

## **The Impact of Light Rail Tunnels on Property Value - Study of the Beacon Hill Light Rail Tunnel, Seattle, WA**

### **Sales of Existing Houses**

As part of the Initial Segment of the Link Light Rail Project (from Downtown Seattle south to Tukwila), Sound Transit constructed a pair of light rail tunnels under Beacon Hill in the southeast portion of the city of Seattle. The twin tunnels (one for north bound tracks and one for southbound tracks) were bored by a tunnel boring machine and are each about one mile long and about 21 feet in diameter. These two side-by-side tunnels are commonly referred to as the Beacon Hill Tunnel.

The east portal of the tunnel is adjacent to the Interstate 5 freeway on the west slope of Beacon Hill, and the east portal is just east of the southeast corner of S. McClellan Street and 24<sup>th</sup> Avenue S. on the east slope of Beacon Hill. A single station (the Beacon Hill Station) is located along the tunnel route (at Beacon Avenue S. and S. Lander Street) on top of the Hill. The station track platform is about 160 feet below street level, and has high speed elevators to move passengers between the track platform and street level.

Boring of the "southbound" tunnel began in January 2006, (bored in a west to east direction) and was completed in May, 2007. Boring of the "northbound" tunnel began in July 2007 (again west to east) and was completed in March 2008. The segment was completed with trains operational in July, 2009.

The tunnel was constructed in the underground portion of public property (including streets) as well as private property. Sound Transit acquired property interests in the form of permanent underground easements from the property owners. Underground interests were required for about 95 properties. The character of the neighborhood is primarily single family residential (with some commercial along Beacon Avenue S, right around the station location). Today the neighborhood appears nearly the same as before the start of construction, because (except for the station and the portals) the project is all underground.

Most of the required underground easements for this tunnel were acquired beneath residential house properties. Our investigations indicated that buyers and sellers were aware of the proposed easements at the end of 2002, although most of the actual easement acquisitions occurred from mid-2003 through 2004.

We studied the area east of the Beacon Hill Light Rail Station (between the station and the tunnel east portal) and investigated all sales within 300 feet north or south of the tunnel (excluding the sale of several newly constructed homes). In this area, all of the property is zoned SF 5000, and nearly all of the lots are developed with older single family homes. 67 of the properties in this study area are encumbered with Sound Transit tunnel easements (those properties within about 20' north or south of either the "southbound" or "northbound" tunnel, or between the two). All of the other properties

in the study area (up to 300' north or south of the two tunnels) are not encumbered by a Sound Transit tunnel easement.

Over the 5 year period from January 2003 to December 2007 a total of 53 sales occurred, 17 for properties with tunnel easements, and 36 for properties without tunnel easements. Several properties sold twice during this period. The average sale price for houses with tunnel easements was \$328,000 (rounded) and for houses without tunnel easements was slightly lower at \$326,000 (rounded).

The properties and sales are analyzed individually and collectively for various indications and characteristics, including floor area and condition of improvements and land area. Analysis indicates little if any noticeable change in value or marketability of these properties. Note that the Assessor performs rigorous value analysis (typically multiple regression) with annual appraisal and a 6-year inspection cycle (2007); however the Assessor appraises the properties fee simple, without regard to easements - *"Unless shown on the Assessor's parcel maps, easements adversely affecting property value were not considered"*. The easements are not on the Assessor's parcel map, therefore the assessed values do not consider the tunnel easements in any way. With a fairly large sample it is reasonable to expect that if the tunnel easements had any negative impact then the ratio of sale price to assessed value would be lower for those properties with easements than for the nearby similar properties without easements. However the ratio is actually higher for the properties with easements, and certainly this portion of the analysis does not indicate any negative influence.

We also investigated sale financing by buyers of the houses with tunnel easements and found it to be similar to the sale financing by buyers of the houses without tunnel easements. Likewise, we do not observe any influence on the marketability or marketing time for the properties, or on the relationship between listing and sale price. Please refer to the following tables for more detailed analysis.

Several of these sales of houses with easements occurred shortly before the actual acquisition of the easement by Sound Transit (but with sellers and buyers having knowledge of the proposed easement acquisition). The balance of the sales occurred after Sound Transit acquired the easements. We have interviewed buyers, sellers, and/or agents from the majority of these transactions, and have found that the properties elicited strong and active interest with transaction prices comparable with expectations and comparable with transactions of similar properties nearby.

Analysis and interviews indicate little change in value, and strong marketability of these properties. Two listing agents who had not previously had experience selling a house with a tunnel easement (at easement properties BHT-156 and BHT-183) said that they were unsure (at the time of taking the listing) how the tunnel easement might affect the marketing of the house. The agent at BHT-156 (a mid 2005 sale) was "very nervous" about the tunnel issue when she took the listing, but the property had multiple offers, sold above listing price, and the buyer investigated the tunnel easement and decided it was not a concern. The agent at BHT-183 (a mid-2007 sale) anticipated he would receive

a good deal of negative comment about the tunnel easement from potential buyers. He had easement information available at each open house and told open house attendees about the easement. He reported that he never received any negative reaction regarding the tunnel from any open house attendees or potential buyers. The buyer had time to review all the tunnel information, and the tunnel easement did not affect the sale. The agent said he also had a backup buyer. The agent at BHT-127 (a December 2007 sale) said the tunnel easement was disclosed but did not seem to affect the sale.

Over the nearly three year period from December 2008 to September 2011 the residential housing market was diminished in terms of both number of sales and home values, as a result of the negative economic conditions preceding and following the financial crisis of 2008. Excluding new construction and non-market sales including bank-owned sales, a total of 10 sales occurred, 4 for properties with tunnel easements, and 6 for properties without tunnel easements.

The average sale price for houses with tunnel easements was \$364,000 (rounded) and for houses without tunnel easements was \$362,000 (rounded). These sales all occurred after the Sound Transit tunnel was completed, and after the light rail trains were operating. The title reports for the properties with tunnel easements indicated the presence; however there was no noticeable surface impact or difference between houses with and without easements. Once again, analysis indicates little if any noticeable change in value or marketability of these properties, including financing, marketing time and list to sale price ratio.

### **Sales of New Houses**

A portion of the townhouse development named Forest Street Townhomes is located above the Beacon Hill Tunnel in the block west of the East Portal. These townhomes were constructed during 2006 and early 2007, with initial marketing in late 2006 and initial sales closing in early 2007.

Please refer to the three exhibit pages at the end of this section for a photograph of the development (with the easement location and sales marked), a Parcel Map showing the location of the easement, and the developer's site layout and listing page from May 2007 showing unit location and details.

A total of six of the 14 units sold prior to the residential market softening in late summer 2007, at which time the developer took the remaining units off the market and rented them.

Of the six sales, those of particular interest are the four along 24<sup>th</sup> Avenue S (shown in the photograph) 8E, 3E, 4N, and 5. These all have garages (rather than carports), are quite similar in total square footage, and all have a similar west view over the Rainier Valley. Of these four sales, two have a tunnel easement and two do not. The range of sale prices is \$430,000 to \$445,000 for all four properties.

The closest paired sales are 8E and 4N (both attached townhomes, both with 1 car garages, both 2 bedroom/1.5 bath, and both between 1,300 and 1,314sf). 8E (with no tunnel easement) sold in February 2007 for \$440,000 and 4N (with a tunnel easement) sold in July 2007 for \$435,000.

One of the listing brokers said the tunnel easement was clearly disclosed and easement information was available in the on-site sales office.

**Beacon Hill, Seattle - Analysis of the Potential Impact of Light Rail Tunnel Easements on House Values****Comparison of Sales of Houses Without Tunnel Easements  
to Sales of Houses With Tunnel Easements (2003-2007)**

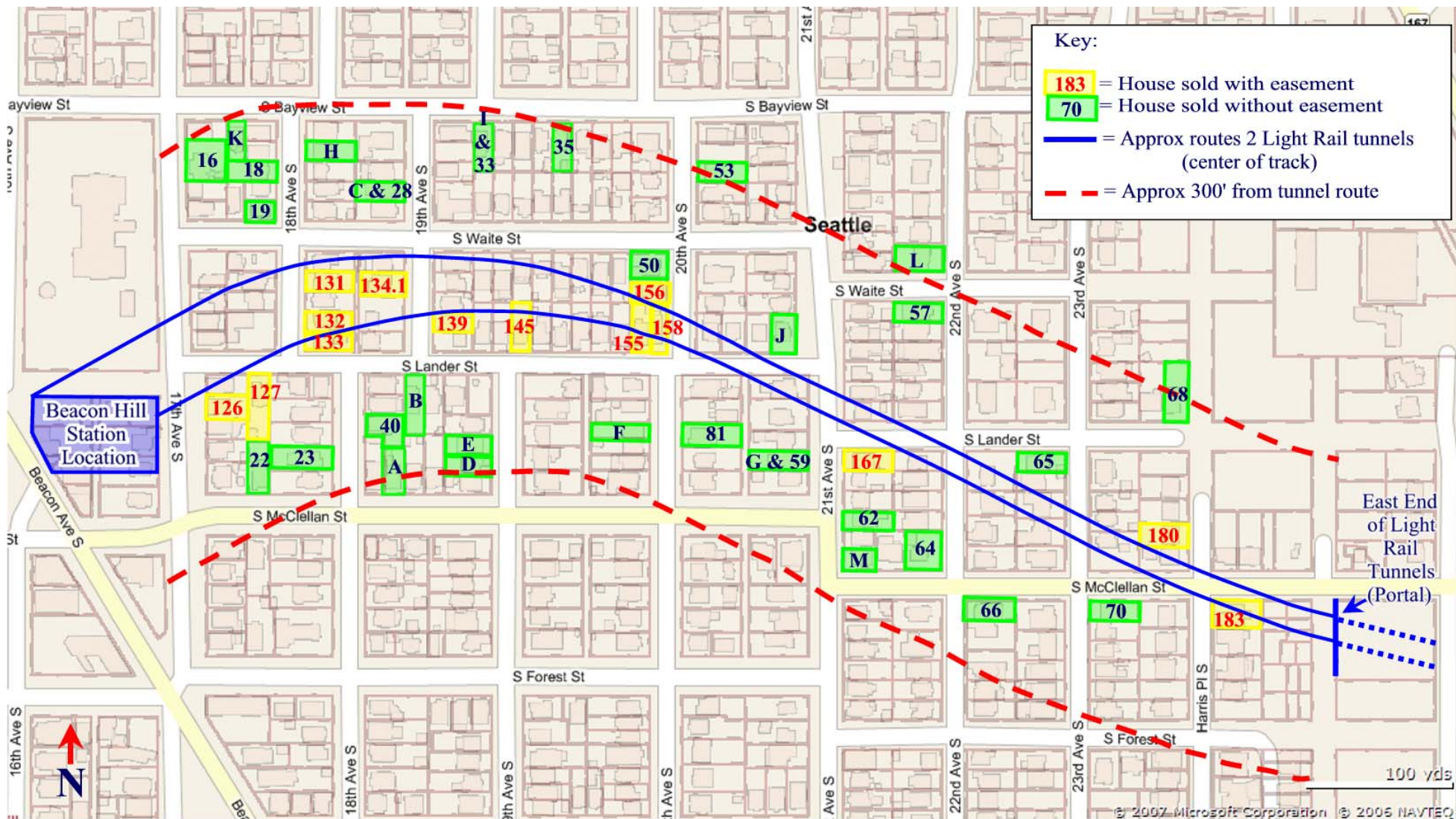
*Comprehensive analysis of all single family houses east of Beacon Hill Station  
Sold between January 2003 and December 2007, within 300' of Tunnel Easement boundary (excludes new construction)*

***Houses Without Tunnel Easements***

Sale ID	Tunnel Easement?	Street No.	Street Name	Sale Price Without Easement	Sale Price/sf Without Easement	Assessed Value at Yr. of Sale	Price/Assessed Value Without Easement	Sale Date	1st Floor Area (sf)	2nd Floor Area (sf)	Finished Bsmt. Area (sf)	Unfinished Bsmt. Area (sf)	Garage Area (sf)	Year Built	Total Finished Area (sf)	Lot Area (sf)
A	No	1804	McClellan St., S	\$236,000	\$179	\$236,000	1.00	9/8/03	750	570	0	750		1909	1,320	3,840
B	No	1809	Lander St., S	\$355,000	\$213	\$303,000	1.17	6/5/03	900	770	0	900		1914	1,670	4,800
C	No	2515	19th Ave S	\$322,000	\$273	\$241,000	1.34	6/25/04	840	340	0	840	210	1931	1,180	3,680
D	No	2719	19th Ave S	\$437,000	\$265	\$338,000	1.29	2/27/04	880	770	0	400		1909	1,650	3,840
E	No	2715	19th Ave S	\$298,000	\$200	\$309,000	0.96	2/24/04	940	550	0	940		1909	1,490	3,840
F	No	2713	20th Ave S	\$286,000	\$249	\$220,000	1.30	10/15/04	750	0	400	350		1910	1,150	3,840
G	No	2717	21st Ave S	\$320,000	\$256	\$220,000	1.45	11/29/04	1,250	0	0	0		1952	1,250	4,800
H	No	2506	18th Ave S	\$259,950	\$241	\$205,000	1.27	7/30/04	1,080	0	0	360		1943	1,080	4,000
I	No	1911	Bayview St., S	\$249,000	\$239	\$172,000	1.45	11/21/03	1,040	0	0	440		1902	1,040	4,000
J	No	2615	21st Ave S	\$238,500	\$236	\$201,000	1.19	7/29/03	1,010	0	0	1,010	300	1941	1,010	4,000
K	No	1711	BayView St., S	\$249,950	\$278	\$197,000	1.27	8/27/04	900	0	0	360		1913	900	2,600
L	No	2529	22nd Ave S	\$313,500	\$169	\$275,000	1.14	1/10/05	1,160	0	700	460	280	1956	1,860	5,600
M	No	2720	21st Ave S	\$249,950	\$158	\$268,000	0.93	3/26/04	790	0	790	0		1913	1,580	2,730
35	No	1931	S. Bayview St.	\$310,000	\$341	\$225,000	1.38	5/2/05	910	0	0	370	0	1928	910	4,000
40A	No	2710	18th Ave S	\$435,000	\$177	\$267,000	1.63	5/3/05	1,070	990	400	670	0	1914	2,460	4,160
23	No	2717	18th Ave S	\$308,050	\$280	\$250,000	1.23	5/20/05	1,100	0	0	880	220	1925	1,100	6,144
20A	No	1711	S. Waite St.	\$215,000	\$262	\$220,000	0.98	6/17/05	820	0	0	460	180	1908	820	4,000
19	No	2517	18th Ave S	\$327,500	\$271	\$235,000	1.39	7/28/05	640	570	0	580	170	1913	1,210	2,600
50	No	2603	20th Ave. S	\$309,000	\$262	\$207,000	1.49	10/21/05	740	0	440	300	0	1919	1,180	3,700
68	No	2316	S. Lander St.	\$355,000	\$303	\$247,000	1.44	11/1/05	1,170	0	0	620	0	1908	1,170	6,000
22	No	1710	S. McClellan St.	\$423,500	\$255	\$253,000	1.67	12/12/05	1,260	0	400	620	240	1926	1,660	4,664
64	No	2116	S. McClellan St.	\$239,950	\$375	\$182,000	1.32	3/30/06	640	0	0	0	0	1946	640	6,000
33	No	1911	S. Bayview St.	\$331,400	\$257	\$262,000	1.26	4/19/06	1,040	0	250	190	0	1902	1,290	4,000
20	No	1711	S. Waite St.	\$250,000	\$305	\$232,000	1.08	6/13/06	820	0	0	460	180	1908	820	4,000
18	No	2509	18th Ave S	\$336,000	\$267	\$287,000	1.17	6/15/06	900	360	0	700	200	1924	1,260	4,000
66	No	2800	22nd Ave. S	\$385,000	\$162	\$313,000	1.23	6/15/06	1,270	0	1,110	0	160	1952	2,380	4,000
57	No	2601	22nd Ave. S	\$300,000	\$149	\$303,000	0.99	7/25/06	1,010	1,010	0	0	560	1950	2,020	4,000
65	No	2701	23rd Ave. S	\$349,500	\$336	\$221,000	1.58	8/28/06	1,040	0	0	0	0	1963	1,040	4,000
62	No	2712	21st Ave. S	\$339,950	\$337	\$247,000	1.38	9/7/06	1,010	0	0	860	0	1913	1,010	4,000
59	No	2717	21st Ave. S	\$412,000	\$330	\$255,000	1.62	9/14/06	1,250	0	0	0	0	1952	1,250	4,800
70	No	2800	23rd Ave. S	\$280,000	\$174	\$237,000	1.18	10/17/06	1,010	0	600	210	200	1956	1,610	4,000
28	No	2515	19th Ave. S	\$463,500	\$256	\$284,000	1.63	10/27/06	840	340	630	0	210	1931	1,810	3,680
16	No	2508	17th Ave. S	\$420,000	\$231	\$291,000	1.44	2/9/07	1,050	0	770	60	220	1957	1,820	6,752
53	No	2508	20th Ave. S	\$309,000	\$303	\$264,000	1.17	3/20/07	770	0	250	340	180	1955	1,020	4,000
40	No	2710	18th Ave S	\$520,000	\$211	\$299,000	1.74	6/11/07	1,070	990	400	670	0	1914	2,460	4,160
81	No	2716	20th Ave S	\$305,000	\$218	\$287,000	1.06	9/28/07	1,400	0	0	0	250	1912	1,400	5,760
<b>Avg. of 36 Sales Without Tunnel Easmts</b>				<b>\$326,089</b>	<b>\$237</b>	<b>\$251,472</b>	<b>1.30</b>	<b>8/9/05</b>	<b>976</b>	<b>202</b>	<b>198</b>	<b>411</b>	<b>145</b>	<b>1927</b>	<b>1,376</b>	<b>4,278</b>

***Houses With Tunnel Easements***

Sale ID	Tunnel Easement?	Address	Street	Sale Price With Easement	Sale Price/sf With Easement	Assessed Value at Yr. of Sale	Price/Assessed Value With Easement	Sale Date	1st Floor Area (sf)	2nd Floor Area (sf)	Finished Bsmt. Area (sf)	Unfinished Bsmt. Area (sf)	Garage Area (sf)	Year Built	Total Finished Area (sf)	Lot Area (sf)
BHT-126	Yes	2706	17th Ave. S	\$275,000	\$309	\$217,000	1.27	5/14/04	890	0	0	890	200	1910	890	3,360
BHT-131	Yes	2606	18th Ave. S	\$315,000	\$173	\$264,000	1.19	3/8/04	1,220	0	600	620		1953	1,820	4,000
BHT-132	Yes	2610	18th Ave. S	\$322,000	\$195	\$200,000	1.61	12/11/03	990	0	660	200	200	1928	1,650	4,000
BHT-134	Yes	2605	19th Ave. S	\$302,000	\$190	\$236,000	1.28	5/19/04	1,260	330	0	0		1907	1,590	4,600
BHT-139	Yes	2612	19th Ave. S	\$210,000	\$216	\$200,000	1.05	1/9/03	970	0	0	970		1926	970	3,200
BHT-139A	Yes	2612	19th Ave. S	\$299,950	\$309	\$200,000	1.50	10/15/03	970	0	0	970		1926	970	3,200
BHT-155	Yes	1936	Lander St., S	\$232,500	\$183	\$199,000	1.17	5/19/03	850	420	0	850		1915	1,270	4,000
BHT-167	Yes	2702	21st Ave. S.	\$385,000	\$229	\$272,000	1.42	9/24/03	1,200	480	0	1,200	200	1939	1,680	4,000
BHT-133	Yes	2618	18th Ave. S	\$312,000	\$190	\$270,000	1.16	6/21/05	830	810	0	400	0	1921	1,640	4,000
BHT-156	Yes	2607	20th Ave. S	\$312,600	\$351	\$221,000	1.41	8/5/05	890	0	0	740	0	1919	890	3,700
BHT-180	Yes	2717	Harris Pl. S	\$281,000	\$190	\$246,000	1.14	9/2/05	880	0	600	80	200	1958	1,480	4,800
BHT-134	Yes	2605	19th Ave. S	\$395,000	\$248	\$259,000	1.53	1/24/07	1,260	330	0	0	0	1907	1,590	4,600
BHT-158	Yes	1946	S. Lander St.	\$433,000	\$209	\$321,000	1.35	3/5/07	1,040	740	290	0	450	1994	2,070	3,100
BHT-183	Yes	2802	Harris Pl. S	\$375,000	\$205	\$283,000	1.33	5/15/07	1,230	0	600	630	0	1955	1,830	5,500
BHT-132	Yes	2610	18th Ave. S	\$425,000	\$258	\$340,000	1.25	9/18/07	990	0	660	0	200	1928	1,650	4,000
BHT-144	Yes	1918	S. Lander St.	\$260,000	\$361	\$202,000	1.29	9/25/07	720	0	0	0	0	1943	720	4,000
BHT-121	Yes	1709	S. Lander St.	\$445,000	\$484	\$298,000	1.49	12/12/07	920	0	0	920	0	1925	920	5,896
<b>Avg. of 17 Sales With Tunnel Easements</b>				<b>\$328,238</b>	<b>\$236</b>	<b>\$248,706</b>	<b>1.32</b>	<b>6/10/05</b>	<b>1,006</b>	<b>183</b>	<b>201</b>	<b>498</b>	<b>121</b>	<b>1933</b>	<b>1,390</b>	<b>4,115</b>



**Map of Beacon Hill House Sales with & without tunnel easements (East of Beacon Hill Station)**

prepared by McKee & Schalka 1/08