

# THE SEATTLE CENTRAL LINK INITIAL SEGMENT AS A STAND-ALONE SYSTEM: INVENTORY OF ISSUES

By John Niles, Coalition for Effective Transportation Alternatives (CETA)  
After Consultation With The Members of CETA  
October 18, 2002

The Coalition for Effective Transportation Alternatives (CETA) offers this inventory of issues for consideration by the USDOT Inspector General in the determination of whether the Seattle Central Link Light Rail Initial Segment constitutes a stand-alone system that would not require building additional segments.

*This is a different point than whether or not the Initial Segment will inevitably be the Last Segment because of funding deficiencies or other conditions. This briefing describes what the Puget Sound region would be stuck with if it were the Only Segment.*

The evidence below shows that the proposed Initial Segment would not constitute a reasonable stand-alone light rail system. Sound Transit has defined the Initial Segment as an artifact required for justifying a \$500 million Federal grant. There is clear intent to ask for more money later and extend the system. FTA has apparently accepted this position as well.

## **Initial Segment versus Stand-Alone Segment**

Sound Transit and FTA are straddling a fence, claiming that the Central Link-Initial Segment is a stand-alone project, but also that it is part of the larger Central Link Light Rail plan, which covers 21 miles between the University District and S 200th below SeaTac Airport, with an option to go two miles further north to Northgate for a total of 23 miles. There is also a segment of Light Rail in Tacoma, called Tacoma Link, which at least in the minds of some is meant to be connected to Central Link at some point in the future.

The Sound Transit budget requirement for Federal funding to contribute to paying for the construction of Link Light Rail has necessitated segmentation of the 21 (or 23) mile project approved by voters in 1996 to create a series of shorter segment projects that each come in with a Federal grant request of no more than \$500 million.

Environmental analysis must cover the very same project as is defined for Federal funding. So the Amended Record of Decision (ROD) of May 8, 2002 says that for "Federal record of decision-making purposes under NEPA," the Initial Segment constitutes the Federal Project for which the ROD applies.

Attachment F of the ROD claims on page 13, "the Initial Segment is a Minimum Operable Segment (MOS), which is a stand-alone portion of the project that has independent utility."

On page 14 of the ROD Attachment F, Sound Transit quotes 23 CFR Part 771.111(f) which is required of projects like the Initial Segment evaluated under NEPA rules. Three conditions are stated for projects like the Initial Segment of Link Light Rail:(1) Connect logical termini and be of sufficient length to address environmental matters on a broad scope; (2) Have independent utility or independent significance, i.e., be usable and be a reasonable expenditure even if no additional transportation improvements in the area are

made; and (3) Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements."

Sound Transit then asserts: "The Initial Segment meets these requirements. It connects logical termini (two of the region's designated activity centers), and it will have independent utility or independent significance because it contains all elements needed for light rail operation even if not additional transportation improvements in the area are made. It does not restrict consideration of other reasonably foreseeable transportation improvements, including Link extensions to the north or south. The Initial Segment MOS is the only part of the project where federal funding is currently being requested."

However, analysis of the Initial Segment shows that it does not meet any of these requirements for an MOS. In comparison with what Sound Transit claims:

- The Link Initial Segment does not connect logical termini. The south terminus in the City of Tukwila is outside of the designated urban center for that city and is several blocks removed from a closer designated center in the adjoining municipality of SeaTac that it is alleged to be serving. The north and south terminal stations for the Link Initial Segment may be convenient and expedient, but they are not logical.
- That the Link Initial Segment is of sufficient length to address environmental matters on a broad scope works against its designation as a standalone MOS. A public transit system is among other things an expenditure of resources to improve the environment. The 14 mile long Initial Segment provides ridership that is only one third of the forecast ridership of the originally promised 21 mile Central Link Light Rail project, but is now estimated to cost 38 percent more than the original. [Cost is up from \$2.1 billion to \$2.9 billion in YOY dollars. Daily boardings down from 127,600 to 42,500.]
- The Link Initial Segment does not have independent utility, because it reduces the utility of the existing regional mass transit system financially and operationally. The Initial Segment commits significant resources to a new mode of public transit in a single limited local corridor without adding significant new transit benefit. It replaces productive regional buses with a local light rail train. It reduces the passenger carrying capacity of the Downtown Seattle Transit Tunnel because of the safety requirement for more headway between vehicles of different modes.
- The Link Initial Segment as a stand-alone project demonstrates restricted usability when compared to the magnitude of the regional mobility challenge and to the prospect of more reasonable, readily available public transit alternatives.
- The Link Initial Segment is not a reasonable expenditure if no further extensions of the Initial Segment are made north or south. This is prominently stated by downtown Seattle business leaders, and Sound Transit leaders indicate they agree with this conviction.
- The Link Initial Segment is not a reasonable expenditure in light of many more productive, less expensive transportation improvements that could be substituted. Modest express bus improvements would top the public transportation performance of the Link Initial Segment at a lower cost.

- The Link Initial Segment restricts consideration of alternatives for other reasonably foreseeable transportation improvements. The Link Initial Segment destroys the potential of the Downtown Seattle Transit Tunnel to maximize its utility as a regional Bus Rapid Transit facility. Even though operated at less than half of its vehicle capacity, the facility attracts 27,000 bus riders daily from around the region, providing them a rapid ride under downtown Seattle's congested street.
- While building the Link Initial Segment creates a light rail line that will be prohibitively expensive to extend, it further consumes public transportation resources that could create a more extensive and productive alternative. Building the Initial Segment precludes having resources to consider reasonably foreseeable improvements.

The justification for the 14 mile Initial Segment relies upon the 1999 Final Environmental Impact Statement for the complete 21 mile Central Link Light Rail system. The 1999 FEIS was the culmination of decades of study of high capacity rail transit in the Puget Sound Region, including a 1993 FEIS for a regional system. A shorter Initial Segment was not contemplated when the 1993 or 1999 FEIS was being prepared, and is nowhere mentioned in these environmental documents. There is no analysis or even mention of downtown Seattle as a logical northern terminus. There is no mention of South 154th Street in Tukwila as a logical southern terminus. There is no analysis of a 14 mile subsegment. Therefore the Initial Segment has never been directly compared to any alternative. Therefore, no evidence exists to support a conclusion that the Central Link Initial Segment is logical or sensible as a standalone segment.

## **Government Authorities Speak**

### Sound Transit

Numerous statements made by the Sound Transit Board and its executive management make clear that the agency is absolutely committed to build Central Link light rail beyond the Initial Segment to the full 21 miles promised in the ten year 1996 voter-approved plan.

The Amended ROD confirms this (page 13): "Sound Transit represents that it fully intends to complete the project from the University District to SeaTac as described in its Sound Move plan, financing for which was approved by the voters in 1996."

Indeed, the name selected by Sound Transit, "Initial Segment," implies in plain English that more segments will follow.

Sound Transit pronouncements reinforce the conclusion that the justification for building the Initial Segment is based upon achieving the performance and benefits of the 21 mile or 23 mile versions of Central Link. Occasionally Sound Transit officials make reference to a long-run vision that has light rail extending north to Snohomish County, southward below SeaTac Airport to connect with Tacoma Link, and eastward across Lake Washington to Bellevue and Redmond.

Declaring Link Light Rail as a standalone project with independent utility has the sole purpose of segmenting the project to obtain Federal funding support. As stated by Sound

Transit on page 1 of the Initial Segment Environmental Assessment, this Segment is "a revised MOS for federal funding purposes."

### FTA

FTA clearly accepts and repeats the Sound Transit explanation of the Initial Segment as the first phase of a multi-phase project. Statements made by USDOT/FTA in the FY 2003 New Starts Report to Congress indicate that the Central Link Initial Segment is the first phase of 24 mile light rail system approved by voters in 1996. There is no claim made or evidence presented that the Initial Segment is a viable standalone project.

The Amended ROD states, "FTA recognizes that Sound Transit considers its overall Central Link project alignment to continue to consist of that alignment from Northgate to S. 200th Street in the City of SeaTac and may seek additional Federal funds for the completion of Central Link to Northgate and to S 200th Street."

### Secretary of Transportation Norman Mineta

In his August 21 Letter to U.S. Senator Patty Murray announcing entry of the Initial Segment into Final Design, the Secretary of Transportation consistently (and confusingly) refers to the "Central Link Light Rail Project," even though the action he is announcing applies only to the 14 mile Initial Segment.

## **Characteristics of the Initial Segment**

### Northern terminus

The design specification of the northern Initial Segment terminus depends upon decisions not yet made on the selection of the track alignment going north from the Downtown Seattle Transit Tunnel.

The northern passenger terminus of the Light Rail initial segment is the Downtown Seattle Transit Tunnel station at Westlake Center. However, the trains will proceed further to crossover tracks that will allow the trains to reverse direction. These tracks will run under Pine Street toward the last, northernmost DSTT station, Convention Place, which will be at most a bus station and the point where buses enter the DSTT. The design of this Convention Place station depends importantly on the eventual planned alignment for tracks to proceed north. The grade and depth of the tracks from Westlake to Convention Place depend on whether the tracks are eventually planned to go under the I-5 freeway into a Capitol Hill tunnel, or turn left for a different way northbound.

Sound Transit notes on page 8 of the Initial Segment Environmental Assessment "The Initial Segment northern terminus does not influence the choice of alternatives to the north." However, the choice of alternatives to the north influences the design of the Initial Segment. These design contingencies for the tracks at the northern end of the Initial Segment alignment is in itself an indication that this Segment is not an independent standalone.

At the northern terminus, there appears to be a consensus among downtown Seattle light rail supporters that Central Link tracks must go at least to Northgate in order for the system to be beneficial. The leadership of both the Downtown Seattle Association and the Seattle Chamber of Commerce has indicated that the terminus points of the Initial Segment would be unsatisfactory as a permanent arrangement. The Chamber has written

that the closing the DSTT for two years to convert it to light rail operations is opposed unless extension to Northgate were funded and committed.

#### DSTT Joint Operations Safety Risk

The Link Initial Segment operations plan establishes a mixture of buses and trains with different operating characteristics in the DSTT bus tunnel. This presents a greater risk of collisions than pure bus operations because of the difference in weight, stopping distance, and operating characteristics of buses and ten times heavier trains. Mixed bus-train operations inline in a tunnel with stations is a unique operating environment not experienced elsewhere in the world.

Because of the significant cost and disruption of converting the DSTT to joint rail and bus operations, and the consequences of unevaluated hazards, John Niles has recommended that this operational characteristic be subjected to an independent in-depth assessment by safety engineering specialists with appropriate skill and experience. This recommendation is the subject of ongoing correspondence between John Niles and Harry Saporta, Director of Safety and Security at FTA.

#### DSTT Joint Operations: Less Efficient use of Capacity

The Initial Segment specification of joint bus and rail operations in the DSTT is a less efficient use of this facility's capacity than an all-bus alternative. By "efficient" we mean serving the most transit customers for the least cost.

Sound Transit has asserted --and FTA has accepted-- that mixed bus and rail operations "will allow the most efficient use of the transit tunnel." However, Sound Transit has presented no evidence to support this assertion. This claim is highlighted in the executive summary of the report, "Evaluation of Joint Operations in the Downtown Seattle Transit Tunnel" (Appendix L of the Initial Segment Environmental Assessment) but, rather curiously, nowhere else in that 50 pages.

The capacity of the DSTT - the key public transit artery through downtown - can be used economically and vastly more efficiently and safely by a growing cadre of buses: buses carrying commuters directly from locations north, east and south. Because of the need for significant separation of trains and buses, the Link Light Rail Initial Segment mixed with bus traffic cannot compete with the capacity of the DSTT fully utilized with closely spaced buses. Adding trains to the DSTT means that capital expenses already incurred in the form of the tunnel would be underutilized. Furthermore, traffic on the street above ground would be worsened. Chart on the following page illustrates bus and rail capacity.

The situation is all the more worse when one considers that the DSTT must be closed to all traffic for two years in order to convert the tunnel to mixed rail and bus operations.

#### Degradation of DSTT bus operations

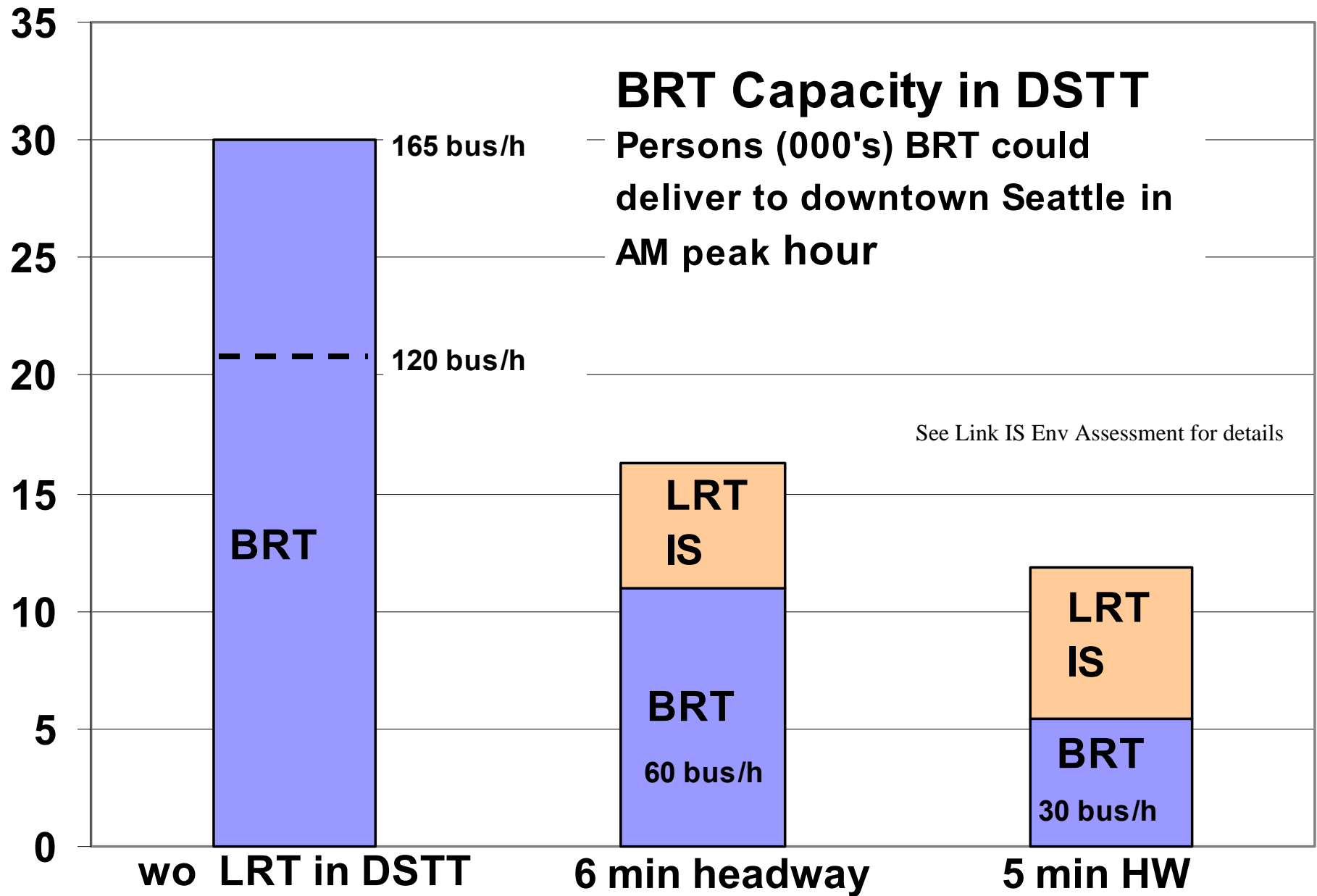
The joint bus and rail operations planned in the DSTT would replace some of the regional tunnel buses with light rail trains carrying passenger loads that are significantly less regional than the passenger loads on the displaced tunnel buses. Less regional means a lower fraction of the passengers moving between Seattle and non-Seattle destinations.

Many (about 13 out of 24) regional bus routes could be moved from the exclusive transit guideway in the DSTT to mixed-use surface streets with the advent of Link Light Rail. Thus, adding trains would degrade Seattle's existing regional express bus service at the

# BRT Capacity in DSTT

Persons (000's) BRT could deliver to downtown Seattle in AM peak hour

See Link IS Env Assessment for details



same time that FTA is generally promoting Bus Rapid Transit as a cost-effective public transportation alternative for American cities.

#### Rainier Valley traffic congestion

The 1999 Final EIS for the 21 mile Central Link project showed that traffic congestion at intersection in the Rainier Valley south of downtown would become slightly worse in many locations as a result of the Link project. The 14 mile Initial Segment as a substitute for the 21 mile project does not significantly reduce the traffic congestion impacts of Link. At the same time, the ridership of the Initial Segment is reduced by two thirds. The negative impact of traffic congestion caused by the surface alignment in the Rainier Valley is less justified by the reduced ridership benefits of a standalone Initial Segment.

#### Grade crossings of city streets south of downtown

The basic design of the Link Initial Segment includes 21 distinct places south of the DSTT where trains can collide with cars, trucks, or buses and cause fatalities. This includes 18 grade-level crossings in the Rainier Valley, and three on the E-3 Busway.

The Initial Segment track design at the start of revenue service will see 272 trains per day intercepting the path of at least 600 thousand cars, trucks, and buses crossing the tracks in between trains in the Rainier Valley, according to the Korve Engineering background study prepared for the EIS process in 1999. The resulting safety hazard at these grade crossings is less justified by the low ridership of a standalone Initial Segment than by the much greater ridership of the full 21 mile or 23 mile regional system as promised to voters in 1996.

Furthermore, the hazard of collisions at the various Link Initial Segment grade crossings could conceivably require reducing the speed of the trains to levels that make the system unacceptable as a transit investment under Federal guidelines. That is, the train would have to travel so slowly that not enough riders would be attracted to make it worthwhile.

#### Southern Terminus

The southern terminus of the Link Initial Segment at S 154th Street in Tukwila is a transit center for intermodal interface with buses as well as a park and ride lot. This facility is located two miles north of the SeaTac Airport Terminal. This terminus is not a logical terminus for several reasons.

The station area has little surrounding housing, nor will there be due to environmental considerations. Because of aircraft noise and the odor of fuel from jet engine exhaust fumes, the S154th site is not pleasant for an urban village and other Transit Oriented Development.

Despite representations by Sound Transit, the southern terminus station is not actually inside the boundary line of the MPO designated SeaTac Urban Center.

Support for this terminus point in Tukwila was voted down by the elected Tukwila City Council in June 2002. Members expressed an interest in the train route going instead to the designated urban center of Southcenter, a route that the Sound Transit Board determined was too expensive to be built.

### Shuttle Buses to SeaTac Airport

Shuttle buses from the Southern Terminus of the Initial Segment to the SeaTac Airport terminal are likely to be perceived negatively if a permanent arrangement. The airport terminal is about two miles south along a busy arterial with several traffic signals. There is only one entrance/exit road now planned for both cars and buses to the combined park and ride lot and transit terminal for the Link Initial Segment.

### Excessive overhead for limited rail system

The Link Initial Segment if standalone and permanent at 14 miles would be a shorter than average light rail system in comparison with other systems nationwide. We are suspicious that a 14 mile system with 31 rail cars and 42,500 daily riders is not of sufficient size to justify the fixed minimum overhead costs associated with maintaining a light rail system.

## **Corridor Transportation Demand**

### Corridor capacity needs

The Initial Segment as a standalone would be a capacity expansion in a specific corridor south of the Seattle downtown that arguably shows a lower need for additional capacity than other corridors. Sound Transit's only operating commuter rail line goes from Seattle southward as well.

There already are express buses to downtown Seattle from the Rainier Valley, SeaTac airport and Southcenter. Metro bus #194 currently travels from the Downtown Bus Tunnel to the Airport in 30 minutes with only one stop. Adding additional runs, stopping at the North and South ends of the Terminal, adding luggage racks, comfortable seats, low floor buses would attract as many or more riders for a fraction of the cost. There is no bus at all between Rainier Valley and the airport, which suggests a lack of customers for transport between these locations.

### Transit Oriented Development potential

An important justification for the Link Initial Segment lies in claims of its potential to stimulate redevelopment of the Rainier Valley, and thus generate ridership. For example, King County Councilman Dwight Pelz, whose Southeast Seattle district would be served by this line, was indirectly quoted in the *Seattle Times* on September 3, 2002 as saying "the point of rail transit is to create urban communities." The *Times* directly quoted Pelz: "The billion and a half dollars to replace a couple of bus routes and make it easier for a few commuters to go to work, that's not why you build rail. I'm a believer in rail because it can shape our city 20, 30 or 40 years from now."

However, we understand that the Link 2020 ridership forecasts take the impact of future TOD into account, and the forecast levels are relatively low for the expense required.

Furthermore, there are some people now living in the Rainier Valley who oppose the construction of Link precisely because it is aimed at changing the development pattern of the neighborhood. Some residents there particularly oppose the at grade design because it physically divides the community and creates a safety hazard for the volumes of motor vehicles and pedestrians who will need to cross the tracks whether or not they use the light rail train.



## **Comparisons with Alternatives**

The Link Initial Segment is simply unnecessary given other transit options. Proponents argue that the Link Initial Segment adds capacity. But this argument is not enough, because there are other, less expensive ways to add capacity. Building the Link Initial Segment would consume a disproportionate share of regional transit resources compared to what it accomplishes in coverage and riders served. The Initial Segment as a standalone transit segment would be a degradation of regional transit service compared to less expensive, more effective alternatives.

### Increased express bus service

Improving the existing bus service to the destinations that the Link Initial Segment serves is an alternative that would add capacity. The forecast Link Initial Segment daily station boardings as published in the Environmental Assessment – ranging from 8,700 at Westlake to 1,400 at Othello – could be achieved and exceeded with modestly improved express bus service. Buses already provide good service to the Rainier Valley and Sea Tac Airport from downtown Seattle. Spending \$2.9 billion in a corridor for a new mode is not necessary when the bus mode that is already there can be improved to provide equivalent service that will attract just as many people. Inefficiencies in the bus service system can be resolved.

The scheduled travel time by express bus between downtown Seattle and Othello in the Rainier Valley is now 32 minutes; BRT techniques such as signal synchronization and some exclusive guideway segments could get buses closer to the 20 minute light rail travel time for the same route.

Eventually, bus service in the Rainier Valley could be enhanced further with an exclusive bus right of way in the Rainier Valley. Exclusive Bus Rapid Transit lanes down the middle of MLK Way would potentially speed up buses, and would also allow buses to pass if necessary.

### Sound Transit's New Starts No Build Alternative

In its eagerness to build light rail, Sound Transit has not defined an express bus or other No Build Alternative that would compete effectively with the Initial Segment.

This failure shows up in the irregularities in Sound Transit's conception of the No Build Alternative that has been offered as a comparison to justify the Initial Segment as a Federal Investment. There is evidence that the No Build Alternative is designed to be non-competitive with the Link Initial Segment, and thus an irrelevant strawman. This is especially pertinent to understanding the value of the Link Initial Segment as a standalone.

- Irregularity 1: BRT not offered in LRT corridors.

Both NEPA and the FTA's own governing statutes and regulations emphasize the critical importance of studying reasonable project alternatives before proceeding with a light rail project.

Sound Transit claims that its "single no-build/TSM alternative" includes "all reasonable cost-effective transit improvements within the Link light rail study area short of the proposed New Starts project" is contradicted by the fact that Metro has excluded Bus Rapid Transit as an option in the light rail study area.

In its November 2001 policy paper proposing BRT plans for 2002-2007, Metro explains how much future potential there is for BRT in the Seattle area, but then emphasizes that: "Corridors that do or would compete [with light rail] were eliminated" from study. In other words, Metro has never studied BRT as a solution in the proposed light rail corridor itself. Yet this type of analysis is exactly what FTA's "baseline" alternatives definition calls for.

- Irregularity 2: Inexplicable bus procurement forecasts

Sound Transit's bus purchase assumptions over the next 20 years for No Build versus the Initial Segment appear contrived to make light rail look good vis a vis continuing all-bus alternatives.

According to the New Starts justification, here is how Sound Transit and FTA Region 10 want to attract those 16,000 new rider boardings in 2020 that come from building the Central Link Initial Segment: The region buys 14 miles of track and stations, 31 rail cars, 200 tunnel buses, and 1846 other kinds of buses. This much rolling stock, costing \$1.3 billion, undoubtedly gets some additional bus-only riders as well, but what is important is the incremental new transit system riders, the 16,000 per day.

The No Build alternative is business as usual and describes what Sound Transit would do to NOT get the extra 16,000 per day. For that, the agency would skip buying the 31 light rail cars (saving \$155 million plus not buying all that right of way, laying tracks and building stations that would save an additional \$1.5 Billion), buy only 1653 non-tunnel buses (193 fewer), but then buy over twice as many tunnel buses, 432 of them. Sound Transit claims this amount of bus buying would cost \$1.6 billion.

From the New Starts submission and a supplementary letter from Sound Transit to John Niles, the bus procurement for the Initial Segment versus the No Build alternative is revealed as follows:

- Light Rail Initial Segment requires buying 2046 buses at a total cost of \$1.158 Billion
- The Baseline No Build requires buying 2085 buses at a total cost of \$1.603 Billion

The \$445 Million difference for fewer buses in the No Build is enormously helpful in justifying Link because the saving from lower bus purchases with light rail reduces the key metric of incremental cost per new rider. Link Light Rail would come out much worse in cost-effectiveness if Sound Transit did not claim these future bus purchase savings. If the bus savings were not present, the incremental new rider cost would jump 74%.

However, the claim that the Link LRT line with its 14 miles of track, seven new train stations, and 31 light rail vehicles will reduce the combined three county bus procurement spending out to 2020 by \$445 million is difficult to understand.

The mix of bus types is critical to understanding the difference between the bus procurements for the Link Initial Segment scenario, and the No Build alternative scenario. Tunnel buses are assumed to cost \$1.6 million each. Non-tunnel buses are some mixture of articulated buses, standard length coaches, and perhaps some small

neighborhood feeder buses. Price of a non-tunnel bus would average about one half million dollars.

Making a long story short: Sound Transit's 31 light rail cars allow eliminating the purchase of 232 extra tunnel buses at \$1.6 million each, while 193 extra smaller and less expensive buses are added to the fleet with light rail in comparison to no-build, offset by a less expensive mix of new buses overall. Buying \$155 Million in rail cars saves buying \$445 Million in buses by achieving a cheaper mix of bus types. The following table compares the procurement and performance of the Link Initial Segment and the No Build Baseline as submitted for the FTA New Starts justification, along with a third Bus Maximization Alternative that combines the tunnel buses of the No Build Baseline with the Larger Non-Tunnel Bus Fleet of the Link LRT New Starts Build:

	<b>No Build, All-Bus Regional Baseline</b>	<b>Link LRT Initial Segment and the Associated Regional Bus System</b>	<b>Unspoken Bus Maximization Alternative</b>
<b>LRT rail cars</b>	None	31 @ \$5M = \$155M	None
<b>Other LRT System Elements</b>	None	7 stations, 14 miles double track = \$1.48 B	None
<b>Tunnel Buses Purchased</b>	432 @ \$1.58M = \$683M	200 @ \$1.58M = \$316M	432 @ \$1.58M = \$683M
<b>Non-Tunnel Buses Purchased</b>	1653 @ \$557K = \$921M	1846 @ \$456K = \$842M	1846 @ \$456K = \$842M
<b>Total Capital Costs</b>	\$1.6 Billion	\$2.8 Billion	\$1.5 Billion
<b>Total transit vehicles, all modes</b>	2,085	2,077	2,278
<b>Total Daily Transit Riders</b>	438,000	454,000	At least 454,000 (?)
<b>Incremental Daily Ridership</b>		16,000	At least 16,000 (?)
<b>Incremental Cost per Incremental Rider</b>		\$15.60	Less than \$15.60 (?)

The obvious potential superiority of the Bus Maximization Alternative in the third column suggests that the No Build scenario in the first column is an alternative contrived to make the Link Initial Segment in the second column look as good as possible.

- Irregularity 3: No bus interlining in the DSTT

Sound Transit has always refused to assume interlining of bus service through the tunnel. They have claimed this is because of operational problems. The reality is that interlining routes through the tunnel (for example, a route coming from Bellevue would enter the tunnel from I-90 then exit the north end of the tunnel going to Northgate on I-5) would be a more efficient operation.

Sound Transit staff know that a Bus/TSM alternative making extensive use of interlining would greatly increase ridership because it reduces transfers and it makes more effective use of tunnel capacity. Insisting on an inefficient bus operation was a key method by which Sound Transit slanted the analysis in favor of rail.

Following are additional issues for an audit of the No Build Alternative and the associated justification for the Link Initial Segment:

- Why do tunnel buses have to cost so much? 1.6 million dollars each even assuming 20% spares is higher than prices reported by Metro in the media, \$600,000.
- What exactly is the bus fleet mix under the LRT build, and does it make sense? Are the assumptions consistent with the bus fleet mix under the NO Build scenario?
- What is the deployment pattern on buses under the LRT build scenario, and does it support the LRT ridership claimed?
- Is there a less expensive bus fleet and more efficient bus service pattern possible under No Build?
- What happens to all the people who would have been riding those 232 extra tunnel buses under No Build? Where would those tunnel buses be deployed under No Build? How are the riders of those 232 tunnel buses traveling under the LRT build scenario?
- Could regional transit agencies deploy the bus mix described under the Link Initial Segment scenario, but then buy something less expensive than the Link Initial Segment to achieve the same 16,000 incremental (new) daily transit riders? Column three in the table above is an example.

It is likely that with a properly designed baseline/no build alternative, mobility in the region would improve beyond what can be achieved with the 14 mile Initial Segment as a standalone segment. A well-designed all-bus no build option could have a better outcome for transit ridership and area mobility than building the Link Light Rail Initial Segment.

### Street Trolleys

Electrified transit alternatives to the Link Initial Segment include both street trolley cars running on rail, or trolley buses.

If a standalone rail system between downtown Seattle and the Rainier Valley is deemed desirable, an extension of the Waterfront streetcar could be considered as an alternative to the Link Initial Segment. It could be routed to include no tunnels.

Or Metro's existing fleet of electric trolley buses could be used for tunnel service. They already run on the same voltage as the tunnel buses. The trolley bus routes running south of downtown approximate large parts of the proposed light rail line. In other words, with fairly minor improvements Metro could carry the Rainier Valley passengers on enhanced trolley service at a small fraction of the cost of light rail. Trolley buses run just as clean as LRT, can use the DSTT with little or no modification, and will last for about twenty years before needing replacement or remanufacturing. The trolley buses can be deployed anywhere along Metro's extensive electrified system, including lines that already go from the University to downtown to south Seattle.

### Seattle Monorail

The Seattle monorail is also a candidate to be an alternative to the Link Initial Segment, if the monorail passes with Seattle voters on November 5.

## **Public Opinion**

### Polling

A public opinion poll reported in the *Seattle Times* on September 23 reported that regional respondents "When asked if they could vote today on Sound Transit, which is building a light-rail system, 42 percent said they would abandon light rail and use the money for other transportation solutions. An additional 24 percent said they want to build the proposed line to Tukwila and 23 percent said additional taxes should be raised to build the line as originally designed, from the University District to Seattle-Tacoma International Airport."

This result suggests that 65 percent (42% plus 23%) of regional voters would be unhappy if the Link Initial Segment turned out to be the Final Segment.

### Public Perceptions

Widely derided as the "train to nowhere," the Link Initial Segment as a standalone would damage the public perception of regional transit

Link LRT was sold as a Northgate to SeaTac starter line for an eventual light rail system running north-south from Everett to Tacoma and then across Lake Washington to Bellevue and Redmond. As a standalone, the Link IS is a local, redundant option. It would be irrelevant and inconvenient service for most regional residents who will be asked to transfer and pay more in order to take a slower ride. This will have the affect of actually decreasing transit use instead of increasing it for those with options.

Expensive, poorly performing light rail in operation would besmirch the reputation of public transportation and be a political setback for transit that would last generations.

## **Action Recommendation**

The Link Initial Segment is not properly qualified to be a Minimum Operating Segment. Early action to shut down its eligibility for FTA New Starts funding is warranted, since local tax dollars are being wasted every day in final design and pre-construction activities, tax dollars that could be spent on more cost-effective public transportation implementation.

At the very least, Sound Transit and FTA should be required to conduct a complete Alternatives Analysis and Environmental Impact Statement on this extremely altered, never compared Central Link Light Rail Initial Segment.

**Questions or Comments?**

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