alternative to back up alarms at night. If construction activities exceed nighttime noise ordinance levels, Sound Transit would seek the type of variance appropriate to the nighttime activities.

NL 147A-50

Thank you for describing the dewatering plan requirements. Sound Transit or the identified contractor will address the requirement by contacting the City and initiating permit applications prior to construction or dewatering activity once a construction schedule and detailed information on dewatering needs have been developed.

NL 147A-51

Sound Transit recognizes that site-specific plans are needed for permitting.

NL 147A-52

Comments noted. Sound Transit will coordinate with SPU and King County during permitting to determine appropriate dewatering discharge.

NL 147A-53

Please see the response to comment NL 147A-34. The Final SEIS Mitigation text in Section 4.17 has been updated to reflect the need to minimize surface disruptions.

NL 147A-54

Please see the response to comment NL 147A-34.

NL 147A-55

Thank you for the information.

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NL 147A-56

Table 4.17-14 of the 2003 Draft SEIS has been updated with additional engineering information. The SEIS provides estimates of utility impacts, and Sound Transit recognizes that additional detail will be developed through final design.

NL 147A-57

Thank you for the information. If these routes are the selected project, this facility will be evaluated in detail.

NL 147A-58

Comment noted. Sound Transit will address construction and utility protection measures in more detail during final design.

NL 147A-59

Comment noted. Sound Transit will address construction and utility protection measures in more detail during final design.

NL 147A-60

Thank you for providing additional information on Alternatives A2.1b and A2.1c, which are along the alignment of the BO-UN 115 kV overhead transmission line.

NL 147A-61

Sound Transit thanks SDOT for clarifying that Alternatives A2.1b and A2.1c are along the SH-NO 115kV line for a short segment north of Lake City Way.

NL 147A-62

If temporary occupancy of Cal Anderson Park is necessary during construction, compensation would be negotiated as part of the temporary construction easement to use park property. The Preferred Alternative identified by Sound Transit Board does not require temporary occupancy.

NL 147A-63

Sound Transit will work closely with Seattle Parks, and other interested parties to determine mitigation plans for Cal Anderson Park if it is affected by project construction.

NL 147A-64

The references to Major Institution Master Plans have been updated in Appendix F. Updated discussions are provided in Appendix P4.2 of the Final SEIS.

NL 147A-65

Text in the Final SEIS has been revised to reflect the new name of the park property on Capitol Hill, which surrounds Lincoln Reservoir and includes Bobby Morris Playfield, as Cal Anderson Park.

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NL 147A-66

Sound Transit acknowledges the City of Seattle's concurrence with the determination that construction impacts to Cal Anderson Park constitutes a temporary occupancy of the parkland. The State Historic Preservation Officer (SHPO) also concurs and has indicated that portions of Cal Anderson Park are no longer eligible for the National Register of Historic Places.

NL 147A-67

Please see the responses to comments NL 147A-62 and NL 147A-63.

NL 147A-68

Sound Transit anticipates working closely with the City regarding station areas and is continuing discussions with the City in this regard.

NL 147A-69

The Final SEIS includes an updated review of consistency with plans, including the UCUC.

NL 147A-70

Appendix P4.2 has been revised to reflect additional changes in land use plans.

NL 147A-71

Figures P4.10-1 and P4.10-2 have been included in the Final SEIS.

NL 147A-72

Page 4-7 of the Transportation Technical report has been revised to reflect updated Sounder service to Everett.

NL 147A-73

The service frequency and hours of service concepts are evaluated separately for the North Link Light Rail and existing bus transit systems, based on the Transit Capacity and Quality of Service Manual (TCQSM) methodologies. However, service frequency was used to calculate a weighted average service span for each screen line location in order to make broader comparisons of project effects. Updated discussion of further planning and review of transit service issues with the City of Seattle and others is provided in the 2005 Draft SEIS and included in the Final SEIS.

NL 147A-74

The Transportation Technical Report has updated discussions of transit reliability at the Northgate Transit Center, and the factors that create variable levels of service.

NL 147A-75

The Transportation Technical Report has been revised to reflect updated route information.

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NL 147A-76

“PM Peak Hour” has been added to the heading for Table 4.1-15 of the Transportation Technical Report.

NL 147A-77

The Transportation Technical Report has been revised to note “Existing midblock pedestrian signal locations and bicycle facilities..., including shared-use paths, bicycle lanes, and arterial and residential streets commonly used by bicyclists, are shown...”

NL 147A-78

Comment noted. Please refer to response to comment NL 147A-6.

NL 147A-79

Figure 4.2-1 of the Transportation Technical Report has been updated to reflect the bicycle lanes and streets commonly used by bicyclists shown in the current Seattle Bicycling Guide Map (Fall 2003). A listing of missing sidewalk sections within 1/2-mile radius of North Link Segment A stations is shown in Table 4.2-4. This level of information is appropriate to provide a basis for an assessment of project impacts to non-motorized facilities in the area.

NL 147A-80

The Transportation Technical Report has been revised to note that the overpass connects N 117th and 1st Ave NE on the west side of I-5 to 1st Place NE and 1st Ave NE on the east side of I-5. The text has also been revised to note that the NE 117th Street overpass also provides bicyclists with east-west access across I-5, and that the facility is ADA accessible.

NL 147A-81

The Transportation Technical Report has been revised to characterize Ravenna Blvd. east of 12th Ave NE as an arterial commonly used by bicyclists.

NL 147A-82

The Transportation Technical Report has been revised to note that Sound Transit Regional Express buses are also equipped with racks that can carry up to two bicycles.

NL 147A-83

The Transportation Technical Report has been revised to delete the “bicycle route” terminology. This terminology has been replaced with the following appropriate classifications: shared-use paths, bicycle lanes, and arterial and non-arterial streets commonly used by bicyclists.

NL 147A-84

Text in the Transportation Technical Report has been revised to note that signalized and unsignalized intersections were reviewed along the North Link corridor. In addition, text has been added to note the relatively low number of accidents that have involved pedestrians and/or bicyclists.

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NL 147A-85

Figures 4.2-1 and 4.2-2 of the Transportation Technical Report have been updated to reflect the latest version of the Seattle Bicycling Guide Map, which includes the addition of the “Pedestrian Pathway” classification. The level of information presented is appropriate to provide a basis for a qualitative assessment of project impacts to non-motorized facilities in the area.

NL 147A-86

The Transportation Technical Report has been revised to delete all references to the Potlatch Trail, as this project is not moving forward.

NL 147A-87

The Transportation Technical Report includes specific discussion of the Broadway and Olive/John intersection, which does not exceed the City’s HAL threshold but has experienced a relatively high number of accidents between the years 1999 and 2001 in comparison to other intersections reviewed.

NL 147A-88

The Transportation Technical Report has been revised to reflect that the parking survey area was generally bounded by I-5 to the west, instead of Meridian Avenue.

NL 147A-89

The Transportation Technical Report has been revised to clarify that restricted on-street parking primarily consists of signed RPZ’s and metered parking. Subtotals for different types of restricted parking were not specifically tallied for the project, since light rail patrons are not expected to use restricted parking spaces to “hide-and-ride.”

NL 147A-90

The University District parking analysis study area was identified through conversations with University of Washington and City of Seattle staff, and is generally consistent with the University of Washington’s primary impact zone. In addition, as stated in the first paragraph in Section 4.3.3 of the Transportation Technical Report, the analysis “included the total area encompassing 2,000 feet around each of the station locations since existing parking utilization within 1/4-mile radius of each station exceeded the 90 percent threshold.” With this knowledge, none of the potential station locations within the University District parking analysis study area would likely experience hide-and-ride parking impacts, and differences between the options would not be substantial.

NL 147A-91

The Transportation Technical Report has been revised to reflect that parking data was collected for the six University District Station areas (NE 45th, Brooklyn, Pacific, Southwest Campus, and Montlake/Rainier Vista, and University of Washington). Text has also been added to explain that within the City of Seattle’s primary impact zone, the University of Washington is responsible for partially funding residential parking zone programs.

NL 147A-92

The word “midday” has been added to table titles for Tables 4.3-1 through 4.3-7 of the Transportation Technical Report.

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NL 147A-93

The percent utilization subtotal for On-Street Unrestricted and Off-Street Public Parking in Table 4.3-5 of the Transportation Technical Report has been changed to 92 percent.

NL 147A-94

The Transportation Technical Report has been revised to clarify that restricted parking is signed as 1-hour or 2-hour.

NL 147A-95

The Transportation Technical Report has been revised to describe off-street parking supply in the north portion of the study area as fewer and less utilized than areas to the south. Off-street public parking supply and demand data for Harrison Station was not readily available from the Central Link FEIS Transportation Technical Report or the City of Seattle's Comprehensive Parking Study. In addition, new off-street public parking supply and demand data was not specifically collected near this station and others evaluated in the North Link SEIS, since the relatively high costs associated with off-street lots would likely deter most light rail users. The Harrison Station is being proposed as a possible station for Alternatives B3.D and B3.G.

NL 147A-96

Text on page 4-53 of the Transportation Technical Report has been revised to reflect that the western boundary of the Convention Place Station study area is 7th Avenue.

NL 147A-97

No change made. Similar to the Harrison Station, as described in response to comment NL 147A-95, Off-street public parking supply and demand data for the Convention Place Station was not readily available from the Central Link FEIS Transportation Technical Report or the City of Seattle's Comprehensive Parking Study. In addition, new off-street public parking supply and demand data was not specifically collected near this station and others evaluated in the North Link SEIS, since the relatively high costs associated with off-street lots would likely deter most light rail users. The Convention Place Station was identified as a possible station location for Alternatives B3.D and B3.G.

NL 147A-98

Section 5.2.2 of the Transportation Technical Report has been revised to clarify the statement.

NL 147A-99

Comment noted. The Transit Capacity and Quality of Service Manual (TCQSM), from which the North Link transit level of service (LOS) analysis was based, does acknowledge that the majority of transit systems consider an early departure as not being on time. However, the Reliability LOS criteria considers "on-time" for fixed-route service to be a departure from a published timepoint 0 to 5 minutes after the scheduled time, or an arrival at the end of the route no more than 5 minutes after the scheduled time.

NL 147A-100

The Transportation Technical Report has been revised to reflect that travel times would be shorter instead of fewer with the North Link project.

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NL 147A-101

The Transportation Technical Report provides examples of conditions that promote good, safe transfers.

NL 147A-102

The Transportation Technical Report has been revised to note that the Eastlake routes would serve the western residential edge of Capitol Hill via a new pedestrian bridge.

NL 147A-103

Please see the response to comment NL 147A-5. Each train can provide two bicycle racks. Sound Transit has also provided bike storage at stations, as well as the capacity for expansion.

NL 147A-104

Footnote 2 for Table 5.3-1a of the Transportation Technical Report was meant to imply that since the Greenlake park-and-ride lot would be operating at capacity in the future regardless of whether light rail is implemented, no additional trips would be made to and from the park-and-ride lot with North Link than with the No-Build Alternative. However, passenger drop-off activity would occur, and the potential for hide-and-ride parking impacts exists at the Roosevelt Station. Please refer to pages 5-23 and 5-38 in the Transportation Technical Report for text discussing passenger drop-off activity and the potential for hide-and-ride parking impacts, respectively.

NL 147A-105

Refer to response to comment NL 147A-103.

NL 147A-106

As described on page 4-26 of the Transportation Technical Report, the City of Seattle defines arterial level of service standards based on the PM peak hour directional v/c ratio at designated screenlines. The North Link project area generally falls within areas that have a v/c standard of 1.0 (LOS E) or 1.2 (LOS F). The City of Seattle also applies SEPA review policies to determine transportation mitigation for individual projects, taking into account such factors as the availability of public transit, existing vehicular and pedestrian traffic conditions, accident history, the trend in local area development, parking characteristics, the use of the street as per the Comprehensive Plan, etc.

NL 147A-107

Comment noted. Please note that project impacts at the NE 103rd Street/1st Avenue NE and the NE Northgate Way/5th Avenue NE intersections are minimal, and that these intersections would operate at LOS E/F regardless of whether light rail is constructed. The NE 65th Street/8th Avenue NE intersection would operate at LOS E with Alternative A2.1b in the year 2030, which, for purposes of this SEIS, is not considered unacceptable. Mitigation measures for the Preferred Alternative are provided in the Final SEIS.

NL 147A-108

The Transportation Technical Report has been revised to reflect that all intersections near the Roosevelt Station would operate at LOS E or better in the years 2015 and 2030.

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NL 147A-109

Refer to response to comment NL 147-2.

NL 147A-110

Comment noted. The HCM pedestrian analysis methodology was used to identify the potential for sidewalk capacity issues near proposed stations. In addition, the signalized and unsignalized intersection LOS analysis conducted using the Synchro 5.0 software program does, to some degree, take pedestrians into account when evaluating intersection operations. Queuing space and standing area was evaluated at the University of Washington Station crossing at Montlake Boulevard and Pacific Street where there are potential impacts.

NL 147A-111

Comment noted. For analysis purposes, a 1-mile and 1/2-mile “travelshed” for bicyclists and pedestrians, respectively, was evaluated for the North Link 2003 Draft SEIS. However, Sound Transits current policies are that a 1/4-mile radius for bicyclists and pedestrians is considered a reasonable “travelshed” for Sound Transit to work with local public transportation agencies, communities, and local governments to place and design transit facilities to fit with local community plans. Please refer to *Bicycle Access to Sound Transit Policy Recommendations*, provided in Appendix C of the 1999 *Central Link Final EIS Transportation Technical Report* for more details. As described on page 5-31 of the North Link 2003 Draft SEIS Transportation Technical Report, “Sidewalks on or immediately adjacent to Link station property would be provided. At minimum, existing sidewalk widths would be maintained and any improvements would be sufficiently wide to accommodate pedestrian volumes from Link and will be designed to conform to City standards.”

NL 147A-112

In the Transportation Technical Report, the term “designated bicycle routes” has been replaced with “several streets that are commonly used by bicyclists,” as characterized in the Seattle Bicycling Guide Map. Pedestrian and bicycle access improvements will be further refined throughout the station design process.

NL 147A-113

The Transportation Technical Report has been modified. The level of detail provided in the 2003 Draft SEIS and Transportation Technical Report provides a reasonable qualitative assessment from which to identify future bicycle facility improvements.

NL 147A-114

The Transportation Technical Report has been revised to note locations where on-street metered parking would be displaced by the project.

NL 147A-115

Column placement conflicts with sight distances are limited for the Preferred Alternative, as well as for other alternatives. More elevated structures and columns are used with Alternatives A2.1c and A2.1b. All Segment A alternatives share elevated approaches to the Northgate Station and along a portion of NE 1st Avenue NE. In most locations, however, elevated alignments are not in rights-of-way used by pedestrians and bicyclists. For all alternatives, column placement would be avoided near intersections and other

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pedestrian and bicycle crossings and routes to maintain appropriate sight distances. Signing, lighting, and other measures can also be taken to minimize the potential for conflicts.

NL 147A-116

Please see the response to comment NL 147A-111

NL 147A-117

Mitigation measures to reduce delay are identified in the Final SEIS.

NL 147A-118

The Final SEIS has been revised to note the agreement.

NL 147A-119

The Final SEIS and the Transportation Technical report have been updated to define the impacts of the alternatives compared to No-Build conditions.

NL 147A-120

Comment noted. The Draft Transportation Technical Report does explain that direct east-west bicycle access routes are lacking near the NE 45th and Brooklyn Station options.

NL 147A-121

Comment noted. The Final SEIS includes additional information and analysis of the bicycle facility for the University of Washington Station.

NL 147A-122

Comment noted. The Final SEIS has been revised.

NL 147A-123

The Transportation Technical Report has been revised.

NL 147A-124

The Transportation Technical Report has been revised.

NL 147A-125

Comment noted.

NL 147A-126

Comment noted; the assessment of impacts reflects a variety of factors and is not restricted to parking utilization rates alone.

NL 147A-127

The Transportation Technical Report and related Final SEIS text have been revised.

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NL 147A-128

Please see the response to comment NL 147A-117.

NL 147A-129

The Transportation Technical Report has been revised.

NL 147A-130

Comment noted.

NL 147A-131

The Transportation Technical Report has been revised.

NL 147A-132

Sound Transit will work closely with SDOT when seeking City approval of traffic control plans for closures and detours to ensure that the needs of bicyclists are considered as well as those of auto and pedestrian traffic.

NL 147A-133

The ratings are provided as general indications of impact, with additional discussion provided in text. Strict thresholds were not involved.

NL 147A-134

Regular written updates on construction activities near schools will be provided to public and private schools. Section 4.17.2 of the Final SEIS has been edited to reflect communication approaches.

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NL 382

Gregory J. Nickels, Mayor

Grace Crunican, Director

Seattle Department of Transportation

November 30, 2005

James Irish
Link Environmental Manager
Sound Transit
Union Station
401 S. Jackson Street
Seattle, WA 98104

Re: City of Seattle's Comments on the 2005 North Link Draft SEIS

Dear Mr. Irish:

Thank you for the opportunity to comment on the 2005 North Link Draft Supplemental Environmental Impact Statement (Draft SEIS). The City appreciates Sound Transit's continued work to develop and refine project alternatives, and looks forward to continued collaboration as a defined project is adopted by the Sound Transit Board and developed further through the design review and permitting process.

The City has commented on previous North Link environmental documents and on the preliminary engineering design that supported the environmental process. In reviewing the project alternatives and the preferred alternative of this Draft SEIS, the City would like to restate some of our key concerns with the project. The City would like to see these issues addressed in the Final SEIS and in Sound Transit's subsequent work with City staff as the project moves forward.

First Hill Station

In July 2005, the Sound Transit Board identified a preferred alignment which did not include the First Hill Station. As a consequence of this decision, Sound Transit engaged City and King County Metro staff to evaluate alternate ways to connect First Hill to the regional transportation system. First Hill is a hub for regional medical services, a key employment destination, and a dense residential community. As First Hill will no longer be part of the North Link project, the City encourages the Sound Transit Board to include transit connections between First Hill and the regional transit system as a Sound Transit Phase 2 project.

University of Washington Station Entrances

The City is concerned that the baseline design for the University of Washington (UW) Station does not include an entrance on the main UW campus, where the majority of riders are destined, north of NE Pacific Place and the Burke-Gilman Trail. SDOT does not agree with Sound Transit's conclusion that the impacts of an at-grade pedestrian crossing at this location could be

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adequately mitigated, and requests that the "potential third entrance" pedestrian tunnel be included in the baseline project.

The UW Station will be the most heavily used station on the entire Link light rail alignment with 21,000 daily boardings (Modified Montlake Draft SEIS, Feb 2004). This increases to 24,900 daily boardings if this station is chosen as an interim terminus (University Link FTA New Starts Submittal, Aug 2005). Sound Transit's consultants anticipate that 50% of these riders will cross NE Pacific Place and the Burke-Gilman Trail to the main UW campus. The Draft SEIS states that pedestrians attempting to cross this roadway would have to wait through 2 or 3 signal cycles during peak hours. At this level of pedestrian activity, SDOT believes at-grade pedestrian movements will control the roadway regardless of any mitigation measures taken. SDOT believes this condition will encourage unsafe pedestrian movements contrary to traffic control, which will increase vehicle/pedestrian conflicts.

The function of NE Pacific Place is linked to operations of NE Pacific Street and Montlake Boulevard NE (SR-513). The functions of these roadways need to be maintained to accommodate the anticipated Metro bus connections at the station, as well as the other transit, freight, delivery, and general purpose vehicles that must travel through this corridor. Similarly, the Burke-Gilman Trail is a major regional facility used by non-motorized commuter and recreational users that connects Ballard and Fremont to the U-District, and around Lake Washington to Redmond. While SDOT is also concerned with the Burke-Gilman Trail's capacity to handle increased pedestrian traffic associated with light rail riders along the trail, SDOT is particularly concerned about major pedestrian movements across the trail that would compromise the trail's safety, operations and function.

As a part of the design review and permitting process for the UW Station, Sound Transit will need to demonstrate how it will adequately address pedestrian flows to the main UW campus. Currently, SDOT does not see an acceptable alternative to the third entrance and grade-separated crossings of NE Pacific Place and the Burke-Gilman Trail, and requests that Sound Transit include this entrance in the North Link project baseline.

In addition, future reconstruction of SR-520 will ultimately include some form of high capacity transit across Lake Washington. It is too early to know what type of high capacity transit service will serve SR-520 and how that will be configured, however SDOT would like Sound Transit to consider preserving opportunities to provide a direct connection to the south end of the station mezzanine in the future. Such considerations could include locating key equipment to avoid obstruction, incorporating breakout panels to allow for future connection, and consideration of additional pedestrian movements in mezzanine design.

Allowing for a future direct connection to the mezzanine level may also be desirable as growing ridership increases pedestrian volumes across Montlake Boulevard NE and NE Pacific Street to the UW Medical Center and Surgery Pavilion. The mezzanine connection could be used to provide a pedestrian tunnel across these streets if warranted in the future. Preserving this opportunity for a direct connection to the station will help address future congestion issues and increased pedestrian/traffic conflicts in a critical transportation corridor.

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Capitol Hill Station Entrances

The intersection of Broadway E and E Olive Way/E John Street has one of the highest pedestrian counts within the City of Seattle and pedestrian volumes will increase with the light rail station. With the elimination of the First Hill Station in the preferred alternative and an interim terminus at UW Station, the Capitol Hill Station will have 15,300 daily boardings (University Link FTA New Starts Submittal, Aug 2005). This ridership is on par with expected pedestrian volumes at the Westlake and International District Stations downtown. To accommodate these volumes on Broadway and improve connections to the Seattle Central Community College campus, SDOT requests that the third entrance on the west side of Broadway be included in the baseline design.

North Link Commitments to Pedestrians and Bicyclists

As occurred with the initial segment of Link Light Rail, the City anticipates more detailed discussions with Sound Transit to determine the extent of pedestrian and bicycle needs around each station to establish baseline parameters for the project design. Access to regional bicycle trails/routes and key pedestrian generators (such as school-walking routes) needs to be considered in the final design, and the adequacy of existing sidewalks and street crossings to safely accommodate the anticipated pedestrian and bicycle travel must be evaluated. This work for the Southeast Seattle Stations and on Beacon Hill Station was detailed in a document entitled, Link Commitments to Pedestrians and Bicyclists (January 2002), and was the result of a series of meetings between City and Sound Transit staff. A similar effort should inform Sound Transit's design team once a Locally Preferred Alignment (LPA) is chosen.

Bicycle Parking

The City appreciates Sound Transit's commitment to a bike station facility at the UW Station, however SDOT believes that Sound Transit's stated bicycle parking program of racks for 20 bikes and lockers for 4 bikes is insufficient to meet the expected demand at the other stations. The North Link alignment serves communities with higher than City average bicycle use and good bicycle facilities. The North Link stations have large bicycle travelsheds (including the east-side of Capitol Hill, Wallingford, Greenlake, Wedgewood/Sandpoint, and surrounding Northgate); Sound Transit's bicycle program should be driven by expected demand based on anticipated ridership.

The location of the North Link stations in dense fully-built urban settings means that space for bicycles will be at a premium. Inadequate bike parking facilities means that riders will lock bicycles to street furniture, trees, railings, and any available surface, crowding the sidewalk and creating safety problems. To avoid these problems, adequate space for expansion needs to be provided at the station sites. This is particularly true at the Capitol Hill, Brooklyn and Roosevelt stations where Sound Transit will have larger redevelopment sites in urban environments where additional bicycle parking will be difficult to provide in the future.

Transit-Oriented Development

The City recognizes the link between transportation and land use, and views North Link and other transit improvements as a key part of the City's growth management strategy. The City hopes that North Link will help spur transit-oriented development (TOD) around the stations and

encourages Sound Transit to consider future redevelopment potential in the design process. The location of equipment and access points (particularly given subterranean connections to the tunnel platforms) may have implications for the future development of the station sites and could preclude below-grade development if it is not considered early on. In addition, consideration of structural loads in the design could allow for potential overbuild of the stations, which may be prohibitively costly to retrofit later.

Allowing for TOD at the stations maximizes Sound Transit's land assets and generates ridership for the system. The Sound Transit Board adopted a TOD policy as part of its mission, and established a Sound Transit TOD program. TOD considerations should be included in the North Link design and reflected in the Draft SEIS.

Truck Haul Routes and Condition of Pavement

The City is concerned that the large amount of excavation and materials needed to construct North Link and the associated truck trips will impact arterial streets which may not have been originally designed to accommodate such loads. SDOT proposes using a non-destructive deflection test to measure the actual impact to the working life of City streets as a basis for mitigation.

Impacts to City Infrastructure and Facilities

The North Link environmental documents identify a number of potential impacts to City-owned utilities, infrastructure, and facilities which will need to be addressed in detail through the design and permitting process. These include impacts to water and sewer pipes, electrical transmission and distribution lines, and other City-owned facilities. Impacts may require protect-in-place engineered support structures, or preemptive relocation. Utility outages to relocate key facilities will need to be scheduled with the City and may be restricted by operational demands.

Settlement impacts will need to be evaluated along the alignment, and the City and Sound Transit will need to agree on a settlement monitoring and response program which may require preemptive replacement or relocation of critical facilities. Key facilities for evaluating settlement impacts include transit asbestos ducts, cast iron pipes, the Broadway Pump Station, and the Volunteer Park Standpipe. Impacts due to stray current will also need to be evaluated.

Sound Transit's water, drainage, and electrical power needs must be identified and evaluated. Utility upgrades and/or new facilities may be required to provide utility services to meet Sound Transit's design specifications. City staff are prepared to work with Sound Transit through subsequent design and engineering efforts to resolve conflicts and respond to all parts of the project proposal.

Construction Issues and Contract Provisions

The City and Sound Transit have learned a great deal with the construction on the Initial Segment of light rail, and have a shared interest to ensure that expectations on the contractor for mitigating construction noise, truck staging, traffic management and other impacts are clearly established in the contract documents. The nature of this project may require construction impacts at a given site over many years, and require long-term closures of portions of the right-of-way. Potential

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sidewalk, crossing, and signal changes may be necessary to handle the interim construction conditions.

The City appreciates Sound Transit's efforts to eliminate direct construction impacts to Cal Anderson Park, but will need to address access, dust, noise, and adjacency issues to minimize indirect impacts to the park during construction. The City looks forward to addressing these issues with Sound Transit through the design review and permitting process.

Surrounding Land Use and Station Area Planning

The City made zoning and land use changes around the First Hill, Capitol Hill, and University District Stations as part of the Station Area Planning effort for the original Central Link LPA in 2001. The City anticipates reviewing these changes and considering additional land use and zoning changes, if warranted, once a North Link LPA is selected. Sound Transit participated in funding these efforts for Central Link, and should continue to do so in this next phase.

Thank you again for the opportunity to comment. The City looks forward to working with Sound Transit through the design review and permitting phases of the North Link project.

Sincerely,


Grace Crunican
Director

cc: Mayor Greg Nickels
Councilmember Richard McIver
Councilmember Richard Conlin
Calvin Chow, SDOT

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cont.

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NL 382 Seattle Department of Transportation – Grace Crunican

NL 382-1

Comment noted.

NL 382-2

The Sound Transit Board will make a final decision on whether to include a First Hill Station in the project after publication of the Final SEIS. The Board has directed staff to work with King County Metro and the City of Seattle to find ways to improve transit service and connections with North Link to the First Hill area if a First Hill Station is not included in the project. Sound Transit Phase II is separate from North Link and this SEIS. The Sound Transit Board is expected to identify projects to include in Sound Transit Phase II this year.

NL 382-3

As mitigation for pedestrian impacts to the Burke-Gilman Trail, Sound Transit will provide an access point or entrance north of the trail for the University of Washington Station, which would provide an underground or overhead crossing of NE Pacific Place and the trail. Sound Transit recognizes the City's ongoing concern regarding this station and will continue to work with the City and other affected parties throughout the course of the project.

NL 382-4

The City's comments are noted. Please see response to comment NL 382-3.

NL 382-5

Please see response to comment NL 382-3. Additional analysis of this issue is provided in Section 3.3.2 of the Final SEIS.

NL 382-6

See response to comment NL 382-3. The grade-separated crossing of NE Pacific Place would significantly reduce the number of pedestrians crossing NE Pacific Place and the Burke-Gilman Trail.

NL 382-7

Please see response to comment NL 382-3.

NL 382-8

The current station design could accommodate a future pedestrian connection from the south on the upper mezzanine level. The structure necessary for construction and support of the station box may preclude creating "break-out panels" in anticipation of a potential future pedestrian connection.

NL 382-9

Sound Transit notes your request to include the third entrance at the Capitol Hill Station in the baseline design. However, the optional 3rd entrance is not at Broadway and John for which the City cites the

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pedestrian count, it is south of Denny. In addition, it should be noted that the International Station with which a comparison is made in the comment does not have a grade-separated crossing of the surrounding arterials.

NL 382-10

As occurred with the Initial Segment, Sound Transit will continue to work closely with the City to develop final designs for station facilities and other components of the light rail system.

NL 382-11

Sound Transit acknowledges your concern regarding the sufficiency of bicycle facilities at the light rail stations. Since publication of the 2003 Draft SEIS, Sound Transit has prepared bicycle-parking demand estimates based on the methodology developed by PSRC. Based on the results of the analysis, the provision of 24 bicycle spaces plus expansion areas at most stations, as recommended in the North Link SEIS, was determined to be reasonable for accommodating the projected bicycle demand at most North Link stations. With regard to pedestrian traffic, the Highway Capacity Manual (HCM) and Transit Capacity and Quality of Service Manual (TCQSM) methodologies were used to evaluate the adequacy of existing sidewalks for accommodating existing and future pedestrian volumes. In addition, the signalized and unsignalized intersection level of service (LOS) analysis conducted using the Synchro 5.0 software program takes into account pedestrian volumes at crosswalks when evaluating intersection operations. To evaluate typical weekday conditions, school walk routes and other key pedestrian destinations were taken into account in this analysis to the extent that pedestrian volumes from these generators are captured in peak hour counts used for the LOS analysis.

NL 382-12

For all alternatives, Sound Transit will, as practical, consider future redevelopment in station designs. By Resolution R99-35, the Sound Transit Board adopted the “Central Puget Sound Regional Transit Authority Real Property Disposition Policy, Procedures and Guidelines”. The “Policies and Goals” section expresses Sound Transit’s intentions with regard to disposal of its surplus real property and include complying with Sound Transit adopted policies, state law and federal grant requirements; implementing the *Sound Move* plan on time and at minimum expense; encouraging Transit-Oriented Development, joint development, and public and private projects at and around Sound Transit facilities to build transit ridership, enhance communities and aid economic development; supporting the retention of existing businesses; mitigating impacts arising from project implementation; and encouraging realization of other objectives, as appropriate, such as economic development, appropriate land uses; parks, trails and open space preservation; and environmental protection and enhancement.

NL 382-13

TOD potential is evaluated as part of the land use and economic analysis reported in Section 4.2 of the Final SEIS. Sound Transit will develop the project consistent with the guidance and direction of the Sound Transit Board, including through the implementation of the TOD policy discussed in Section 2.5.2 and in Section 4.2 of the Final SEIS.

NL 382-14

Sound Transit would repair any public right-of-way at Sound Transit work sites that are damaged during construction to substantially the same condition.

NL 382-15

Sound Transit will continue to work with the City throughout the design and permitting process to detail the appropriate mitigation for the impacts of light rail construction on City-owned utilities, infrastructure and facilities.

NL 382-16

Settlement impacts were evaluated in Sections 4.10 and 4.17.11 of the 2003 Draft SEIS and updated information has been provided in this Final SEIS. Sound Transit will continue to work with the City regarding a settlement monitoring and response program. Impacts due to stray current were evaluated in the 2003 Draft SEIS in Section 4.12.2 and the Final SEIS also identifies the potential for impacts as well as potential avoidance or mitigation measures.

NL 382-17

These issues are reviewed as part of the Final SEIS discussion of impacts to utilities, provided in Section 4.14 of the Final SEIS. As you note, specific improvements may be needed for the light rail system and Sound Transit will work with the City during final design to determine project details.

NL 382-18

Sound Transit also recognizes the importance of an effective construction mitigation plan to allow contractors to minimize environmental. The Final SEIS outlines mitigations in all areas of the environment, and looks forward to working with the City during final design and construction mitigation planning.

NL 382-19

Comment acknowledged that the City appreciates the efforts made to eliminate direct construction impacts to Cal Anderson Park. Please see response to comment NL 382-18.

NL 382-20

Station area planning for stations included in University Link was previously completed and further work is not anticipated. First Hill is not included in the Preferred Alternative but if it is included in the project, it is in the same location as in the original project. Capitol Hill Station is in substantially the same location as it was during previous station area planning efforts, and the University of Washington Station is entirely on University of Washington property. The funding and timing of final design or other activities for the remainder of North Link, north of the University of Washington station, is not certain at this time. Sound Transit and the City could revisit station area planning at the north University District station if its location is substantially different from the location identified in the Preferred Alternative.