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The Hiawatha Line: Impacts on Land Use and Residential Housing Value



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The Hiawatha Line Impacts on Land Use and Residential Housing Value

Final Report

Prepared by:

Edward G. Goetz
Aaron Hagar
Hoang Ton

Humphrey Institute of Public Affairs
University of Minnesota

Kate Ko

Department of Applied Economics
University of Minnesota

Jeff Matson

Center for Urban and Regional Affairs
University of Minnesota

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University of Minnesota
200 Transportation and Safety Building
511 Washington Ave, SE
Minneapolis, Minnesota 55455

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Executive Summary

The \$715 million Hiawatha Light Rail Line opened in 2004, running between downtown Minneapolis and the Mall of America in Bloomington. The line is the first major investment in the Twin Cities region in what planners and public officials are envisioning as a comprehensive network of transitways to include a mix of light and heavy rail and Bus Rapid Transit. This report presents the finding of a study of economic impacts resulting from the construction of the Hiawatha Line.

Three major research questions are investigated:

- RQ1. What are the impacts on property values of proximity to a Hiawatha Line station?
- RQ2. How have land-uses changed around the Hiawatha transit stations?
- RQ3. What are the impacts of the transit stations on the level of housing investment within the corridor?

Research question 1 focuses on the impact of the line on the real estate market. Using tax assessor's data we examine trends in residential property sales before and after development of the Hiawatha Line. The assessor's data provides data on most recent sales prices as well as detailed information on property attributes. The data allow us to control for a range of variables that determine sales value in order to isolate the impact of proximity to a transit station. We examine home sales from 1997 to 2007, both within station areas and in the larger southeast Minneapolis housing sub-market which we use as a control group. We use 2004, the year the Hiawatha Line completed construction, as the break point between pre- and post-LRT. Thus, we utilize a "pretest-posttest with comparison group" design.

The second research question is an examination of how land-uses have changed around Hiawatha stations. We develop several measures of the land-use characteristics within station areas utilizing data from the Metropolitan Council covering a period between 1984 and 2005. In this analysis we focus our attention on an area defined by a ¼ mile radius from the stations. We also describe the planning efforts of the cities of Minneapolis and Bloomington that have led to rezoning to accommodate land-use changes.

The third research question focuses on the degree of investment in the housing stock that may have been induced by the Hiawatha Line. In this analysis we utilize data on construction permits issued within the city of Minneapolis from 2000 to 2007. We compare the rate and value of permits over the eight-year period, comparing station areas to comparison areas more distant from the Hiawatha Line stations.

The 17 Hiawatha Line stations are located in a diverse set of neighborhoods. The downtown Minneapolis station areas from the northern terminus (Warehouse district station) to the Downtown East/Metrodome station have little land-use diversity, being dominated by commercial land uses and having very few residential properties. The downtown stops are typically destinations for those travelling on the Hiawatha Line.

The neighborhood corridor of the line stretches from the Cedar Riverside station on the north to the V.A. Medical Center station to the south. These station areas have a greater mix of land uses

(especially the Franklin and Lake Street stations) that become more residential as one moves south along the line. The neighborhood corridor stations are primarily origin stations; most of the riders using these stations begin their LRT trips at these stations. There are significant differences in the demographic (and housing stock) profiles between the Cedar Riverside and Franklin Avenue stations in the northern section of the neighborhood corridor and the stations from 38th Street south to the V.A. The northern stations have greater levels of racial diversity, lower incomes, and more multifamily housing compared to the southern stations in the neighborhood corridor. The Lake Street station occupies a middle ground both geographically and demographically.

The third identifiable subset of station areas along the Hiawatha Line is made up of the Fort Snelling station and the two airport stations. These station areas are surrounded by institutional land uses with no residential properties.

Finally, the southernmost stations of the line are in the city of Bloomington and are surrounded primarily by commercial properties, including the Mall of America. In general, the institutional and commercial station areas at the southern end of the line are destination stations (the 28th Street station is a notable exception, having park and ride facilities nearby).

Key Findings

- Single family homes sold within a half-mile radius of the station areas along the neighborhood corridor are 16.4 percent lower in price before 2004 than homes sold in the larger southeast Minneapolis sub-market. After 2004, single family homes within station areas sold for 4.2 percent more than homes in the comparison area.
- There is a significant accessibility effect for single family residential properties located within station areas west of the Hiawatha Line. Location closer to the LRT stations is associated with higher property values, an effect that extends beyond a half-mile. There is also a negative, nuisance effect for properties that are close to the LRT tracks. This effect is of a smaller magnitude than the positive, accessibility effect.
- Properties on the east side of the Hiawatha Line do not benefit from proximity to the line. This is likely due to the intervening effect of the four-lane Hiawatha Avenue and the strip of industrial land use immediately adjacent to the highway on the east. The combination of these pushes the nearest residential property close to 200 meters away from the LRT line and its stations. Furthermore, the large industrial structures create a visual barrier between the residential properties on the east and the Hiawatha Line.
- Development of the Hiawatha Light Rail Line has produced an average \$5,229 price premium per single family home in the station areas. This translates to an aggregate increase in home value of \$18.3 million for houses that sold in the station areas since 2004. Applied to all single family homes in the station areas, the Hiawatha Line has produced an aggregate premium of \$29.4 million.
- Properties with multifamily housing located within station areas have also benefitted from development of the Hiawatha Line. West of Hiawatha, proximity to LRT stations is associated with an increase in value of roughly \$350 per meter. As with single family properties, there is also a smaller nuisance effect associated with proximity to the tracks. The positive accessibility effect, however, is of a greater magnitude than the nuisance

effect, producing an overall price benefit for multifamily properties. As with single family properties, these patterns are not repeated east of the Hiawatha Line.

- Development of the Hiawatha Light Rail Line has produced an average \$15,755 price premium per multifamily property in the station areas. This translates to an aggregate increase in property value of \$6.9 million for multifamily properties that have sold since 2004. Applied to all multifamily properties in the station areas, the Hiawatha Line has produced an aggregate premium of \$17.7 million.
- All told, the development of the Hiawatha Line has resulted in a combined price premium of \$25.2 million for residential properties sold after 2004 in the station areas from Cedar Riverside on the north to the V.A. Medical Center to the south. When applying the increase in value to all residential properties along Hiawatha's neighborhood corridor, the LRT line has produced an increase of \$47.1 million in residential property value between 2004 and 2007.
- There has been a significant amount of new housing construction immediately adjacent to the Hiawatha Line since 1997; 183 percent more than would be expected given rates of new construction throughout the southeast Minneapolis sub-market. Aerial photographs show fill-in construction of parcels adjacent to the line that had been kept vacant to accommodate potential widening of Hiawatha Avenue. In total, there were 67 residential properties constructed within 300 feet of the light rail tracks after funding for the Hiawatha project was announced in 1997.
- An analysis of building permits from 2000 through 2007 shows little difference between the number of building permits for station areas and for the larger sub-market comparison area. Three exceptions to this pattern exist; permit activity within a quarter mile of the Franklin Avenue station, the Lake Street station, and the V.A. station were all well above the sub-market rate for the 2000-2007 period. It is notable that station-area planning and rezoning efforts by the City of Minneapolis were completed first for the Franklin Avenue and Lake Street station areas. The greater rate of investment reflected in permit activity may be a result of completed planning processes in those station areas.
- When analyzed by value, permitting activity along the neighborhood corridor accounted for 6 percent of aggregate residential value at the quarter mile scale, compared to 4 percent for the larger sub-market comparison group. This suggests that station areas saw larger-scale building activity than the comparison area for the 2000-2007 period.
- There has been little systematic effect of the Hiawatha Line on the land-use patterns of station areas. Measures of vacancy and undeveloped land, land-use intensity, land-use type, and diversity show modest levels of change over an extended period of time from 1984 and 2005. The changes that have occurred since 2000, however, are indistinguishable in scale or pattern from those that occurred in previous years. Our data on land use extends only to 2005, just one year after opening of the Hiawatha Line. It is likely that greater land-use changes may occur in the future.