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**A Longitudinal Assessment of the Relationship
Between Land Use, Land Values, and Bus Facilities**

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And

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ABSTRACT

This study is designed to measure the potential impacts that transportation facilities have on adjacent properties compared to non-adjacent properties within a quarter mile. Previously done in 1997, this study is updated with information from 2000 and 2004. Census data were obtained to measure demographic changes from 1980 to 1990 and county appraiser's office data and were used to examine the relationship between socioeconomic variables and the transit facility.

Previously, the 1997 study looked at four transit centers and one park and ride facility in Houston's Metropolitan Transit Authority (METRO). The current study adds three transit centers from the Central Ohio Transportation Authority (COTA). Because the transit centers were products of transit oriented development, facilities in Columbus differ in appearance and purpose from Houston's facilities. Findings in this study indicate that transit facilities can affect land value.

EXECUTIVE SUMMARY

This study is an update and expansion of 1997 research involving the effect that bus transit centers have on properties immediately adjacent to them and ¼ mile away from selected Houston Metropolitan Transit Authority (METRO) and Central Ohio Transit Authority (COTA) transit facilities. While the cities shared some commonalities, several differences emerged.

Houston's four transit centers and one park and ride were built in the late 1980's and early 1990's when the focus of the facilities was strictly on transit function. This differs greatly from the three transit centers observed in Columbus. These facilities, built in the early 2000s', were designed for mixed uses and transit operations. In fact, the Linden and Near East facilities were transit oriented developments whose intent was to encourage development activity in the adjacent neighborhoods.

Overall, METRO's Bellaire and Magnolia transit centers fared the best during the study period. Bellaire showed increased population, low vacancy rates, high income, and increased property values and only a small decline in overall housing units. Magnolia showed increased population, housing units, income, and property values. When comparing peripheral and adjacent values, the findings are mixed. Peripheral property values were higher than adjacent properties in Magnolia and Southeast in the 1997 study and the current study. In Kashmere, adjacent property values were initially higher than peripheral values during 1986 and 1995; however peripheral property values exceeded adjacent values in 2000 and 2004. With the exception of Bellaire's residential and North Shepherd's commercial property, all property values near and on the peripheral of the other transit centers showed a decline in values each year until 2004 when a slight increase occurred.

While much has remained the same in Houston, this study found that redevelopment activity occurred when transit centers were located in Columbus's economically depressed areas. With the exception of Linden, commercial properties on the peripheral were valued slightly higher than adjacent commercial properties. Among all three centers, Easton had the highest commercial and residential property values, income, and owner occupancy. Residential properties were the lowest in Linden followed by Near East. These two areas have large minority populations, low incomes, and high vacancy rates; this contrasts with Easton, which is located in a relatively affluent area. Nonetheless, COTA officials and Franklin County Auditor's data indicated that the presence of the transit centers sparked redevelopment in these areas. The hope is that this activity will transform the neighborhoods into viable areas. Additional data need to be gathered to fully understand the impact that these transit facilities have on the surrounding neighborhoods.

As METRO continues to expand its current options to include rail, there may be future opportunities to develop transit oriented development projects with intentional attention to TOD.

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INTRODUCTION

Increasingly, transit studies focus on light rail or bus rapid transit and the impact of locating transit centers near neighborhoods. The Texas Southern University's Center for Transportation, Training and Research (CTTR) 1997 study "Land Value Assessment Near Bus Transit Facilities: A Case Study of Selected Transit Centers in Houston, Texas" examined property values adjacent to and ¼ mile on the periphery of selected transit facilities. Area residents provided responses to a survey regarding their feelings about the transit center in their area. Sixty-seven percent of the respondents favored a transit center in their neighborhood. (Goodwin, 1997) The study found that the populations surrounding the transit facilities decreased similarly to decreases found in the Houston area from 1980 to 1990.

While properties adjacent to three of the five transit facilities studied reported decreased values, peripheral properties decreased in value faster than adjacent properties. However, respondents did not perceive this decline, because "60 percent felt their land values had remained the same and 28 percent felt their values increased since the opening of the transit center..."(Goodwin, 1997) The study found that the transit facilities were not the overriding variable causing changes in the land values. The study stated that other variables, specifically median income and market conditions, influenced property values.

The research objectives of this study are listed below:

- To update the 1997 study
- To describe variations in land values found adjacent and ¼ mile away from transit centers within a transit system.
- To add experience from the Central Ohio Transit Authority system with bus transit oriented development (TOD).

METHODOLOGY

Residential and commercial properties were randomly selected based on their proximity (adjacent to or ¼ mile away from) to each transit center. Due to the random selection process, in some cases, land uses selected for the 1997 study were not selected for the 2004 update.

Harris County Appraisal District (HCAD) records provided commercial property valuations from 1988, 1996, 2000, and 2004. For residential property valuations, data from 1986, 1995, 2000, and 2004 were used. In Columbus, the Franklin County Auditor's Office provided data from 2004. Data from previous years were not easily accessible to show the status of the property over time. Population, housing, and income data from the decennial 1980, 1990, and 2000 Census supplied background conditions for each transit center.

Using the Consumer Price Index Calculator, all commercial and residential property value data and income data were adjusted to equal 2004 dollars. This allowed for a more accurate temporal comparison.

LITERATURE REVIEW

Increasingly, transit officials, government officials and the public are becoming aware that the location of a transit facility can positively impact the surrounding area. As a result, many transit agencies are electing to partner with public and private stakeholders to develop additional projects, i.e., housing, office space adjacent to newly constructed transit facilities.

This type of planning is called transit oriented development (TOD). The American Public Transportation Association (APTA) describes transit oriented development as “dense mixed use development near new or existing public transportation infrastructure that serves housing, transportation, and neighborhood goals.” (APTA Transit Resource Guide, 2006). Research, published in 2002, indicates that “demographers estimate that as much as 30 percent of the demand for housing is for denser, walkable, mixed-use communities”... (Still, 2002)

To examine the impact of TODs, transit professionals use a variety of indicators: transit ridership, density, quality of streetscape, quantity of mixed-use structures, pedestrian activity and safety, increase in property value and tax revenue, public perception, number of mode connections at the transit station, and parking. (Renne, et al., 2005) After examining these indicators, researchers are noting the benefits of TOD.

Locating transit facilities in densely population areas can increase the ridership of nearby residents. The close proximity encourages residents to use public transit which benefits the transit authority. For example, extensive studies conducted by the National Transit/Residential Access Center (NTRAC) at the University of California, Berkeley demonstrated that people who lived close to transit stops utilized the system more frequently. Furthermore, a benefit to nearby residents was also shown. The study found that approximately 33 percent of the residents living near Bay Area Rapid Transit (BART) stations used rail to get to work compared to only five percent of residents in areas not served by BART. (Zykofsky, 1999)

With careful planning, transit centers may play a major role in revitalizing older neighborhoods and may also encourage additional development (mixed use) near the facility. Simply building a new or remodeling a facility may indicate that the transit agency is interested in investing in the community; this could generate interest from private developers and renew community pride among residents. The most successful projects involve public/private dollars and joint planning. In these partnerships, the transit authority joins forces with the local government and neighborhood groups. (Volinski, 2004)

While increased ridership and new/redevelopment near transit centers are beneficial for the transit authorities and patrons, transit facilities also increase land values for developers and existing property owners and generate tax revenue for local governments. Residential and commercial properties within a quarter mile of transit facilities typically appreciate in value more rapidly than properties outside the vicinity of transit facilities. (Zykofsky, 1999) Development near transit stops also increases tax revenues for local governments short on funds; others use tax increment financing to help fund expansion of the transit system. (TCRP Report, 2004)

The literature reviewed shows that many agencies are interested in researching why and how land values increase around the various types of transit facilities - rail and bus. Most TOD studies examined rail focused TODs. For example, the Dallas Metroplex's TOD study indicated that values around the Mockingbird station increased because lofts, restaurants, office space, and shops were built near the area. (Arrington & Boroski, 2004) Before the rail station was built, there was no activity in the area; however, since the erection of the properties, various activities offer a sense of tranquility. Many cities, like Austin Texas, are beginning to examine the merits of TOD. A part of Austin's mobility mission is to "create transit-supportive communities by optimizing social, environmental and economic goals." (Austin City Connection TOD Home Page www.ci.austin.tx.us/planning/tod/default.htm, 2007) City officials hope to achieve this by developing projects that involve rail and Bus Rapid Transit (BRT).

BRT is "defined as a bus-based, rapid-transit service with a completely dedicated right-of-way and on-line stops or stations, much like light rail transit (LRT). (Transit Cooperative Research Program Report 90, 2003) Although BRT is less expensive than light rail, it was not considered as efficient. Those notions are changing as more transit agencies are providing priority signalization, dedicating lanes, and purchasing better vehicles. (Cabanatuan, 2006) Recently, more agencies, like Corpus Christi Texas and Tampa Florida, are looking at bus facilities and redevelopment.

The Corpus Christi Regional Transit Authority's (CCRTA) Six Points Station is an example of a bus transit center assisting in the redevelopment of an area. The Six Points area is one of Corpus Christi's older business areas outside of downtown Corpus. Due to changing business patterns, the area became partially abandoned and in disrepair. Previously, the city owned-bus company operated a dilapidated bus stop. In 1999, CCRTA, working with the Del Mar Neighborhood Association, used its half-cent general sales tax funds and the Federal Transit Administration's (FTA) Livable Communities Initiative Grant to build a new transit center, improve sidewalks, add street lighting, landscape medians, and redesign parking. (Volinski, 2004.) As a result, a large pharmacy retailer, major health insurance company, restaurant, and major bank all reside in the Six Points area. "The neighborhood is now a much more desirable place to live and do business as evidenced by higher property valuations and more rapid turnover of properties as investors buy and sell in an improving market." (Volinski, 2004.) Another source shows commercial property values at \$8 million. (APTA, 2007)

Another example of success is found in Tampa, Florida. In an economically depressed neighborhood, a mall was redeveloped, a community facility was built, and the HARTline bus system built the University Area Transit Center. These projects resulted in more than \$75 million of development which increased land values and tax revenue around the transit center. (APTA, 2007)

While the above cases document bus facility and development additional study is still needed in this area. The following research will add to the body of work. This study updates the findings from the 1997 study, *Land Value Assessment Near Bus Transit Facilities: A Case Study of Selected Transit Centers in Houston, Texas* and adds data for another bus transit system. Opportunities and occurrences that have resulted around bus-oriented facilities will be explored

in Houston, Texas, and Columbus, Ohio—two cities with notable bus-oriented development not associated with rail or BRT. Examples will be included that illustrate developments that were deliberately designed and sponsored by the public sector, as well as, developments that were transit need driven and open real estate market driven with minimal to no public sector encouragement.

**HOUSTON METROPOLITAN TRANSIT AUTHORITY (METRO)
TRANSIT CENTER PROFILES**

The five selected transit facilities represent various Houston neighborhoods from the north, northeast, east, southeast and west. These transit sites provide connections to other transit sites and activity centers. The five transit sites include four transit centers: Bellaire, Kashmere, Magnolia, Southeast, and one park and ride facility: North Shepherd. Transportation characteristics and capabilities of each facility are provided in Table 1. Generally, most transit centers remained unchanged physically with the exception of the Southeast Transit Center where 23 parking spaces were added. “Total Boardings” increased for all transit centers from 1997 to 2002, with the Magnolia Transit Center showing the largest increase (44 percent).

**Table 1: 2002 Metropolitan Transit Authority (METRO)
Transit Center Characteristics**

Transit Center & Year of operation	Size (acres)	Number of Routes	Number of Routes	Number of Bays	Parking Spaces	Total Boardings 1986 (week day)	Total Boardings 2002 (week day)	Percent change
Bellaire December 1987	1.2	4	4	6	0	2914	3071	5%
Kashmere August 1992	3	7	7	6	17	2004	2402	20%
Magnolia March 1992	1.6	7	7	4	50	1471	2117	44%
Southeast August 1987	7.6	7	7	10	23	2876	3146	9%
North Shepherd April 1980	22	5	5	2	1603	n/a	713	n/a

Source: 2004 Facilities Reference Book, Houston Metropolitan Transit Authority

Demographic information and property values from the Harris County Appraisal District’s (HCAD) system were gathered and synthesized into individual profiles. As noted in the 1997 study, this study shows that the transit center areas vary widely in race/ethnic composition, income, land values, and land use characteristics.

Bellaire Transit Center

The Bellaire Transit Center, situated on a one acre site in the median of Bellaire Boulevard, west of South Rice Avenue in Bellaire, Texas, opened in December 1987. Currently, four routes serve the six bus bay facility: 2 Bellaire, 33 Post Oak Crosstown, 49 Chimney Rock Crosstown, and 65 Bissonnet. Because of its unusual positioning, the Bellaire Transit Center does not provide parking. While total boardings increased slightly from 2,974 in 1997 to 3,071 in 2002, the number of routes serving the Bellaire facility declined from five to four. Landmarks near the facility include a large grocery store, banks, drugstores, fast food and neighborhood restaurants, and other small retail stores.

Figure 1: Bellaire Transit Center



Photo taken by TSU, 2006.

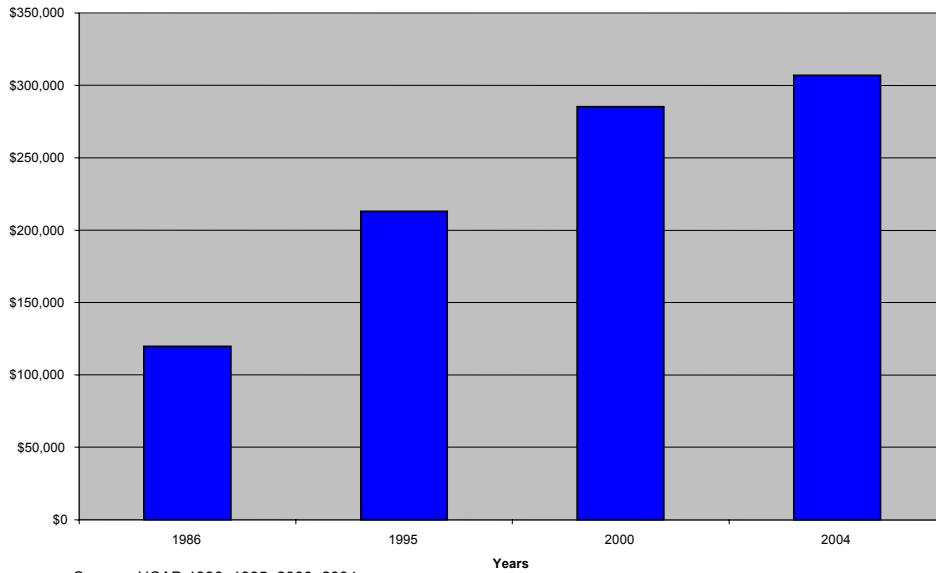
The Bellaire facility is located in Census Tract 4210. Data for this area show continued population growth and increased income. The population increased from 2,190 in 1990 to 2,342 in 2000. The 2000 racial mix of the census tract remains consistent with data from 1990; Census 2000 data show the area as predominantly White (90 percent). Adjusted median household income rose from \$58,196 in 1990 to \$81,756 in 2000.¹

A look at housing units revealed that five percent of the housing units were listed as vacant for the 20+ year study timeframe. These rates are the lowest among all of the study areas. Although vacancy rates remained constant, the overall number of housing units increased from 6,198 in 1990 to 6,315 in 2000. In 1990, 65 percent of the occupied units were owned by the residents; whereas, in 2000, this figure increased to 82 percent.

Unlike most, Bellaire's transit center is completely surrounded by commercial uses. Commercial properties near the Bellaire facility averaged an adjusted \$1.3 million in 1988, and decreased to a little over one million dollars by 1996. However, by 2000, commercial property values averaged about \$370,000 (in constant 2004 dollars) and rose to \$517,640 in 2004; nonetheless,

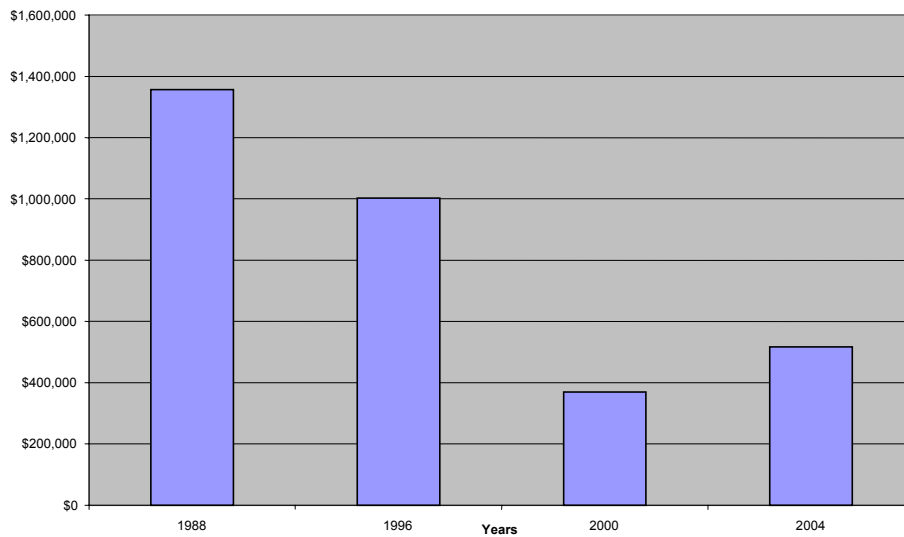
commercial valuation remained lower than it was in 1988. The differences may account for the changes in retail uses that occur. In contrast, residential uses, found at the edge of the study area, showed healthy increases. Adjusted residential values in 1986 and 1995 were \$119,705 and \$213,070 respectively. Residential property values climbed to \$285,343 and \$307,117 in 2000 and 2004.

Figure 2: Bellaire Average Residential Property Values



Source: HCAD 1986, 1995, 2000, 2004

Figure 3: Bellaire Average Commercial Property Values



Source: HCAD 1988, 1996, 2000, 2004

Kashmere Transit Center

In August 1992, the 3-acre Kashmere Transit Center opened at 5910 Hirsch (on the corner of Hirsch and Kelley). Major highways near the center include US 59 N and I-610 N. Loop. Both highways are approximately one block away. Other landmarks nearby include the Barbara Jordan High School, Francis Key Middle School, and McDade Elementary School. Current information from METRO shows the facility services 7 routes, contains 6 bus bays, and offers 17 long term parking spaces. The Kashmere transit center appears to be well utilized. Since 1997, transit center data show increases in total boardings from 2,004 to 2,402, and the center serves an additional route.

Figure 4: Kashmere Transit Center

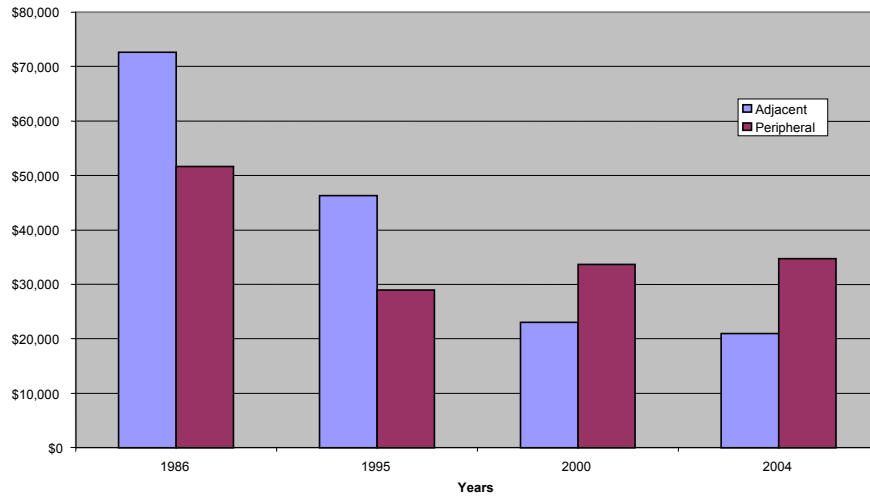


Overall, the neighborhood surrounding the Kashmere Transit Center experienced marked decline as evidenced in the Census data. According to the US Census Bureau, the population in Census Tract 2301 (which includes the area surrounding the facility) continued to decrease each decade. In 1980, data show 2,689 residents; this number decreased to 1,852 in 2000. While the population decreased, the percentage of African-American residents increased from 70 percent in 1990 to over 93 percent in 2000. Similar to the population, median household income (MHI) declined. The area's 1980 adjusted MHI was \$24,111, but the MHI fell to \$17,500 by 2000.

Kashmere's total housing units decreased by almost five percent from 1980 to 1990 (from 843 to 807 units). The 2000 census reported that total units fell by 14 percent leaving the area with only 710 units. This area also reported the second highest vacancy rates among all of Houston's transit centers for the 20+ year study timeframe. Census data showed that almost 25 percent of all housing units were vacant in 1990; by 2000, this rate decreased to about ten percent. In terms of owner occupancy, Kashmere reported the second highest owner occupancy 62 percent in 1990; unfortunately, this percentage slipped to 41 percent by 2000 (second lowest rate). The diminished housing stock, high vacancy and fluctuating owner occupancy rates during the 1990's illuminate the housing difficulties experienced when Houston's oil-based economy declined.

Unlike the Bellaire area, Kashmere did not experience the benefits of high residential values or strong retail development. In terms of property values, residential uses adjacent to the Kashmere facility showed a steady decline from an adjusted value of \$72,601 in 1980 to \$20,950 in 2004. In contrast, properties on the periphery of the transit center declined from adjusted values of \$51,650 in 1986 and \$28,940 in 1995. Property values then showed slight increases during 2000 to \$33,692, and 2004 to \$34,702 for adjacent and peripheral values, respectively.

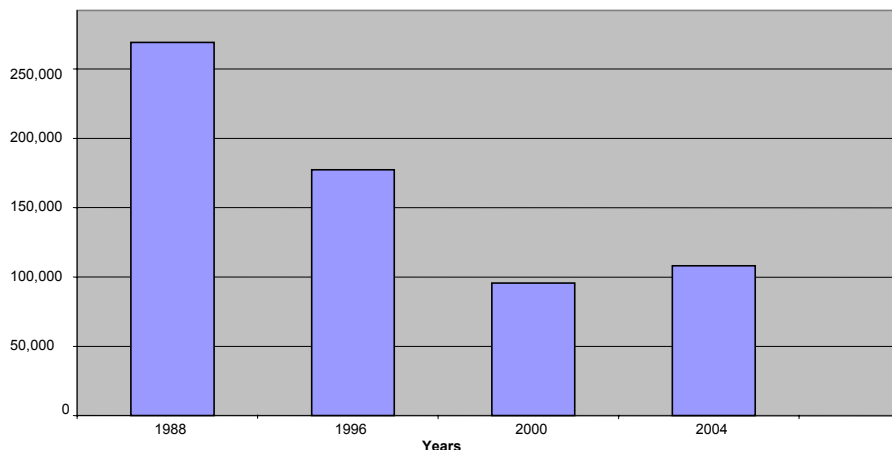
Figure 5: Kashmere Average Residential Property Values



Source: HCAD 1986, 1995, 2000, 2004

Most commercial property was located near the transit center. Commercial values also followed the same trend as peripheral residential properties. Adjusted values reached \$230,198 in 1988, but decreased to \$151,730 and \$81,655 in 1996 and 2000 before increasing to \$92,342 in 2004. Although values are significantly lower than those near the Bellaire facility, nearby vacant or underdeveloped lots provide opportunities for redevelopment near the Kashmere Transit Center. Building on the strength of the transit center, public and private investment could help revitalize the area.

Figure 6: Kashmere Average Commercial Property Values



Source: HCAD 1988, 1996, 2000, 2004

Magnolia Transit Center

The Magnolia Transit Center, opened in March 1992, is located at 6948 Harrisburg Boulevard and sits on almost two acres of land. Approximately 50 parking spaces were built just south of the center. Data for this facility showed total boardings increased from 1,471 in 1997 to 2,117 in 2004; however, the number of routes declined from eight to seven. Land uses surrounding the transit center include fast food restaurants, automotive services, and retail stores.

Figure 7: Magnolia Transit Center

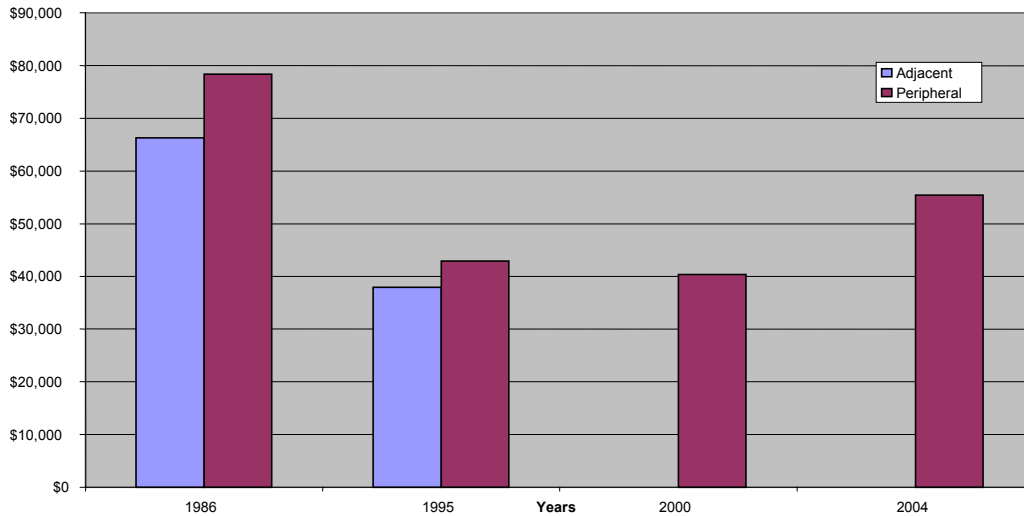


In 1980, the area population was 7,131 and decreased to 6,214 in 1990. By 2000, the population increased to 6,826. Overall, the population is predominantly Hispanic, with over 95 percent indicating that they were of Hispanic or Latino origin. Similar to the changes in the population, Magnolia's median household income also fluctuated. Adjusted MHI recorded a decrease from \$32,140 in 1980 to \$24,833 in 1990. However, by 2000, MHI increased to \$25,586.

Following the same pattern, housing units decreased from 2,204 in 1980 to 1,900 in 1990. Total units then increased to 2,057 units by 2000. In 1990, almost seven percent of the housing units were vacant; this rate increased to more than 13 percent by 1990, and then fell to over ten percent in 2000. This was the highest vacancy rate for all the study areas. Owner occupancy was 43 percent in 1990 compared to 38 percent owner occupancy in 1980. These owner occupancy figures are the lowest among all study areas.

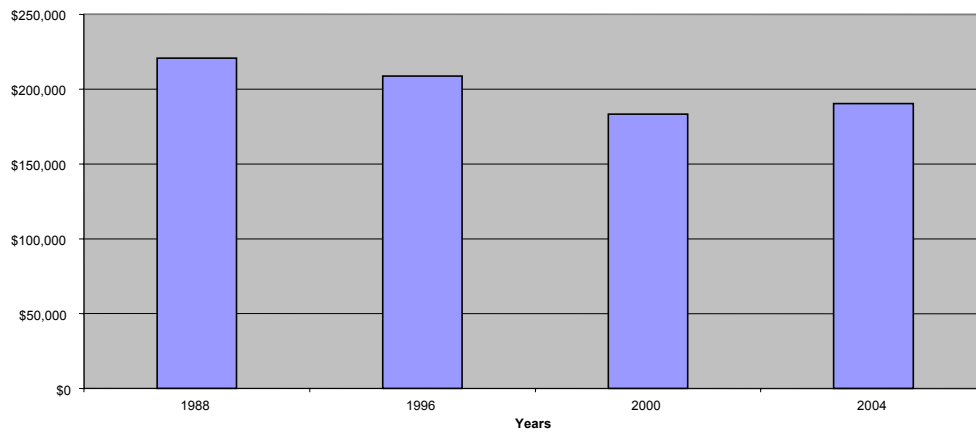
When the initial Transit Center study was conducted, several residential properties were noted as adjacent to the Transit Center; however, this current study does not include any adjacent residential uses. Property values for residential uses on the peripheral show fluctuations. The highest value was \$78,394 in 1980 with the lowest value in 2000 at \$40,375. By 2004, residential values increased to \$55,424. Commercial properties near the Magnolia site decreased in value from \$220,860 in 1988 to \$183,423 in 1996. Some improvement is noted in 2000 when commercial values reached \$190,324.

Figure 8: Magnolia Average Residential Property Values



Source: HCAD 1986, 1995, 2000, 2004. NOTE: No residential properties were adjacent to the Transit Center in 2000 & 2004.

Figure 9: Magnolia Average Commercial Property Values



Source: HCAD 1988, 1996, 2000, 2004

Southeast Transit Center

The Southeast Transit Center, located at 6000 Scottcrest, is built on 7.5 acres and has 23 parking spaces. Southeast Transit Center contains more bays (10) than any other facility that serve the seven routes operating from the site. Total boardings increased from 2,876 in 1997 to 3,071 in 2002. Over the past ten years, new and remodeled retail centers, a grocery store, and fast food restaurants were developed. In addition, several new housing units within walking distance were also built. This center is in close proximity to State Highway 288.

Figure 10: Southeast Transit



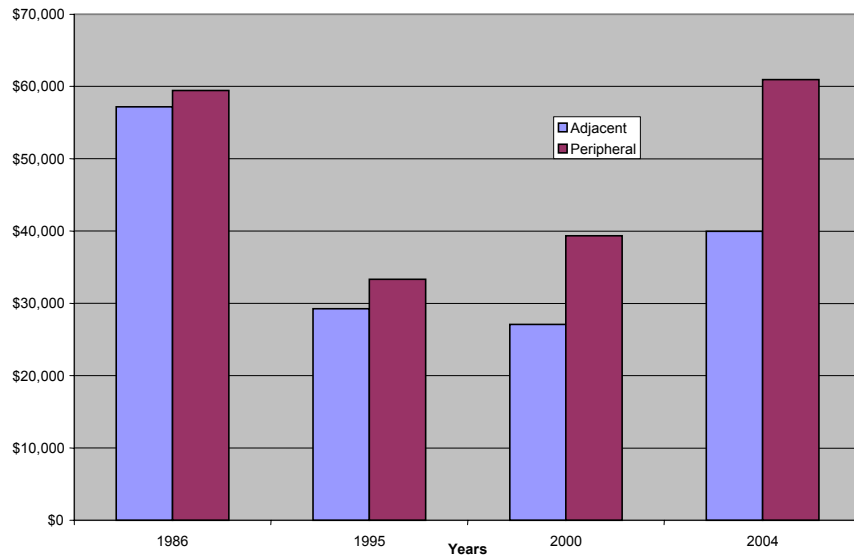
According to Census data, Census Tract 317.04, the neighborhood surrounding the Southeast Transit Center, experienced population decreases from 6,189 residents in 1980, to 4,423 by 2000. This facility is populated predominantly (86 percent) by African-Americans.

Following the same pattern as the population, adjusted media household income (MHI) also reported declines. Figures from 1980 show MHI at \$30,224; this number decreased substantially to \$18,996 by 1990. Over the decade, MHI decreased at a much slower pace only dropping to \$17,279 by 2000.

A look at housing data showed that housing units equaled 2,159 in 1980, but dropped to 1,891 units by 1990. This trend continued to 2000 where the area only counted 1,729 housing units. In terms of vacancy, roughly nine percent of all units were vacant in 1980. This compares to 14 percent and nine percent in 1990 and 2000 respectively. The area also experienced slight changes in owner occupancy, with 52 percent, 53 percent and 50 percent owner occupied units in 1980, 1990, and 2000 respectively.

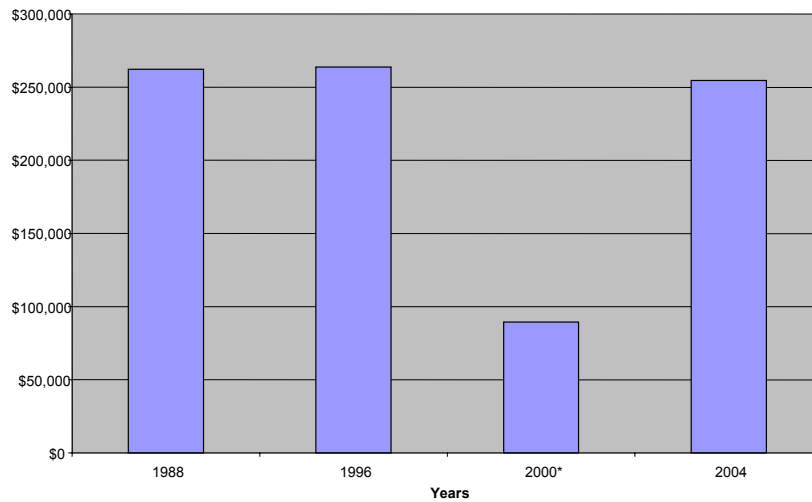
In 1986, residential properties adjacent to the transit center reached an adjusted value of \$57,197. This number declined during 1995 and 2000 before increasing to \$39,950. Figure 11 shows residential property values for the study period. The same pattern holds true for residential properties located on the periphery of the facility. Adjusted values started at \$59,447 in 1986 and ended at \$60,930 in 2004. Commercial property values remained somewhat stable starting at \$262,320 in 1988 and ending at \$254,527 in 2004.

Figure 11: Southeast Average Residential Property Values



Source: HCAD 1986, 1995, 2000, 2004

Figure 12: Southeast Average Commercial Values



Source: HCAD 1988, 1996, 2000, 2004

North Shepherd Park and Ride

Built in April 1980, the North Shepherd Park and Ride (at 7821 N. Shepherd @ Veteran’s Memorial) is the only Park and Ride facility in this study. This facility serves five routes, contains two bays, and offers the largest amount of parking (1,603) spaces. In 2002, total boardings for the facility reached 713. This 22 acre Park and Ride is surrounded by retail uses, restaurants, Osborne Elementary, a residential neighborhood, and Interstate 45.

Figure 13: North Shepherd Park & Ride



The facility is located in Census Tract 531.03 where data for the area show population decreases from 7,612 residents in 1980 to 6,066 residents in 1990. By 2000, the area grew to 6,436 residents with African Americans comprising 93 percent of the population.

Census data also reported the 1980 adjusted median household income (MHI) as \$30,619. The MHI fell to \$14,126 in 1990 and stabilized at \$14,634 in 2000. This is the lowest MHI reported for all study areas. Unlike other areas, total housing units did not decrease significantly. In 1980, 1990, and 2000, total units were 2,369, 2,390, and 2,279 respectively. Overall vacancy rates ranged from nine percent in 1980 to 18 percent in 1990 before falling to six percent in 2000. Owner occupancy was among the highest among study areas. In 1980, owner occupancy reached 66 percent, but fell to 58 percent and 54 percent by 1990 and 2000 respectively.

During the previous study, adjacent residential property values were not selected, therefore, data are only recorded for 2000 and 2004. During this period, property values increased from an adjusted \$41,301 to \$58,300. Interestingly, peripheral adjusted residential values started at \$42,030 in 1986, dropped significantly during 1995 and 2000, but, by 2004, values rebounded reaching \$37,378. Adjusted commercial property values were recorded just over 1.3 million in 1988 and continued to climb reaching \$1.97 million in 2004.

Figure 14: North Shepherd Average Residential Property Values

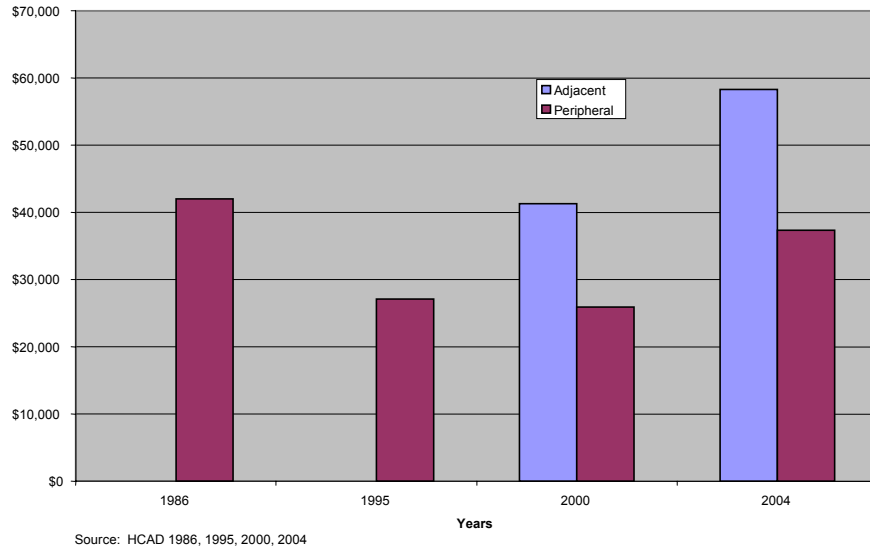
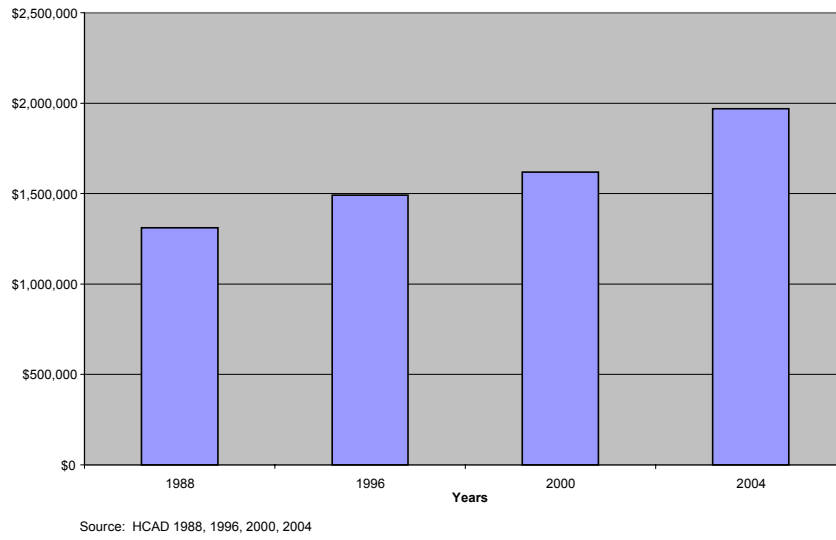


Figure 15: North Shepherd Average Commercial Property Values



CENTRAL OHIO TRANSIT AUTHORITY TRANSIT CENTER PROFILES

Houston METRO’s transit centers were developed before the benefits of transit oriented development (TOD) were well known. As a result, they are designed differently than centers developed by the Central Ohio Transit Authority (COTA) in Columbus, Ohio. COTA’s centers were created for multiple use and maximum convenience. COTA’s centers are substantially larger than METRO’s centers and they offer retail space for lease. Currently, COTA operates three transit centers: Linden, Easton, and Near East. Table 2 provides general transit characteristics of these centers. In addition to the information obtained from COTA, census information and Franklin County Appraisal District data were examined to develop profiles for each center.

Table 2: 2006 Central Ohio Transit Authority (COTA) Transit Center Characteristics

Transit Center	Size (in acres)	Total square footage	Number of Routes	Number of Bays	Parking Spaces	Total Boardings (week day)
Linden 1999	3	20,000	11	1	28	129
Near East 2005	.694	10,000	2	n/a	31	239
Easton 2002	2.6	10,000	5	8	41	125

Source: Central Ohio Transit Authority 2005, 2006

Linden Transit Center

The Linden Transit Center is located at 1380 N. Cleveland (Cleveland and 11th streets) opened in 2000. Unlike Houston’s transit centers, Linden does not have a traditional bus bay; instead, the

Figure 16: Linden Transit



Photo by COTA

center has a bus driveway/lane in the rear of the property. Most of the 11 routes that serve the center are accessed from Cleveland Street.

This two-story, urban transit center facility has 20,000 square feet of rental space, houses a medical clinic, a small bank with ATM machine, and a day care facility. On occasion, the lobby is used for meeting space by community residents. Several new businesses are located across from the transit center including a State Farm Insurance agent’s office, a restaurant, as well as a local housing authority office building.

The Linden Transit Center is found in Census Tract 15. In 1990, the area had a total population of 3,026 that decreased to 2,223 by 2000. Overall, African-Americans comprised 91 percent of the area’s total population.

Figure 17: Linden Transit Center site prior to development.

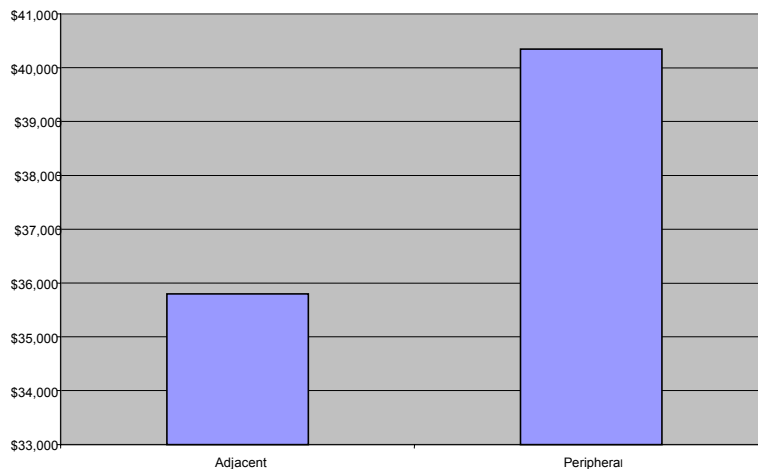


Source: 2006 COTA LRTP

The adjusted median household income (MHI) rose 72 percent in 1990 from \$11,542 to \$19,907 in 2000. About eight percent of the 1,111 housing units were listed as vacant in 1990. In 2000, 12 percent of the 874 housing units were listed as vacant. Overall, the number of units decreased, but the vacancy rate increased. In 1990, 25 percent of the occupied units were owned by the residents, whereas, in 2000, owner occupancy increased to 32 percent. Linden’s owner occupancy was the second lowest for all transit centers in METRO’s and COTA’s systems.

Only one residential property was noted adjacent the Linden facility. This property was valued at \$35,800. On the periphery of our study area, more residential uses were found. where properties averaged \$40,350. Despite these values, there is evidence that property values may increase in the future, because redevelopment is occurring one to two blocks away from the transit center.

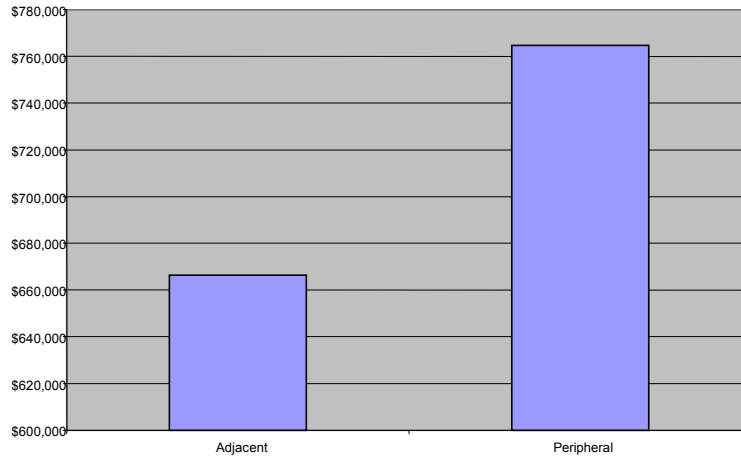
Figure 18: Linden Average Residential Property Values



Source: Franklin County Auditor 2004

As indicated, recorded property values adjacent to this transit area were primarily new commercial. These properties averaged \$666,400, while commercial properties on the periphery averaged \$764,750. COTA officials note that the reinvestment of the transit center in the Linden area helped spark public and private redevelopment in this once blighted area.

Figure 19: Linden Average Commercial Property Values



Source: Franklin County Auditor 2004

Near East Transit Center

In 2005, the Near East Transit Center, located at 1125 East Main on the corner of Main and Champion Avenue opened. This center services two routes, but does not have a bus bay. The routes are accessed from East Main or Champion streets. The Near East Transit Center incorporates the transit oriented development elements. Again, local community leaders partnered with the Federal Transit Administration, City of Columbus, COTA, and private industry to build the facility. This two story 10,000 square foot center offers a passenger lobby/waiting area, retail space for small businesses, and a medical office/clinic. Like the Linden Center, this development was designed to help revitalize the neighborhood. The hope is that continued redevelopment will occur for the surrounding residential uses.

Figure 20: Near East Transit Center site prior to development



Source: 2006 COTA LRT

Figure 21: Near East Transit Center

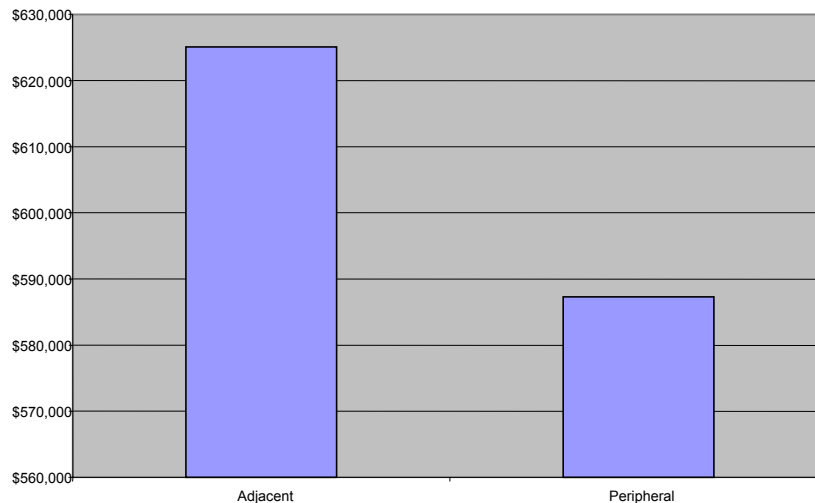


Source: 2006 COTA LRT

Near East is found in Census Tract 53. A look at census data reveals that the population declined sharply in one decade. In 1990, the area’s population reached 4,458, but declined to 3,479 by 2000. The surrounding neighborhood’s residents are predominantly (82 percent) African-American. Interestingly, median household income rose 30 percent in constant 2000 dollars from \$14,374 in 1990 to \$18,683 in 2000. Unfortunately, the rapid decline in population appears to have affected the housing stock; housing vacancies increased and the number of overall units decreased. In 1990, 21.6 percent of the 1,811 housing units were listed as vacant. In 2000, 27 percent of the 1,659 housing units were listed as vacant. In 1990, 27 percent of all occupied units were owned by the residents, whereas in 2000, owner occupied units increased to 30 percent.

While the study’s methodology did not capture any residential uses immediately adjacent to the transit center, residential values on the periphery averaged \$66,950. Commercial properties close to the Near East Transit Center averaged about \$625,080 in 2004, with one commercial property valued over \$2.7 million. Periphery commercial property average values were lower than adjacent properties; Figure 22 shows that the average value reached \$587,300.

Figure 22: Near East Average Commercial Property Values



Source: Franklin County Auditor 2004

Easton Transit Center

Easton Transit Center opened in May 2002. Unlike the Linden and Near East Transit Centers located in the older urban area and emphasize mixed use, the Easton facility is found in a suburban setting and resembles a traditional transit center. Currently, five routes utilize this multiple bay facility. In addition to the 41 parking spaces, this single-story building contains 8,830 square foot which features a 1,360 square foot enclosed Customer Waiting Area and Customer Service Attendant Booth. This Transit Center also houses a 10,300 square foot day care center just south of the bus bay. Large retailers, service stations and a multi-family complex surround the 2.6 acre transit complex.

Figure 23: Easton Transit Center



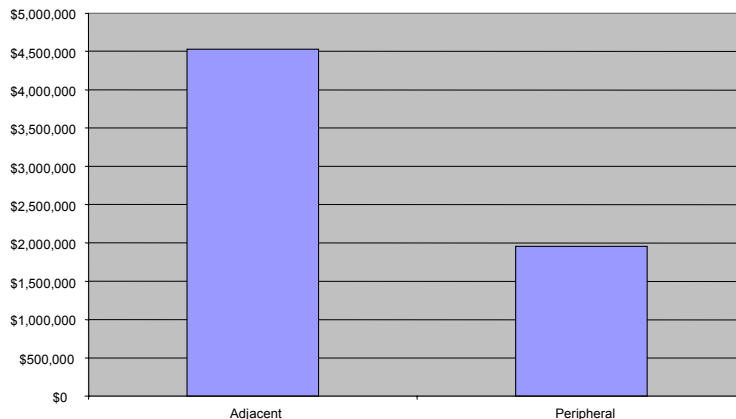
Figure 24: Easton Transit Center - Day Care Facility



The Easton Center is located in Census Tract 71.31. Census data for the area reveals marked contrasts with data from the Linden and Near East areas. While the populations near the Linden and Near East facilities reported significant population losses, Easton’s 1990 population of 8,730 only declined slightly to 8,487 by 2000. Anglos (76 percent), followed by African-Americans (17 percent), comprised the largest share of the population; this differs from the predominantly African-American populations found in the Linden and Near East areas. While the Easton’s median household income was significantly higher than the other transit centers, a slight decrease was noted from 1990 (\$53,473) to 2000 (\$52,045).

The area’s housing stock only lost 21 units from 1990 (3,881 units) to 2000 (3,860 units). Vacancy rates show that almost nine percent of the housing units were listed as vacant in 1990 compared to 4.6 percent in 2000. While housing unit losses were nominal and vacancy rates improved over the decade, homeownership reported a small decline. In 1990, approximately 59 percent of the occupied units were owned by the residents, whereas in 2000, owner occupied units declined to 53 percent. Nonetheless, Easton’s ownership remained significantly higher than ownership in Linden and Near East.

Figure 25: Easton Average Commercial Property

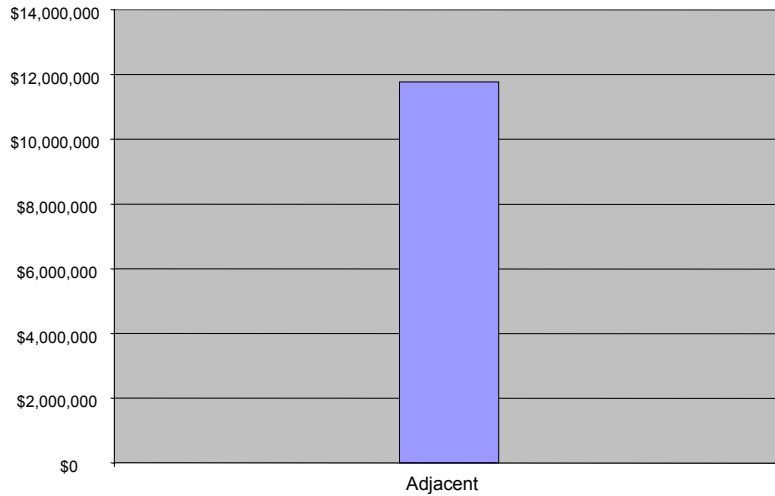


Source: Franklin County Auditor 2004

Franklin County Auditor information showed that commercial properties near Easton Center averaged nearly \$4.5 million and peripheral commercial properties were almost \$2 million. See Figure 13. This number is relatively large compared to the two other transit centers.

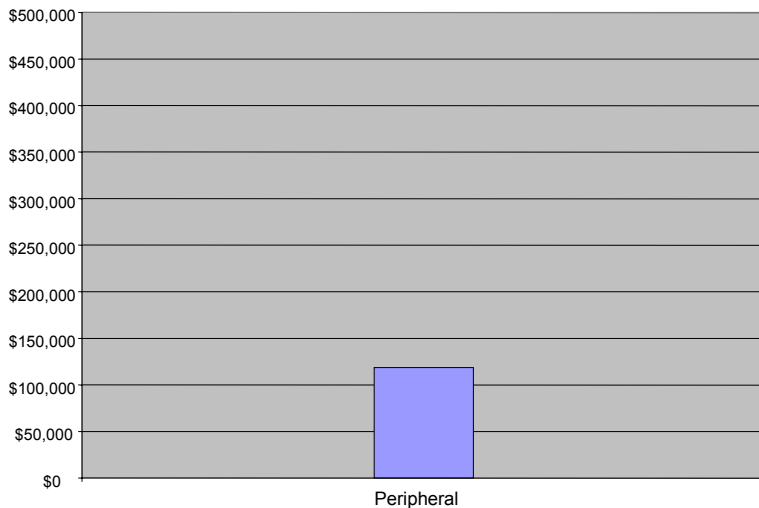
Nearby residential property includes an apartment complex along Stelzer Road valued at \$11.7 million. Immediately abutting the apartments is a single family development which lies on the periphery of the study area where properties average \$118, 700. Again, these values were significantly higher than the values reported for the Linden and Near East facilities.

Figure 26: Easton Average Adjacent Residential Property Values



Source: Franklin County Auditor 2004

Figure 27: Easton Average Peripheral Residential Property Values



Source: Franklin County Auditor 2004

RESEARCH SUMMARY

After examining the transit centers from Houston and Columbus, several findings became apparent. First, the definition and roles of transit centers are evolving. Over the past few decades, a shift is occurring from the transit center viewed strictly in a functional purpose into a community asset that can generate additional sources of revenue and increase ridership for transit agencies. The latter is the case with COTA where the presence of the Linden transit center was encouraged and the Near East facility was requested by the community. While METRO's transit centers were only viewed in their transit function, over the years commercial development occurred and performed serendipitously well without government and/or civic interest. This translated into increased ridership for METRO.

Second, among METRO's transit centers, no consistency exists regarding commercial and/or residential property values that would result in an explicable pattern of change. With the exception of Bellaire's residential and North Shepherd's commercial values, adjacent and peripheral residential and commercial properties showed decreases until 2000 with slight values increases in 2004. In addition, areas that seemed very similar did not have the same have the expected outcome. For example, Kashmere and Southeast areas are both predominantly lower income with African-American populations; however, Southeast showed higher residential values than Kashmere for properties adjacent and on the periphery of the transit center.

Next, the investment in new transit centers serves as a catalyst for other development nearby. Linden and Near East are examples of a transit authority partnering with the community organizations, local businesses and other public agencies to enhance an economically challenged area while improving transit mobility. When utilizing this approach, the community, local government, and transit authority can leverage funds to create a more comprehensive project. This growing trend emphasizes the connection between public and private sectors and their willingness to partner with transit agencies to improve a neighborhood.

Finally, among all transit centers a weak positive relationship was noticed that fostered moderate property value increases for commercial properties. Among Houston's transit centers, North Shepherd and Bellaire (despite its sharp decline) recorded the largest commercial property values. Magnolia, Southeast, and North Shepherd commercial properties sustained their values better than the Kashmere and Bellaire areas.

Future Work

The research team concludes that additional research could further enhance our understanding of the relationship between transit authorities and the property values in several ways. While time and budget constrains did not allow for an assessment of overall market conditions for Houston or Columbus, value added to this work would include this type of assessment.

In Houston, the research team observed continuing new commercial development indicating vitality not reflected in the values. Future work could incorporate year of construction/renovation for adjacent and peripheral properties.

Additional research opportunities exist to further investigate the roles that forming partnerships, offering incentives, and leveraging funds play in getting transit authorities to simulate redevelopment around their transit centers.

Finally, most TOD studies focus on facilities associated with rail or bus transit. Additional analysis is needed of free-standing transit centers not associated with Light Rail Transit (LRT) or Bus Rapid Transit (BRT) because these options are not always viable for all transit authorities. Future research of property values near COTA's selected transit centers could yield valuable data regarding bus facility based Transit Oriented Development (TOD).

Table 3: Analysis of METRO’s Transit Centers

Variables	Bellaire	Kashmere	Magnolia	Southeast	North Shepherd
Access to highway	approximately .5 miles to 610	approximately .5 miles to IH-610 & US 59	approximately 4 miles to IH-45	approximately 1.5 miles to State 288	approximately .25 miles to IH-45
Proximity to residential	yes	yes	yes	yes	yes
Proximity to commercial	yes	yes	yes	yes	yes
Access to jobs/employment center*	yes	no	no	no	no
Access to school (K-12), or university/college within 5 miles	yes	yes	no	yes	yes
Income (above or below median)	above	below	below	below	below
Race	Anglo-American	African-American	Hispanic	African-American	African-American
Population (increase or decrease)	increase	decrease	increase	decrease	increase
Housing value	adjacent: \$n/a peripheral: \$455,204	adjacent: \$20,950 peripheral: \$36,630	adjacent: \$n/a peripheral: \$55,424	adjacent: \$39,950 peripheral: \$60,930	adjacent: \$58,300 peripheral: \$37,377
Vacancy rates	4.7%	9.7%	10.2%	9%	6.1%
Owner occupancy	83.4%	40%	37.8%	50.1%	54.4%
Age of Transit Center	1987	1992	1992	1987	1980

* Major employment center available via one bus (no transfer) ride.

Table 4: Analysis of COTA's Transit Centers

Variables	Linden	Near East	Easton
Access to highway	Approximately 500 ft from IH-71 & 800 ft from State 3	Approximately 1 mile from IH-71 & ¼ mile from IH-70	Approximately ¼ miles from Loop IH-270
Proximity to residential	yes	yes	yes
Proximity to commercial	yes	yes	yes
Access to jobs/employment center	yes	yes	yes
Access to school (K-12), or university/college within 5 miles	yes	yes	yes
Income (above or below median)	Below	Below	Above
Race	African-American	African-American	Anglo-American
Population (increase or decrease)	Decrease	Decrease	Slight Decrease
Housing value	adjacent: \$35,800 peripheral: \$40,350	adjacent: \$n/a peripheral: \$66,950	adjacent: \$11,770,00** peripheral: \$118,000
Vacancy rates 2000	12%	27%	4%
Owner occupancy	32%	30%	53%
Age of Transit Center	2004	2005	2002

* Major employment center available via one bus (no transfer) ride.

** Multi-family housing development

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¹ Census income data were recalculated using the Consumer Price Index (CPI), which determines how prices/dollars have changed over time. For additional information, see the following website: <http://minneapolisfed.org/Research/data/us/calc/index.cfm>.