



Enhancing Economic Opportunity through Transit: Lessons Learned from Denver's Southeast Light Rail Line



A Report By:
Reconnecting America & Mile High Connects
March 2013



Acknowledgements

This report was funded by the Surdna Foundation. Reconnecting America and Mile High Connects thank them for their generous support.

About Mile High Connects & the Jobs Access Initiative

Mile High Connects is a collaborative of local and national nonprofit organizations (including Reconnecting America), philanthropic foundations and financial institutions working together to ensure that the Metro Denver regional transit system helps to foster communities that offer all residents the opportunity for a high quality of life. Our primary goal is to ensure that the creation of FasTracks improves accessibility to affordable housing, good-paying jobs, essential services, educational opportunities, improved health, and other elements of a high quality of life for all of Metro Denver's residents, especially those with lower-incomes.

As part of its efforts, MHC has partnered with the Denver region's employers, planners, economic development professionals and workforce providers to ensure that we maximize the investment in FasTracks by attracting, retaining, and supporting businesses located along the lines and by helping "middle skill" residents (those with more than a high school diploma but less than a bachelor's degree) access jobs, affordable housing, quality child care, and workforce training opportunities along the lines. Mile High Connects' Job Access Initiative seeks to inform and help to shape the strategies of regional stakeholders who are making decisions related to development, zoning, economic development, workforce training and business development. To this end, the Collaborative received support from Living Cities, a consortium of 22 of the world's largest philanthropic and financial institutions, to bring together key stakeholders representing employers, economic development, workforce development, planners, and workers to analyze job opportunities and supports for middle skill workers along current and future transit lines being built as part of FasTracks, and to consider how the region's economic development and workforce systems can leverage our investment in transit to promote, retain, and expand job opportunities along our regional transit system.

The Jobs Working Group is comprised of representatives from the following organizations:

City of Denver, OED	City of Lakewood Economic Development
Community College of Denver (WIN Program)	Denver Metro Chamber of Commerce
Denver Regional Council of Governments	Enterprise Community Partners
FRESC: Good Jobs Strong Communities	JP Morgan Chase Foundation, MHC member
Mile High Business Alliance	9 to 5 Colorado
Reconnecting America	Rose Community Foundation
SkillBuild Colorado	

About Reconnecting America

Reconnecting America (RA) is a national non-profit that works to better communities – places where transportation choices make it easy to get from place to place, where businesses flourish, and where people from all walks of life can afford to live, work and visit. RA conducts research, provides technical assistance, advocates for public policy, builds on-the-ground partnerships, and convenes the players necessary to accelerate decision-making. RA is the managing partner of the Center for Transit-Oriented Development (CTOD), the only national nonprofit effort dedicated to providing best practices, research and tools to support market-based transit-oriented development.

Primary Authors: Bill Sadler and Elizabeth Wampler, with mapping and graphic assistance from Irving Pham and Toral Patel, and advisory support from Kim Burnett and the MHC Jobs Working Group.

Table of Contents

Acknowledgements	1
About Mile High Connects & the Jobs Access Initiative	1
About Reconnecting America	1
Introduction	3
Key Findings	4
What is the Southeast Line?	5
Who Works Along the Southeast Line?	8
What are the Opportunities for Lower Income Workers?	11
How Has the Employment Landscape Changed Since the Light Rail Line Opened?	13
How Do Employers View the Southeast Line?	16
What Are the Challenges of Getting From the Station to the Workplace?	18
Who Lives Along the Southeast Line?	21
How Did Housing Change After the Light Rail Line Opened?	25
What Kind of Workforce Training and Work-Supportive Services Are Available?	28
Putting It All Together: The Missed Opportunity of the Southeast Line	31
So What Do We Do? Recommendations for Other Corridors	31

Introduction

The Denver region is currently embarking on one of the most ambitious and extensive investments in new rail and bus service in the United States. In less than a decade, the \$7.8 billion FasTracks transportation infrastructure project will connect much of the Denver Metro region with 122 miles of new commuter and light rail, 18 miles of bus rapid transit, 70 new transit stations and a variety of other expanded multimodal options.¹ This investment has the potential to expand the reach of opportunity for many people, providing better connections between housing, jobs and other essential destinations. New transit service will provide more transportation options to major job centers and educational institutions that provide career ladders and workforce training for people of all incomes and skill levels. Other regions are watching closely to see how the network is built out and if transit can spur new development and redevelopment of existing assets in station areas, as well as how transit will improve social equity for the Denver region's most economically disadvantaged residents.

Improving access to economic opportunities via transit is especially important to households with lower incomes, who spend a greater proportion of their income on housing and transportation and often have to travel long distances to find good-paying jobs and the training needed to get them. While only around 18% of all trips are made by public transportation, approximately 59% of all trips by public transportation are made for employment purposes.² Traditionally, however, most research and planning efforts focused on transit-oriented development emphasize residential development, with little consideration of how to attract, retain and grow businesses and jobs by transit. In the Denver region, most station area plans mention economic and workforce development by stating that it is a goal to sustain and grow jobs near the station, but without any concrete action steps to achieve these outcomes.

The purpose of this memo is to examine the economic, workforce and real estate development changes that occurred after the Southeast light rail line (hereinafter the "Southeast Line") opened in the southeast Denver metropolitan region in 2006 and use the lessons learned to guide future planning and policy decisions along future transit corridors in the region. This memo is part of a larger research project to analyze the current landscape and understand what has been done to date to improve social equity in the Denver region through increased transit accessibility. To date, little research has been done on the impact of the investment in light rail on the Southeast Line on new business attraction and job creation, especially for those workers with less than a bachelors' degree.

This analysis delves into publicly available data sources, as well as survey data of business owners along the Southeast Line, to gain a better understanding of what happened after the Southeast Line opened and inform planning decisions being made on other corridors and ensure that the Denver region is providing access to opportunity for everyone.

¹ Regional Transportation District, *About FasTracks*. Available at http://www.rtd-fastracks.com/main_26 (last accessed January 4, 2013).

² American Public Transportation Association, 2007. *Public Transportation Fact Book*. Available at <http://www.apta.com/resources/statistics/pages/transitstats.aspx> (last accessed January 4, 2013).

Key Findings

Job opportunities along the Southeast Line are primarily in office-based, professional industries. The Southeast Line runs through the Denver Tech Center, which contains the second largest concentration of jobs in the Denver region, outside of the central business district. The majority of jobs along the corridor are in office-based industries (primarily professional and scientific, healthcare, and finance and insurance). These jobs also are clustered closer to the transit station than jobs in other industries.

Job growth occurred mostly in higher-income careers, but large increases in health care jobs suggest more middle-skill job opportunities. The majority of job growth along the line since it opened has been in jobs that pay more than \$40,000 a year, which may suggest that most new jobs require higher levels of education and training. Office-based industries saw the highest job growth after the light rail line opened, though the recession impacted job growth toward the end of the study period and the number of office jobs actually saw a net decrease. Health care was the only industry to see a large increase in jobs after the light rail line opened, and since this industry includes a significant percentage of middle-skill workers, there may be more opportunities available than before the line opened.

Job growth in low- to middle-skill industries remained stagnant or decreased. Besides office and healthcare jobs, job growth in industries with middle-skill jobs did not see a bump after the light rail line opened. The Denver Tech Center has not traditionally been a center for jobs in the manufacturing, construction, wholesale trade, and transportation and warehousing industries, and the number of jobs in these industries remained fairly constant during the study period.

Very few work-supportive services or affordable housing units have been built along the Southeast Line. In contrast to other parts of the region, there is a dearth of workforce training providers, childcare facilities and affordable housing units in close proximity to the Southeast Line. Very few of these resources have been built in transit-oriented developments along the line, so workers have to travel long distances to get the training they need, take care of their children and find an affordable home if they work along this line. The lack of these resources also makes using transit a significant challenge for those who could benefit from using it the most.

Transit is not the driving force in the location decision of employers, but it is a top consideration. Surveys of business owners reveal that few considered the light rail line when choosing their current location, though this is partly because the Southeast Line was a major job center before the line opened and many employers have been there for a long time. However, employers do value their proximity, ranking it third overall from a list of various considerations they make in choosing a location. Employers also ranked other built environment-related considerations such as facility, neighborhood and visibility high overall, in contrast to other employers surveyed in the region who ranked lease rates and access to highways and parking as top considerations.

“Last mile” connections from the Southeast Line light rail stations to workplaces are a major barrier to taking transit. The Southeast Line is adjacent to an interstate highway on one side throughout most of the line, so workers on the other side of the highway have severe connectivity challenges. Moreover, many of the existing office buildings are surrounded by surface parking lots and busy arterial streets, so getting to and from the stations remains a major challenge. Local employers and RTD also do not provide many connector shuttles or bus routes that could get workers to jobs located one to two miles from the station.

What is the Southeast Line?

The Southeast Line is a 19-mile light rail line that runs along an interstate highway (I-25) from downtown Denver to suburban neighborhoods in the southeast part of the metropolitan region. The line runs through the Denver Tech Center (DTC), which has the second largest concentration of jobs in the Denver metropolitan region, outside of downtown.³ Six stations are located in the Tech Center: Belleview, Orchard, Arapahoe at Village Center, Dry Creek, County Line and Lincoln (see green circle on the **Figure 1**). The line was funded as part of a \$1.7 billion highway expansion project called T-REX.⁴ There are thirteen stations, six of which are within the City and County of Denver. The remaining stations are in the municipalities of Greenwood Village, Centennial, Lone Tree and unincorporated Arapahoe and Douglas Counties.⁵ Trains run every 10 minutes during peak periods and 15 minutes during off-peak periods and weekends. As of 2010, there were 37,717 riders per weekday, with future estimates at 38,100 riders per weekday by 2020. **Figure 1** shows the alignment of this line and **Figure 2** shows the line in relation to RTD's entire light rail system.

The Southeast Line is primarily a destination connection or commuter corridor, with the majority of light rail users taking the trip to work either downtown or in the Tech Center. From a development perspective, the line offers very limited opportunities for transit-oriented development because of its proximity to the highway and distance from existing office, retail and residential buildings. There are also numerous connectivity challenges because of the low-density nature of the land uses surrounding the line, so many people who could theoretically take transit to work do not because of the lack of sidewalks, bicycle lanes, connecting bus or shuttle routes, etc., as well as an abundance of free parking at existing office buildings. Other future transit lines will have similar last-mile connection challenges, so the Southeast Line provides a good case study of what to do and what not to do to maximize both transit ridership and development opportunities, especially for those who rely on transit the most.

³ U.S. Census Bureau, Longitudinal Employer-Household Dynamics Data, 2002-2010.

⁴ RTD, *Southeast Corridor*. Available at <http://www.rtd-denver.com/FF-SoutheastCorridor.shtml> (last accessed January 4, 2013).

⁵ RTD, *TOD Status Report 2011*. Available at http://www.rtd-fastracks.com/main_196 (last accessed January 4, 2013).

Figure 1: Southeast Line Route Map

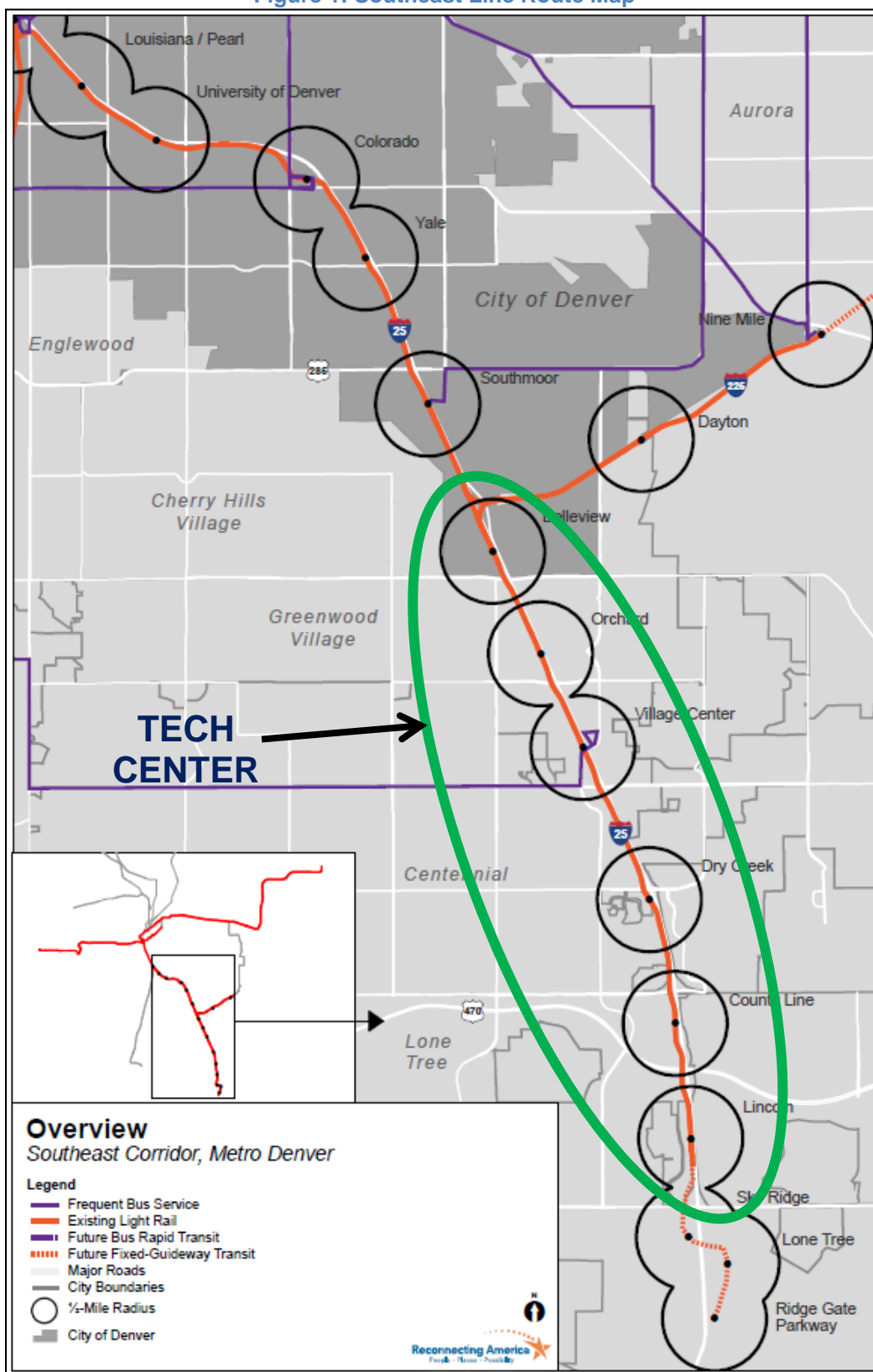
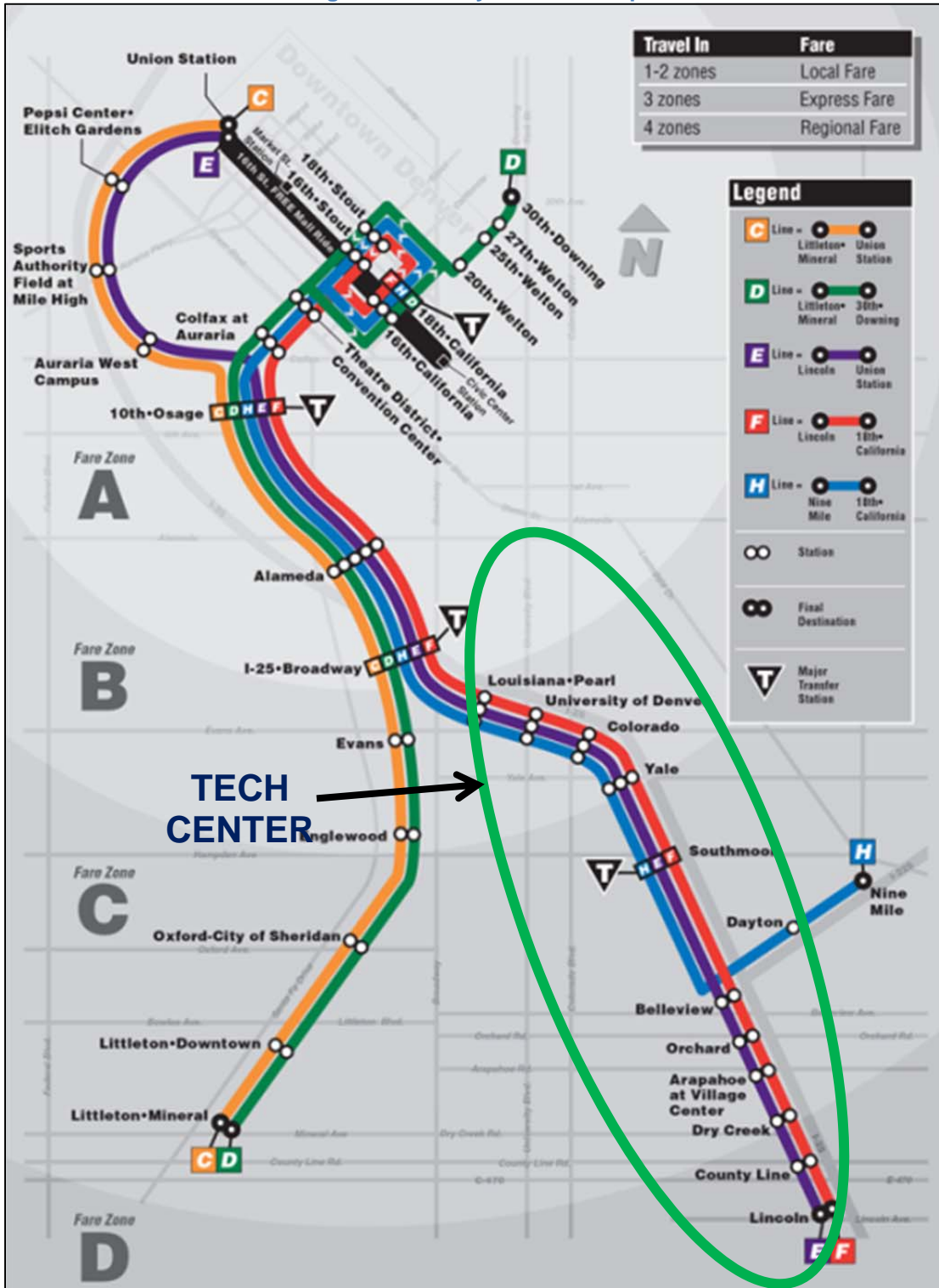


Figure 2: RTD Systemwide Map



Who Works Along the Southeast Line?

As of 2009, there were 87,559 jobs within a half-mile of transit stations along the Southeast Line, accounting for approximately 7% of the region’s total workforce, or about 36% of the jobs that are located near light rail in the Denver region today. (The majority of jobs near light rail in the Denver region are located downtown.)

Figure 3: Comparison of Jobs along the Southeast Line vs. the Region

<i>Geography</i>	<i>Number of Jobs (2009)</i>	<i>Share of Total</i>
Entire Region	1,287,824	
All Transit Corridors (within a half-mile)	245,309	19.0%
Southeast Line (within a half-mile)	87,559	6.8%

The Southeast Line offers a variety of different job opportunities in multiple industries and skill levels. **Figure 5** on the next page shows the location of jobs by industry as of 2009.⁶ The different colors represent the high-growth industries that the Mile High Connects Jobs Working Group identified as employing middle-skill workers: Utilities, Construction, Manufacturing, Retail, Transportation, Finance & Insurance, Professional & Technical, Health Care, and Accommodation & Food services. Industries that do not typically employ middle-skill workers are grouped into “Other.”

The majority of the jobs along the Southeast Line are in office-based industries (finance & insurance, professional & technical, and healthcare). Compared to other transit corridors and the region as a whole, the Southeast Line has a higher percentage of jobs in these three industries.⁷

Figure 4 below shows how the Southeast Line stacks up compared to the rest of the region.

Figure 4: Industries along the Southeast Line compared to the Region

<i>Industry</i>	<i>Southeast Line</i>	<i>All Transit Corridors</i>	<i>Region</i>
Utilities	0.3%	0.7%	0.6%
Construction	3.1%	3.1%	5.2%
Manufacturing	1.7%	3.0%	6.3%
Retail	8.0%	4.9%	10.6%
Transportation	1.6%	2.1%	3.5%
Finance & Insurance	11.7%	9.0%	5.9%
Professional & Technical	14.6%	12.7%	9.5%
Healthcare	14.6%	13.5%	11.6%
Accommodation & Food services	8.9%	8.8%	8.5%
Other	35.6%	42.1%	38.3%

⁶ 2009 is the last year for which data is currently available from the U.S. Census Bureau’s Longitudinal Employer-Household Dynamics (LEHD) database.

⁷ Data from the TOD Database: <http://toddata.cnt.org/>

Figure 5: Employment by Industry Type Along the Southeast Line

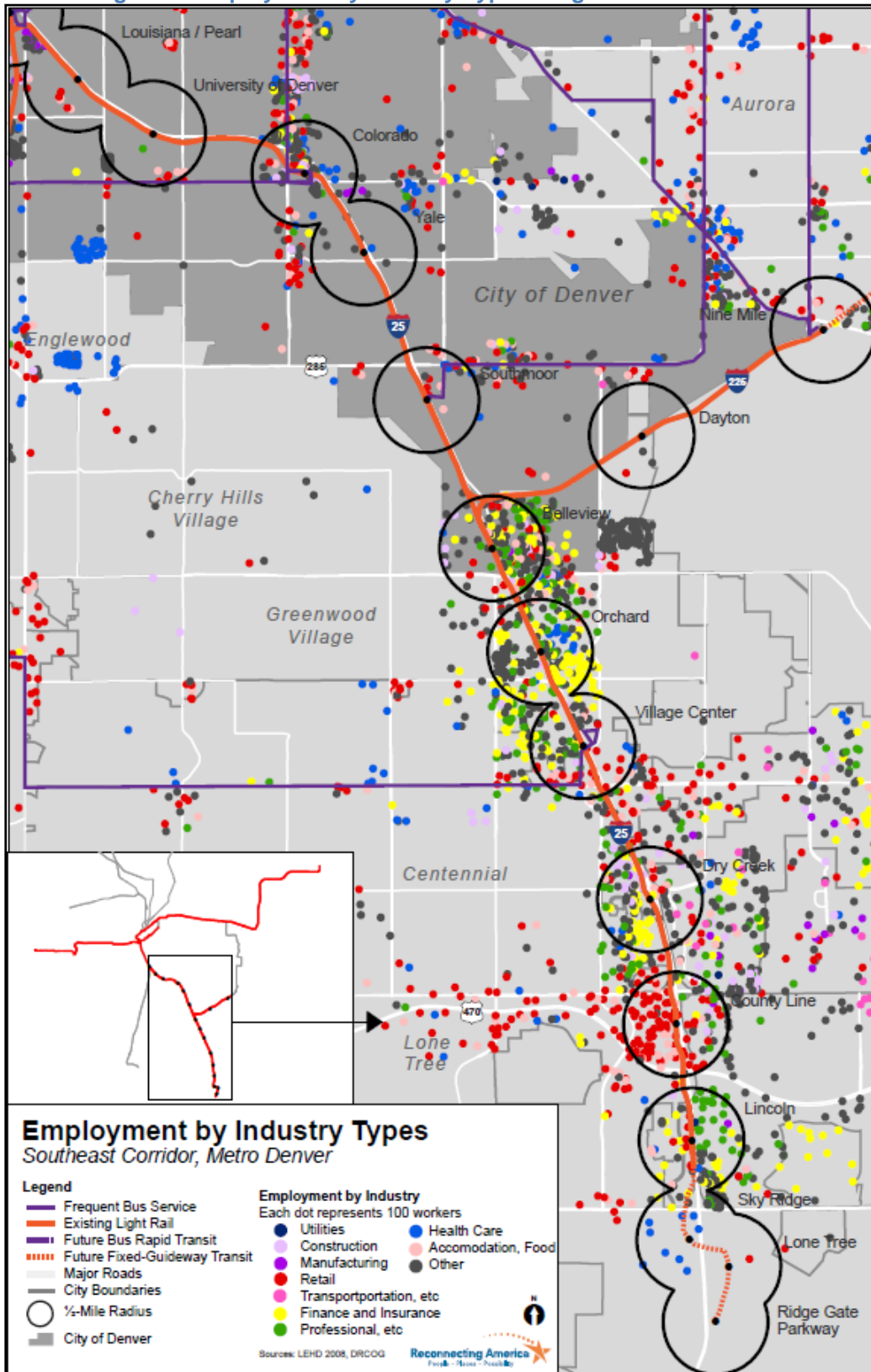
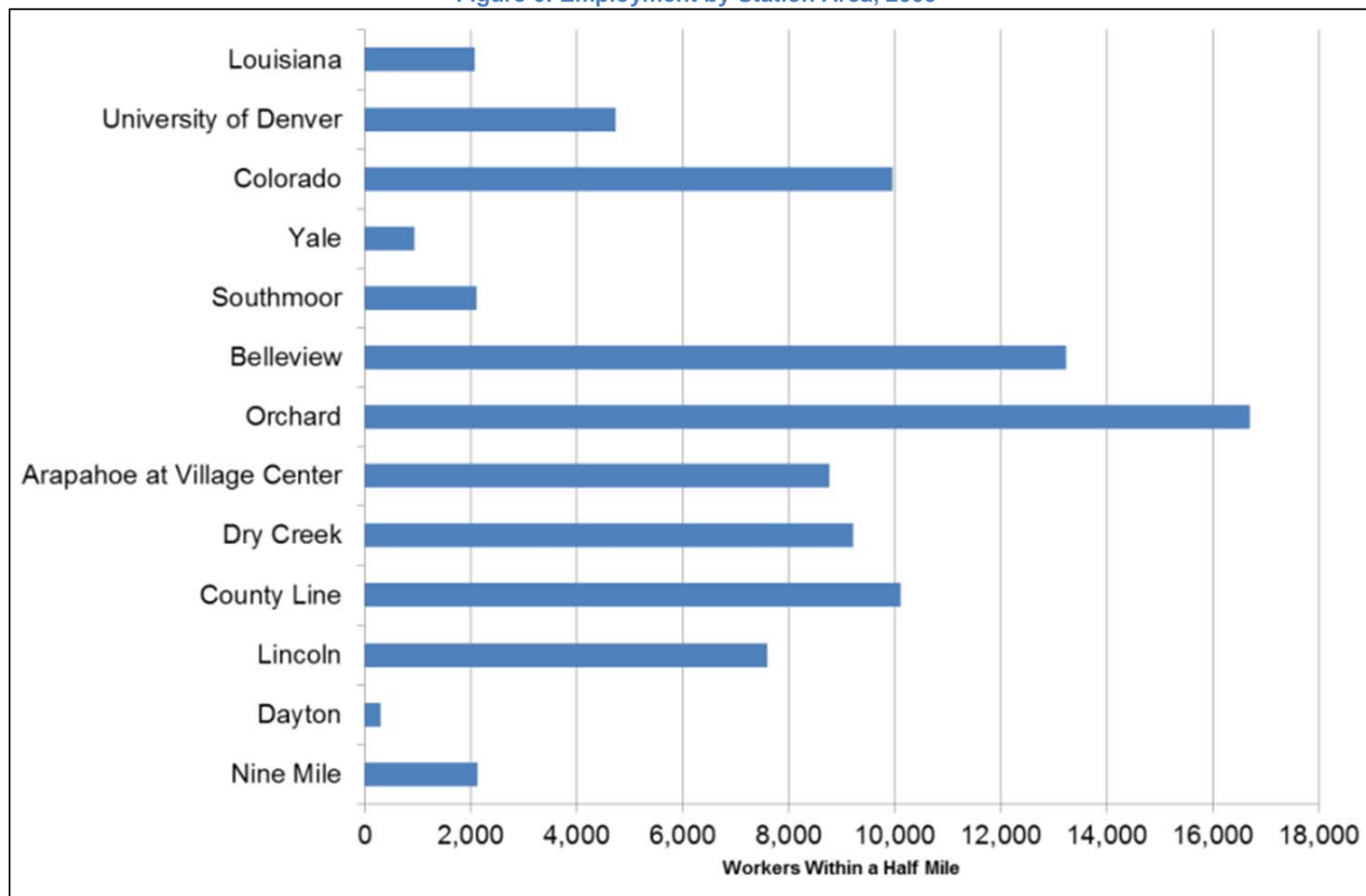


Figure 6 shows the number of jobs in each station area. Three stations in the heart of the Tech Center contain the most jobs (Bellevue, Orchard and County Line), while those closer to downtown Denver and past the Tech Center contain the least.

Figure 6: Employment by Station Area, 2009



What are the Opportunities for Lower Income Workers?

Middle skill jobs require less than a college degree, but more than a high school diploma, including skill building from on the job training to associate's degrees from community colleges. The Mile High Connects Jobs Working Group has identified middle-skill jobs (and the industries with higher shares of those jobs) as a key opportunity to for lower income workers to move up the career ladder and access economic opportunities. As Figure 7 shows, about 30% of jobs along the Southeast corridor fall into this middle-skill category, reflecting a similar proportion to the region's share of middle skill jobs.

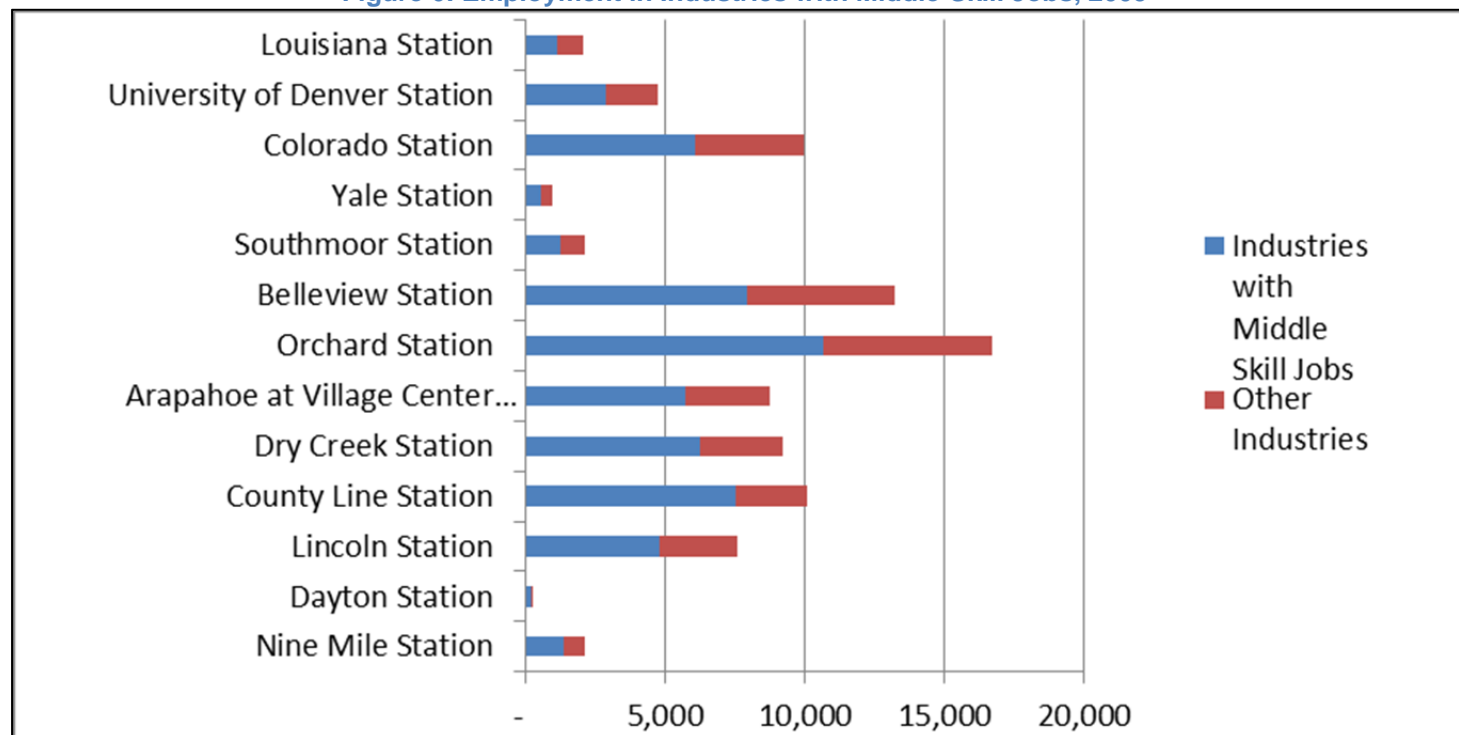
Figure 7: Percent of Jobs by Skill Level Industry

<i>Skill Level</i>	<i>Southeast Line Jobs</i>	<i>All Transit Corridors</i>	<i>Region</i>
Low skill	27%	32%	28%
Middle skill	30%	32%	31%
High skill	42%	36%	41%

Figure 8 below shows the number of jobs in each station area by industries with many middle-skill jobs and those with fewer middle-skill jobs. The firms that Mile High Connects has identified as offering middle-skill job opportunities are in blue, while all other industries are in red.⁸ The station areas with the most jobs are also the ones with the highest number of industries that employ middle-skill workers. The Belleview and Orchard stations contain the most industries with middle-skill jobs, while the Dayton and Yale stations have the least.

⁸ Mile High Connects worked with the City & County of Denver's Office of Economic Development department to identify industries that employed middle-skill workers and also showed signs of constant or high growth in the next five years.

Figure 6: Employment in Industries with Middle-Skill Jobs, 2009



How Has the Employment Landscape Changed Since the Light Rail Line Opened?

The Southeast Line began construction in 2001 and opened in 2006. During the construction period (2002-2006), job growth was steady, with a drop in 2003 that rebounded by the time the line opened in 2006. By 2008, the number of jobs along the line had increased by about 10,000 jobs, though it dropped again in 2009, most likely due to the recession. Overall, the number of jobs in the corridor grew from 79,249 in 2002 to 87,559 in 2009, a 10.5% increase. Compared to the region, job growth was much stronger along the Southeast Line. The entire metro area only saw a 0.65% increase in jobs between 2002 and 2009.

Figure 7: Change in Overall Employment, 2002-2009

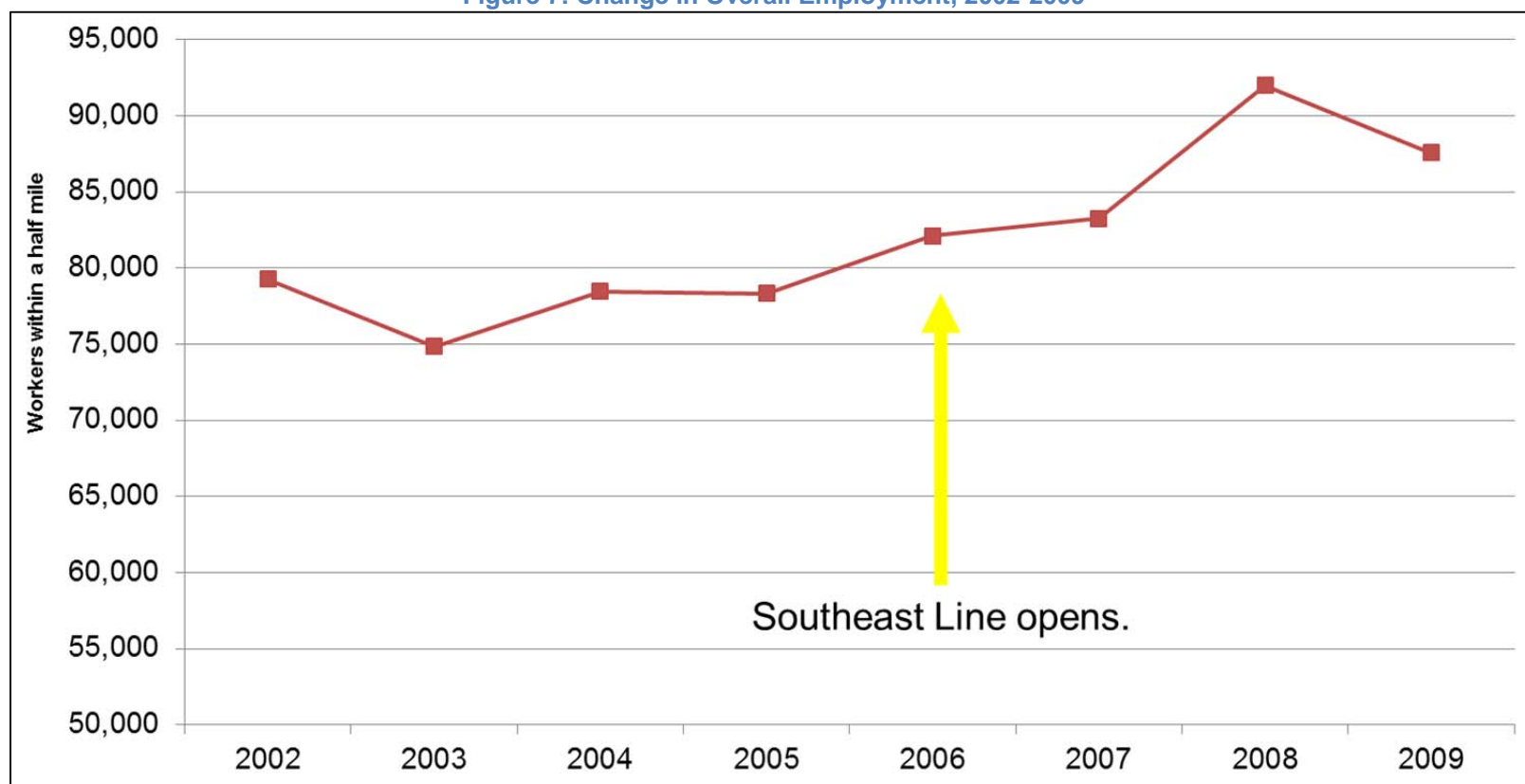
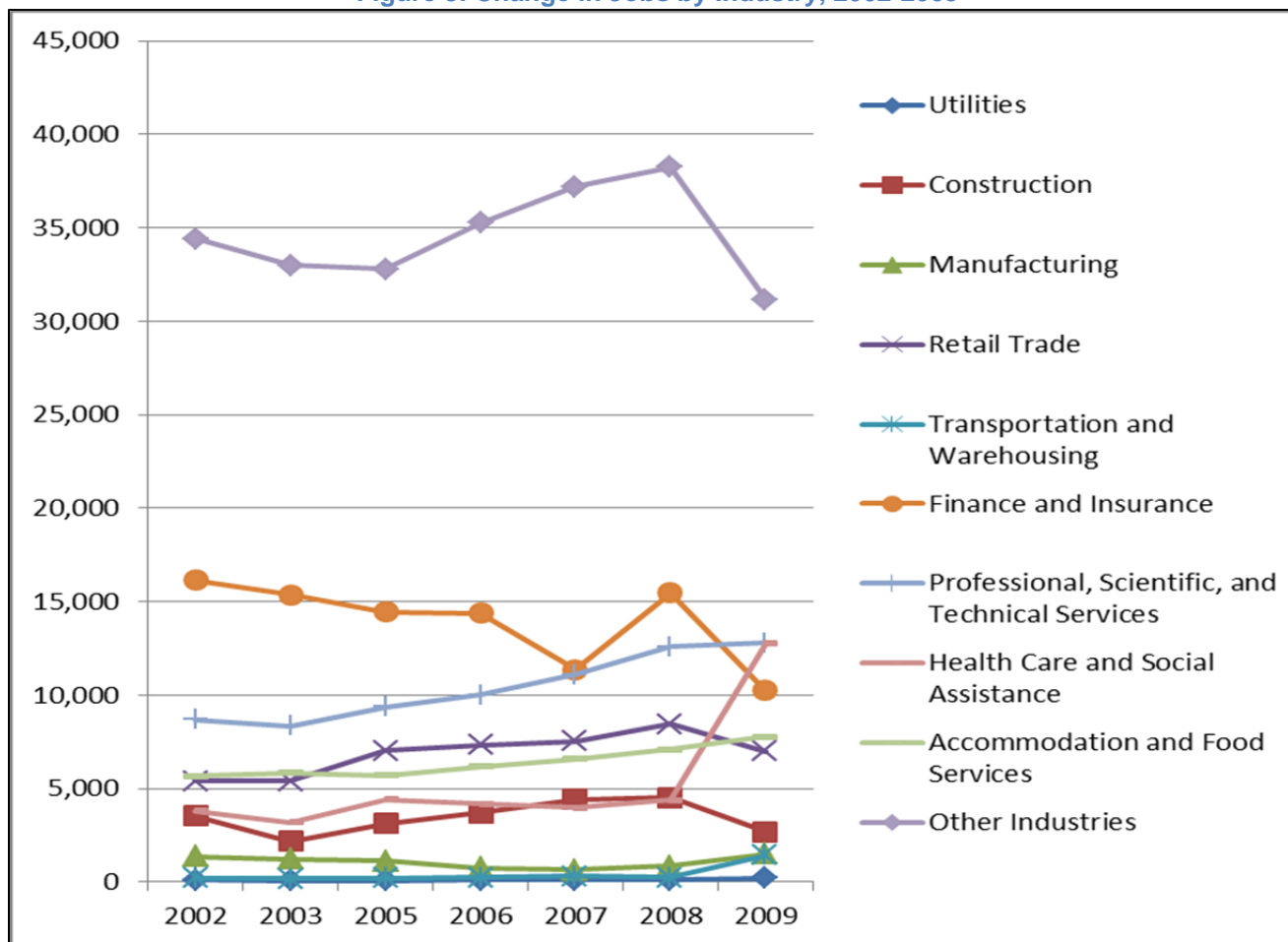


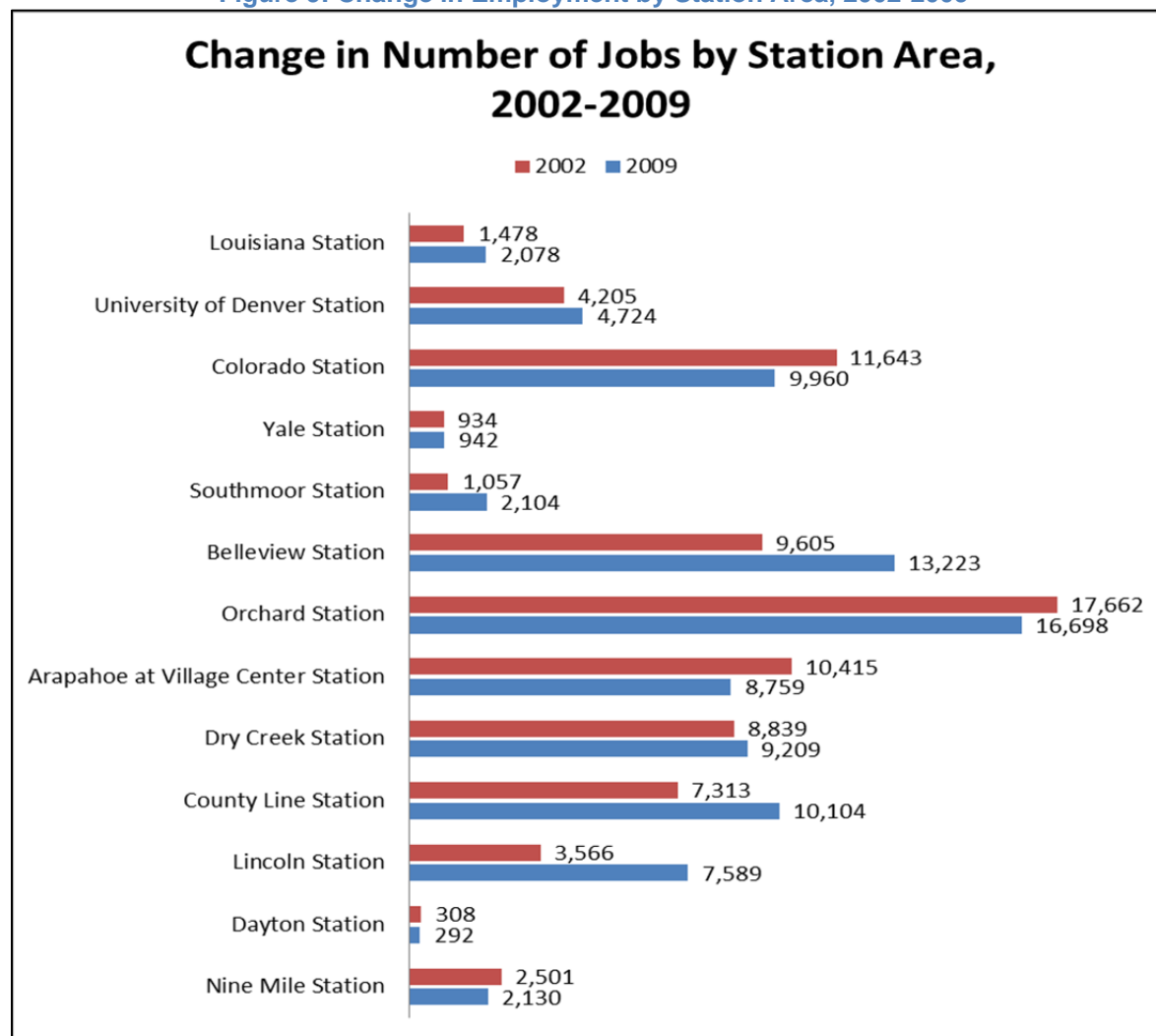
Figure 10 shows which industries gained or lost the most jobs along the Southeast Line. Most new jobs were created in the healthcare sector. The number of finance and insurance jobs have been declining slightly since 2002, with a large drop off during the beginning of the recession, while professional and scientific jobs have been trending upwards. Accommodation and Food services jobs have been slowly increasing, and retail was increasing until 2008 when job growth dropped off. Jobs in the manufacturing, transportation and warehousing, and utilities sectors, only a small portion of all jobs along the corridor, remained constant or decreased during this time period.

Figure 8: Change in Jobs by Industry, 2002-2009



The majority of job growth along the Southeast line occurred in three transit stations—Bellevue, County Line and Lincoln. All three are in the Tech Center and were already large job centers, so this may have been just natural growth for these station areas. The number of jobs decreased at five of the thirteen stations.

Figure 9: Change in Employment by Station Area, 2002-2009

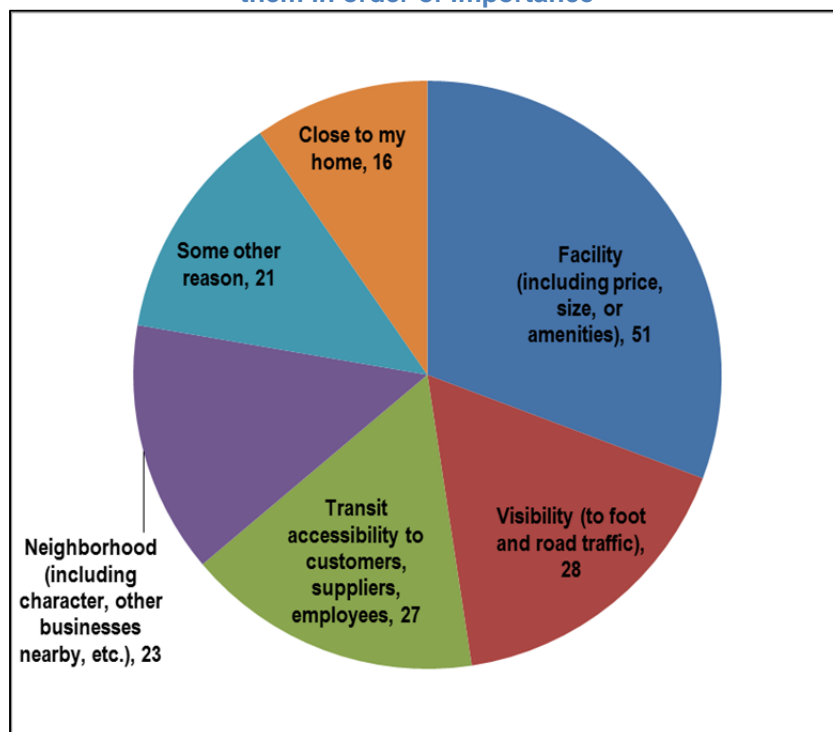


How Do Employers View the Southeast Line?

Several surveys have been conducted of both business owners and employees along the Southeast Line to better understand their support for transit. In 2009, the Denver Regional Council of Governments (DRCOG) conducted a survey of 138 firms located within a half mile of the Southeast Line transit stations.⁹ The survey found that **73% of firms were not aware that transit would be constructed when they moved to their current location.** Of the remaining firms, only 11% rated proximity to transit among the top three reasons for choosing their location, although nearly half reported that transit access had at least some influence in their decision. The top 3 location decisions were (1) near main roads for easy access, (2) good lease rates and (3) building structure suited their business needs.

In fall 2012, the Mile High Business Alliance and Metro Denver Small Business Development Center conducted surveys of business owners near transit throughout the region.¹⁰ **When asked to rank the top three considerations when selecting a business location, transit accessibility ranked third among Southeast Line respondents and fourth among all respondents.** The other three top considerations—facility, neighborhood and visibility—all relate to the built environment as well and are directly impacted by the types of transportation options available and the adjacent land uses. Moreover, 68.7% of Southeast Line respondents and 63.7% of all respondents stated that transit accessibility was a very strong or strong factor in their location decision.

Figure 10: Survey Results from Mile High Business Alliance Survey Question: Please select your top three considerations regarding the location of your business and rank them in order of importance¹¹

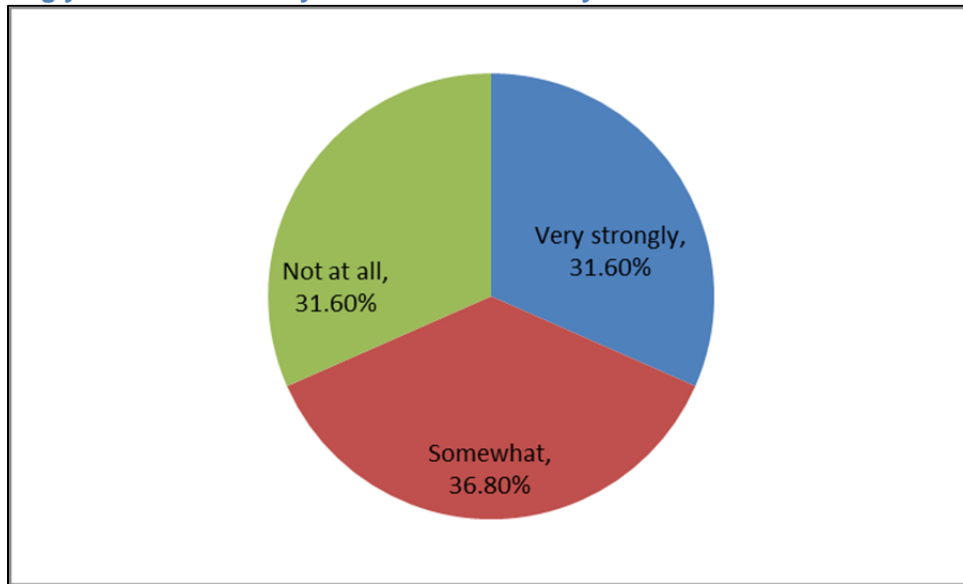


⁹ Denver Regional Council of Governments, 2009-2010. *Who is TOD?* Reports. Available at <http://tod.drcog.org/benchmark-study-who-tod-metro-denver>

¹⁰ Businesses were surveyed to better understand their current challenges and how they see expanded transit impacting their business. Survey data was collected in person, over the phone and also directly from participants using online survey software. There were a total of 99 respondents, with 19 businesses located along the Southeast Line.

¹¹ NOTE: Score is a weighted calculation. Items ranked first are valued higher than the following ranks, the score is the sum of all weighted rank counts.

Figure 11: Survey Results from Mile High Business Alliance Survey Question: How strongly does accessibility to transit factor into your consideration of where to locate?



Yet despite these high rankings, many employees are not currently taking transit, nor are employees providing incentives to use transit. When asked how employees got to work, **68% of Southeast Line respondents and 69% of all respondents stated that none of their employees took transit.** When asked what type of incentives they provide to employees, 68% of Southeast Line and 64% of all respondents stated “none.” Some offer flex hours, but none provide vouchers, last mile shuttles or tax-free transit/parking reimbursements.

What Are the Challenges of Getting From the Station to the Workplace?

Because the Southeast line runs along an interstate highway, there are major connectivity challenges for riders getting to and from stations. People living or working on the opposite side of I-25 have to cross pedestrian bridges to access the light rail stations, and even those living or working on the same side sometimes have no sidewalks or lighting along the paths to stations. In many cases, office buildings are too far away to walk to from stations, but very few employers provide shuttle services or RTD does not offer convenient bus routes to connect middle-skill workers to their final destination. Most of the businesses in this area also have large surface parking lots where employees can park for free, so there is little incentive for workers to switch to transit. Moreover, very few employers along the Southeast line offer incentives to use transit—only 4% of Southeast employers offer transit benefit passes or similar incentives vs. 33% of downtown employers. Groups like the Southeast Connections,¹² a transportation management association, are working to address this issue and provide solutions for workers seeking alternative transportation modes, including holding transit fairs with local businesses to educate and encourage their employees to seek alternative commutes. Southeast Connections will be coming out with a report on addressing last-mile connections in the spring of 2013, after the release of this study, which should provide additional recommendations on this issue.

Figure 14 displays information on current bus routes and bicycle connections along the Southeast Line, while **Figure 15** provides more detailed information on these and other last-mile connections.¹³ Six of the thirteen stations have pedestrian bridges that span I-25 and connect to the other side: Dayton, Orchard, Arapahoe at Village Crossing, Dry Creek, County Line and Lincoln.¹⁴ These bridges double as bicycle paths and connect to regional bicycle routes. Two of the stations within Denver have B-Cycle stations: Louisiana-Pearl and University, though neither of these are part of the Denver Tech Center. Eleven of the thirteen stations connect to local bus routes but bus service is still very limited. At one time there was a circulator shuttle called the “Link Bus” that traveled through the Tech Center to connect workers to their jobs, but that service has been discontinued.¹⁵ Over 7,000 parking spaces are available at transit stations along the Southeast Line, with Louisiana-Pearl (again, outside of the Tech Center) being the only station without any parking. Call-n-Ride services are also available at six stations. These are on-demand shuttles that cost the same as a bus or light rail ride (\$2.25) that provide curb-to-curb service within a designated service area.

¹² Southeast Connections website. Available at: <http://www.southeastconnections.com/?n=south>

¹³ RTD, Light Rail System Map. Available at: http://www.rtd-denver.com/LightRail_Map.shtml

¹⁴ Metro Denver Chamber of Commerce, T-REX Fact book. Available at: http://www.metrodenver.org/files/documents/transportation-infrastructure/highways/Trans_HWY_T-REXFactBook.pdf

¹⁵ “More riders climbing aboard free Denver Tech Center Buses.” *Denver Business Journal*, 29 July 2002. Available at <http://www.bizjournals.com/denver/stories/2002/07/29/story5.html?page=all>

Figure 12: Bus & Bicycle Routes along Southeast Line

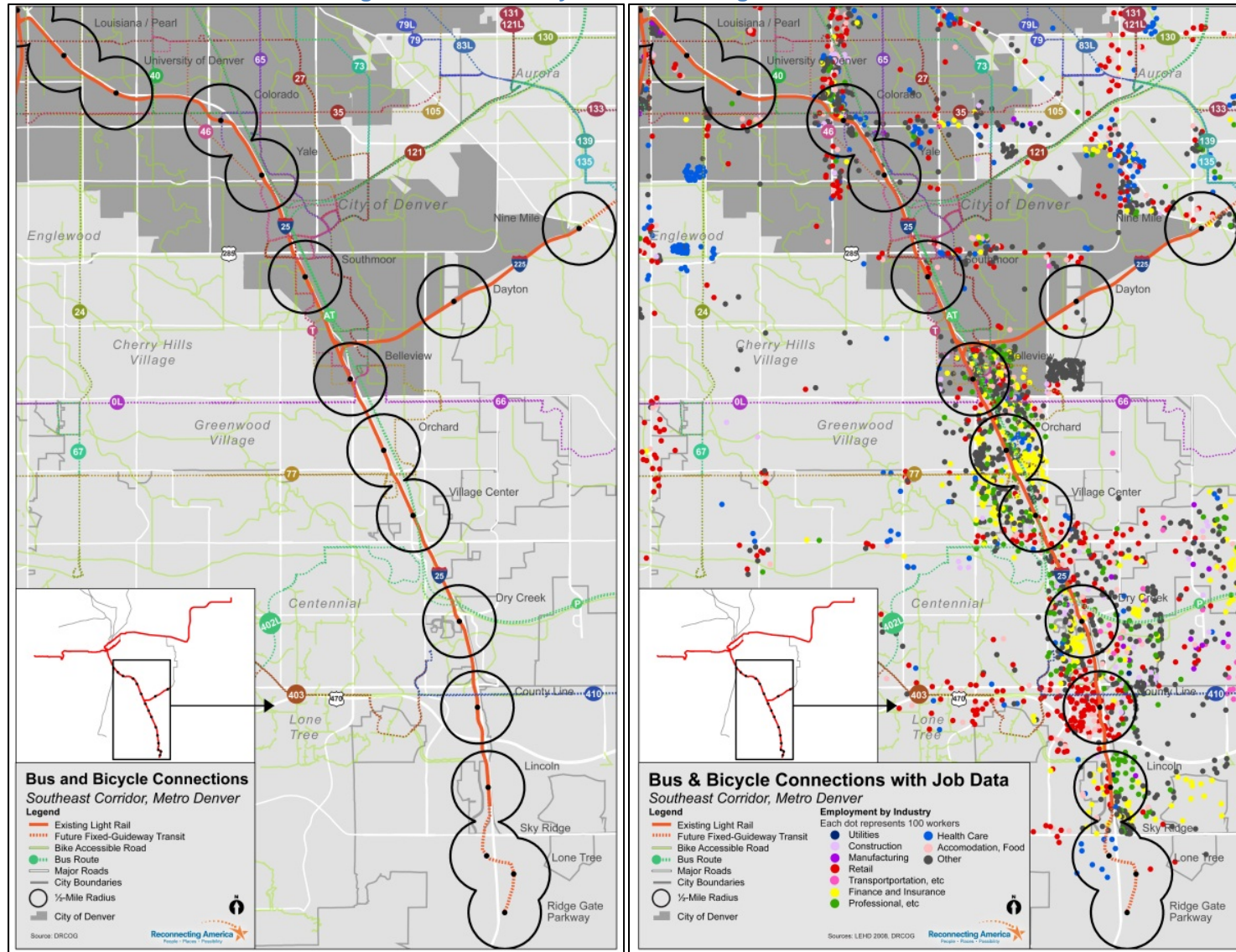


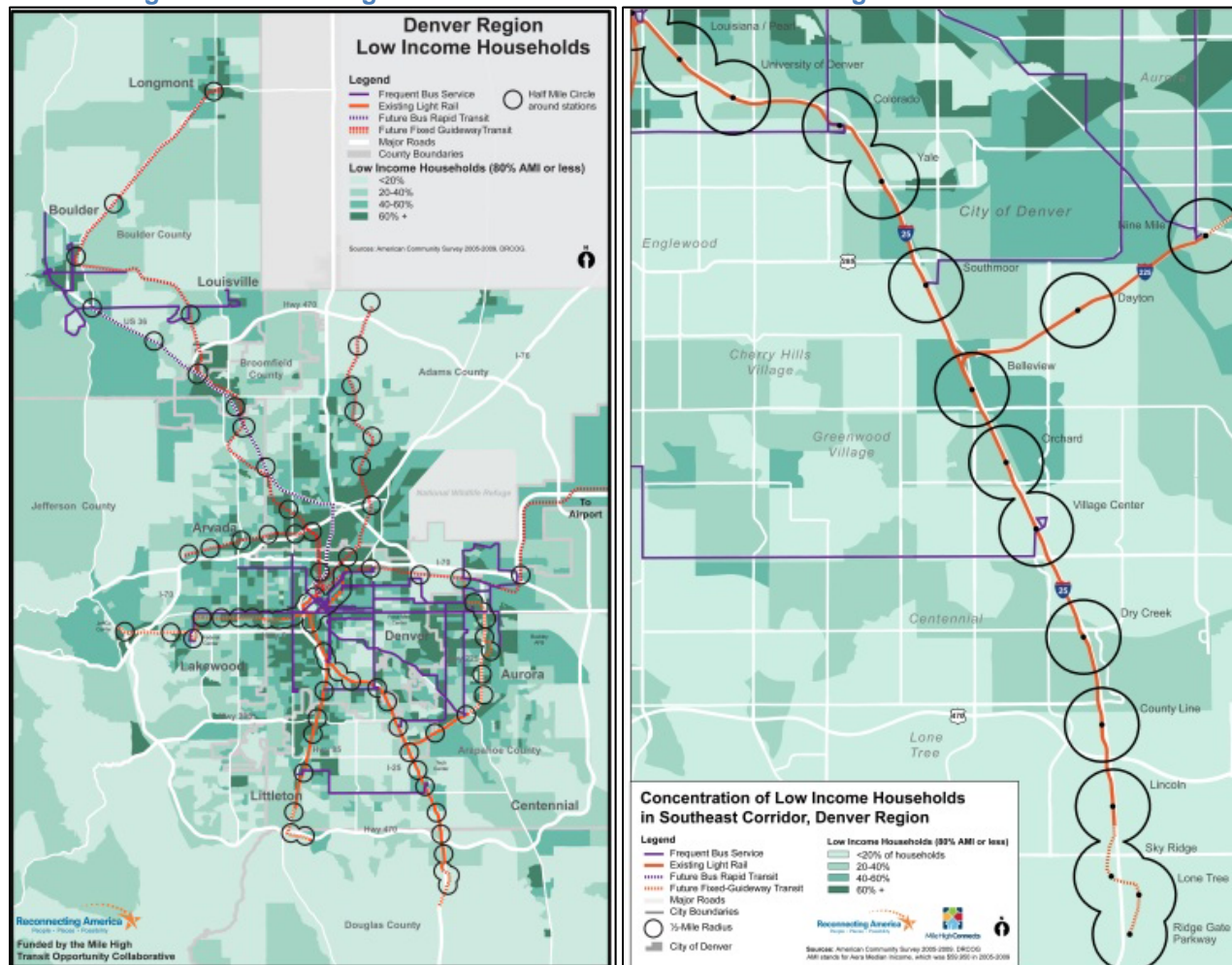
Figure 13: Last Mile Connections along the Southeast Line

Station	Bus Routes	Parking Spaces	Bike Racks	Bike Lockers	Bike Routes	Pedestrian Bridge/ Sidewalks	B-Cycle?	Call-n-Ride?
Louisiana-Pearl	2 (11, 12)	None	2	0	2 north-south routes (Washington St, Emerson St.); 1 east-west route (Buchtel Blvd).	No, but streets has sidewalks crossing over I-25	Yes	No
University	1 (24)	540	10	12	1 east-west route (Buchtel Blvd); 1 north-south route (through University of Denver campus)	No but streets have sidewalks. No connection over I-25.	Yes	No
Colorado	4 (21, 40, 46, DD)	363	8	24	None	Bridge in planning stages as of January 2013	No	No
Yale	1 (27)	120	8	10	High Line Canal in close proximity	No	No	No
Southmoor	4 (35, 40, 65, 105)	788	16	22	None	No	No	No
Bellevue	2 (46, 73)	59	12	12	1 east-west route (Union Ave) that connects to several regional trails	No	No	Yes
Orchard	1 (73)	48	0	0	1 pedestrian bridge/bike path I-25 connecting to DTC Parkway	Yes	No	Yes
Arapahoe at Village Center	6 (65, 66, 73, AT, ATX, T)	1,115	8	8	1 pedestrian bridge over I-25; path connecting to Fiddlers Green circle	Yes	No	Yes
Dry Creek	None	235	6	0	1 pedestrian bridge/bike path over I-25 connecting to Inverness Drive	Yes	No	Yes
County Line	1 (402L)	388	4	16	1 pedestrian bridge/bike path connecting over I-25 to frontage road; 1 path connecting to Park Meadows mall	Yes	No	Yes
Lincoln	2 (403, 410)	1,734	8	16	1 pedestrian bridge under I-25 connecting to frontage roads on both sides	Yes	No	Yes
Dayton	None	250	16	8	1 pedestrian bridge over I-25 connecting to Cherry Creek State Park; 1 path connecting north to neighborhood	Yes	No	No
Nine Mile	11 (35, 79L, 83L, 121, 130, 131, 133, 135, 139, AT, AX)	1,225	16	28	1 path over I-25 connecting to Cherry Creek trail; 1 path north to Parker Road and Parker East Trail	No	No	No

Who Lives Along the Southeast Line?

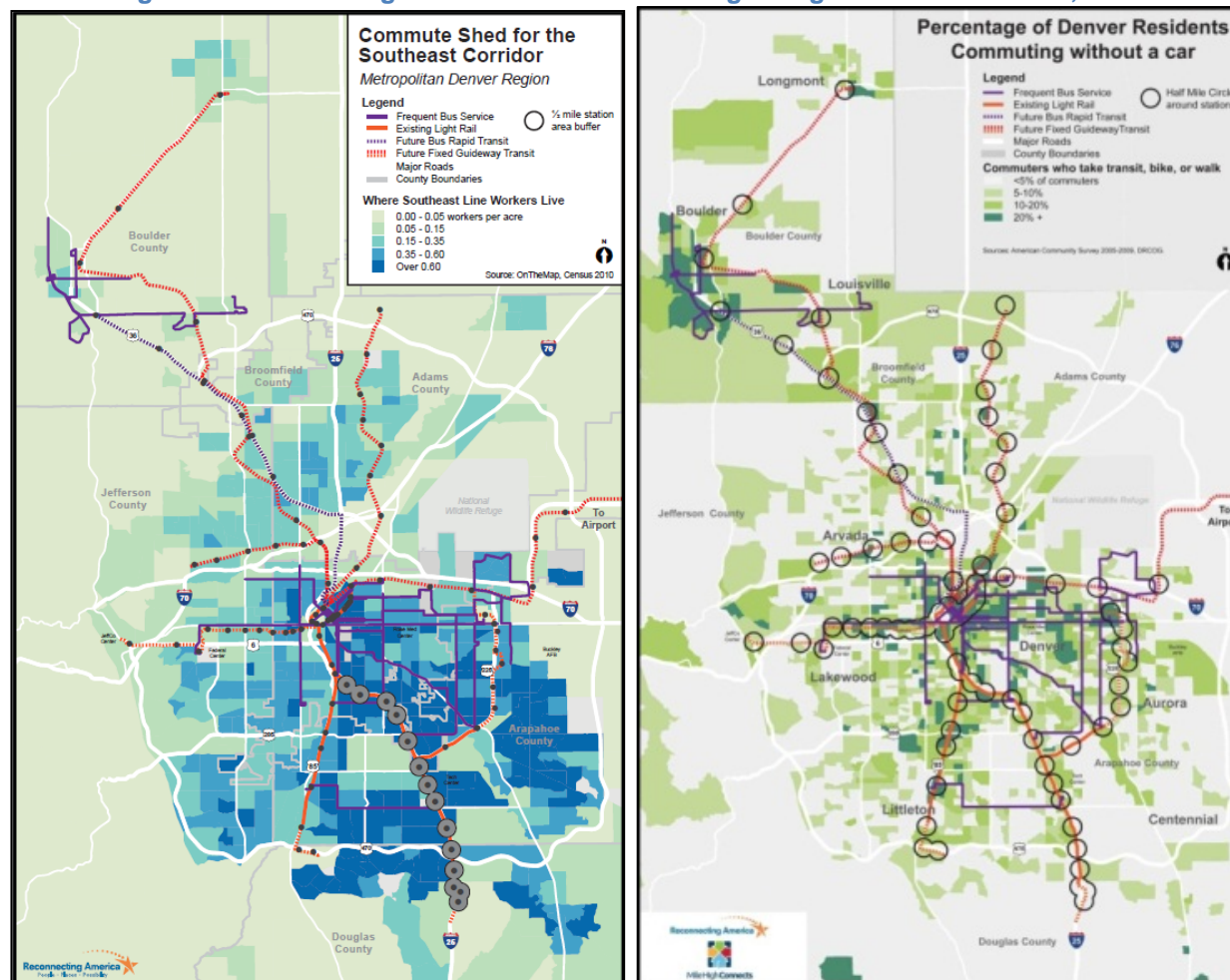
The Southeast Line runs through some of the Denver region's most affluent communities. **Figure 16** displays the percentage of low-income households living in the region versus the Southeast Line, with lighter shaded areas having higher incomes.

Figure 14: Percentage of Low Income Households in the Region vs. Southeast Line



There are very few low-income communities along the Southeast Line, indicating that low- and middle-skill workers may be traveling long distances to get to work here. This is confirmed by looking at commuting patterns and vehicle ownership rates in **Figure 17**. Tech Center workers tend to live on the Southeast side of the Denver region, but few live near the light rail line or close enough to walk or bike to their jobs. Residents who live near the Tech Center also have higher rates of vehicle ownership compared to other parts of the region, so even if they could take transit, they are probably driving to work.

Figure 15: Commuting Patterns of Workers Living Along the Southeast Line, 2010



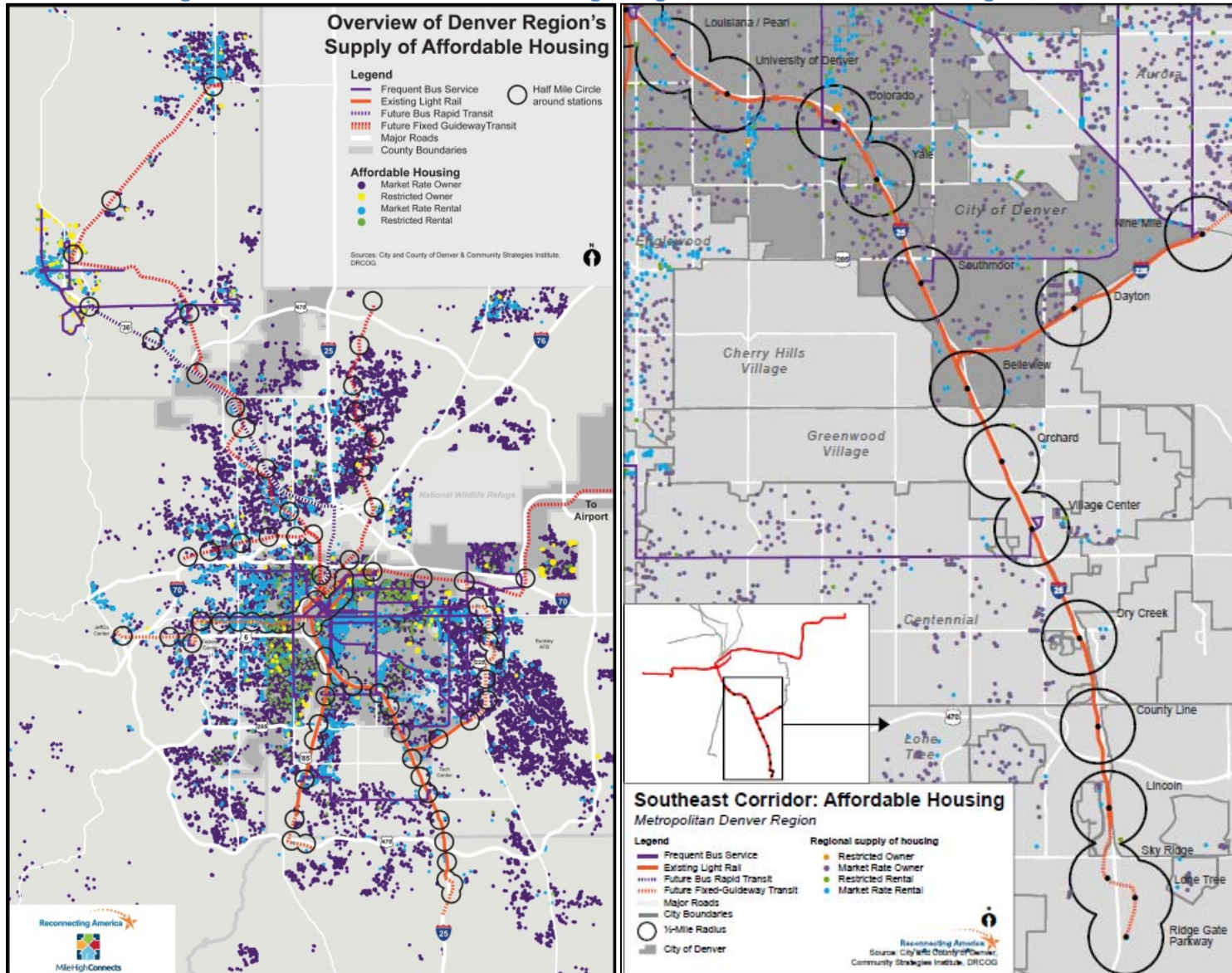
Affordable housing is also in short supply along the Southeast Line. Of the 12,094 housing units that have been proposed since 1999, only 2.7% (330 units) have been proposed or built as affordable units.¹⁶

Building more affordable housing near transit would be beneficial to the region's lower income residents, who often spend a greater proportion of their income on housing and transportation costs, and would be closer to job opportunities and other essential destinations via the light rail line. Yet this part of the region is very affluent and the communities tend to be opposed to providing more affordable housing. Most of the groups who advocate for affordable housing in the region do not devote significant resources to the Tech Center communities because of neighborhood and political opposition, as well as the traditional commercial land use patterns and zoning regulations in this part of the region that discourage any type of housing from being built near transit stations.¹⁷ There are some affordable housing units clustered near stations within the City of Denver and there are plans for more at the Alameda and I-25/Broadway stations, the two stations directly north of the Southeast Line that connect it with downtown. There is also some affordable housing near the Village Center station area. But overall, the Southeast Line provides very few opportunities for lower income residents to both live and work in transit-oriented communities.

¹⁶ RTD/DRCOG TOD Project Viewer. Available at <http://www.drcog.org/index.cfm?page=TODProjectViewer> (last accessed January 4, 2013).

¹⁷ Reconnecting America staff spoke with other members of Mile High Connects who work in the affordable housing, community organizing and social equity fields to understand the history of advocacy along the Southeast Line

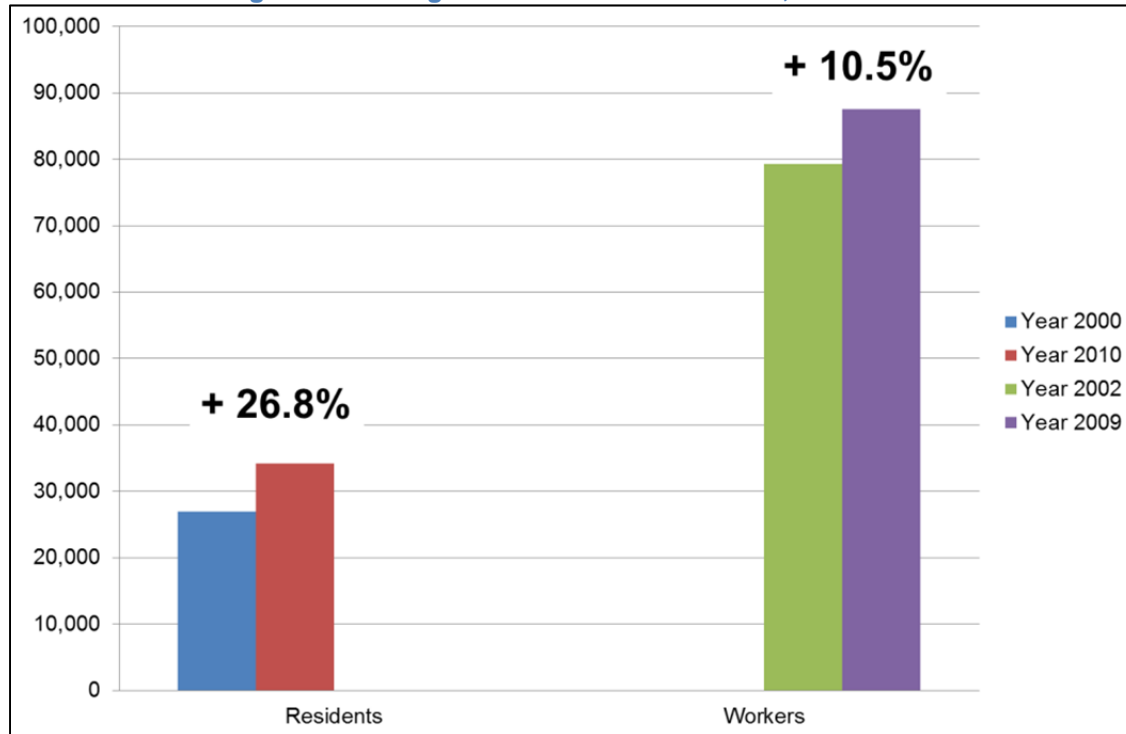
Figure 16: Location of Affordable Housing along the Southeast Line vs. the Region, 2011



How Did Housing Change After the Light Rail Line Opened?

While the Southeast Line is primarily an employment-oriented corridor, the greatest amount of new development has been new housing units. The number of residents living within a half-mile of a transit station rose 26.8% between 2000 and 2010, while the number of new workers rose 10.5% between 2002 and 2009.¹⁸ This suggests that the land use mix is becoming more balanced, as more people seek to live closer to transit and use it to get to work and other destinations.

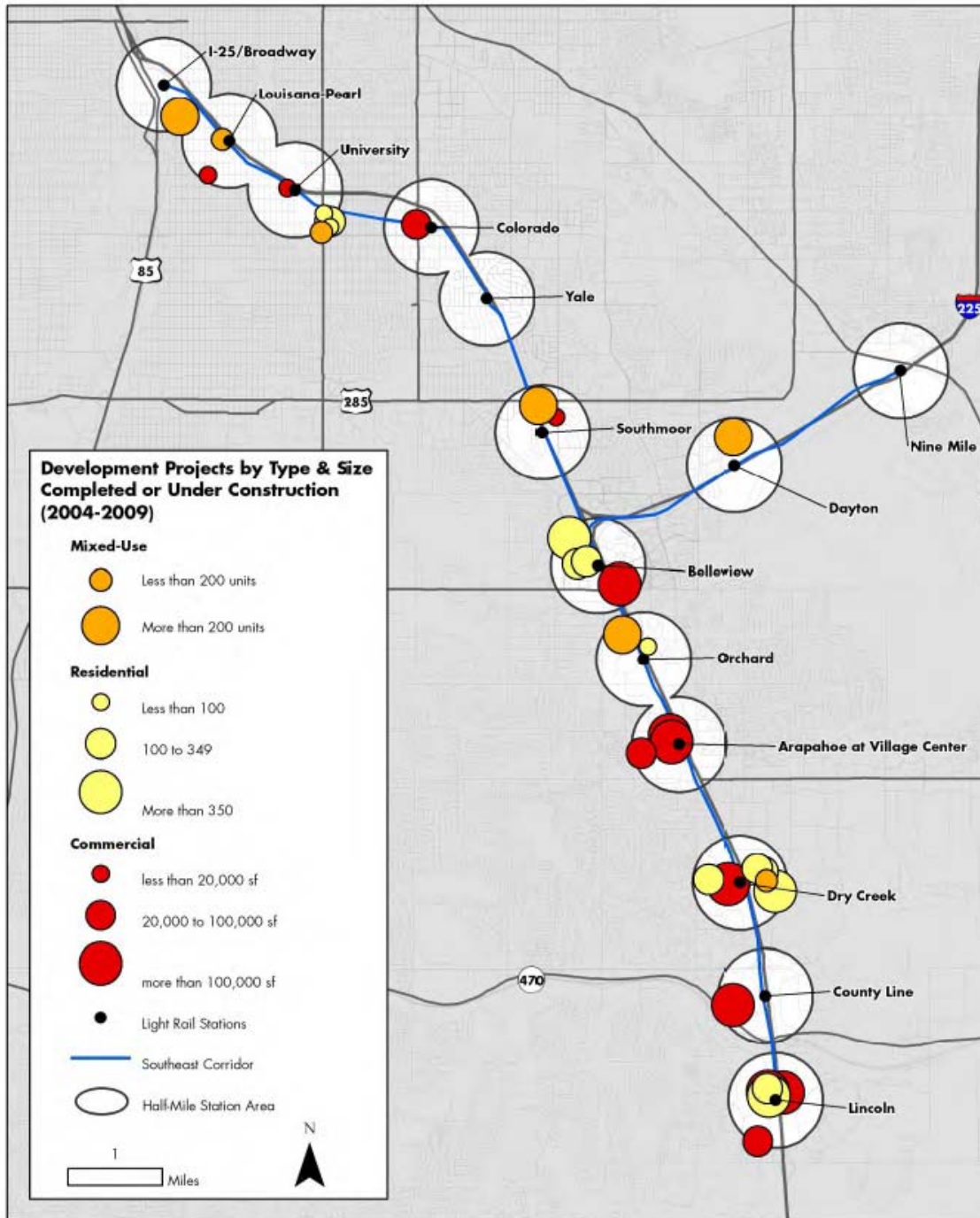
Figure 17: Change in Residents vs. Workers, 2000-2010



In 2010, the Center for Transit-Oriented Development (CTOD) released a report examining the development that occurred along the Southeast Line after the line opened in 2006. The report compared the Southeast Line with two other light rail lines that opened during this period, the Hiawatha Line in Minneapolis and the Blue Line in Charlotte. With respect to the Southeast Line, the report found that corridor was a strong market before light rail was introduced. The Tech Center in particular captured much of region's employment growth from 2004 to 2009. The pace of new commercial and residential development increased significantly after transit line opened and tended to be large scale (90,000 square feet). A total of 7.8 million square feet of development occurred, mostly on large greenfield sites. Compared to Minneapolis and Charlotte, the scale of development was larger, but unlike those two corridors, the relative strength of the Southeast Line before the light rail line opened makes it hard to attribute job growth and real estate development to the light rail line alone.

¹⁸ Population data comes from the U.S. Census, which counts the population every 10 years, while the employment data comes from the Local Employer-Households Dynamics data, which only had data for the 2002-2009 time period.

Figure 18: Development Along the Southeast Line by Type & Size, 2004-2009



Sources: Denver Regional Transportation District; Denver County; Arapahoe County; Douglas County; CTCD, 2009.

According to RTD and DRCOG's TOD Project Viewer,¹⁹ approximately 538 acres of land has been developed or planned for future development near the Southeast Line stations since the agencies began tracking activity in 1999.²⁰ Of the 77 projects identified along the corridor as of February 2010, 39 are completed and 38 are under construction or proposed. The projects are split almost evenly between commercial and residential: 32 are residential, 28 are commercial and 17 are mixed-use. Approximately three million square feet of office space has been built or planned since 1999, along with 643,569 square feet of retail space and 6,564 residential units.

Figure 19: Amount of New Development along SE Line

<i>Development Type</i>	<i>Completed or Under Construction (as of February 2010)</i>	<i>Proposed (as of February 2010)</i>	<i>Total</i>
Residential (dwelling units)	6,195 units	369	6,564
Retail Square Feet	601,569 SF	42,000	643,569
Office Square Feet	1,931,441 SF	1,073,785	3,005,336
Medical Square Feet	40,000 SF	0	40,000
Hotel Rooms	471 rooms	237	708

Most of this new development is occurring in the Tech Center at three stations: Belleview, Arapahoe at Village Center and Lincoln. The Tech Center stations are highlighted in pink below.

Figure 20: Number of Development Projects since 1999 by Station Area

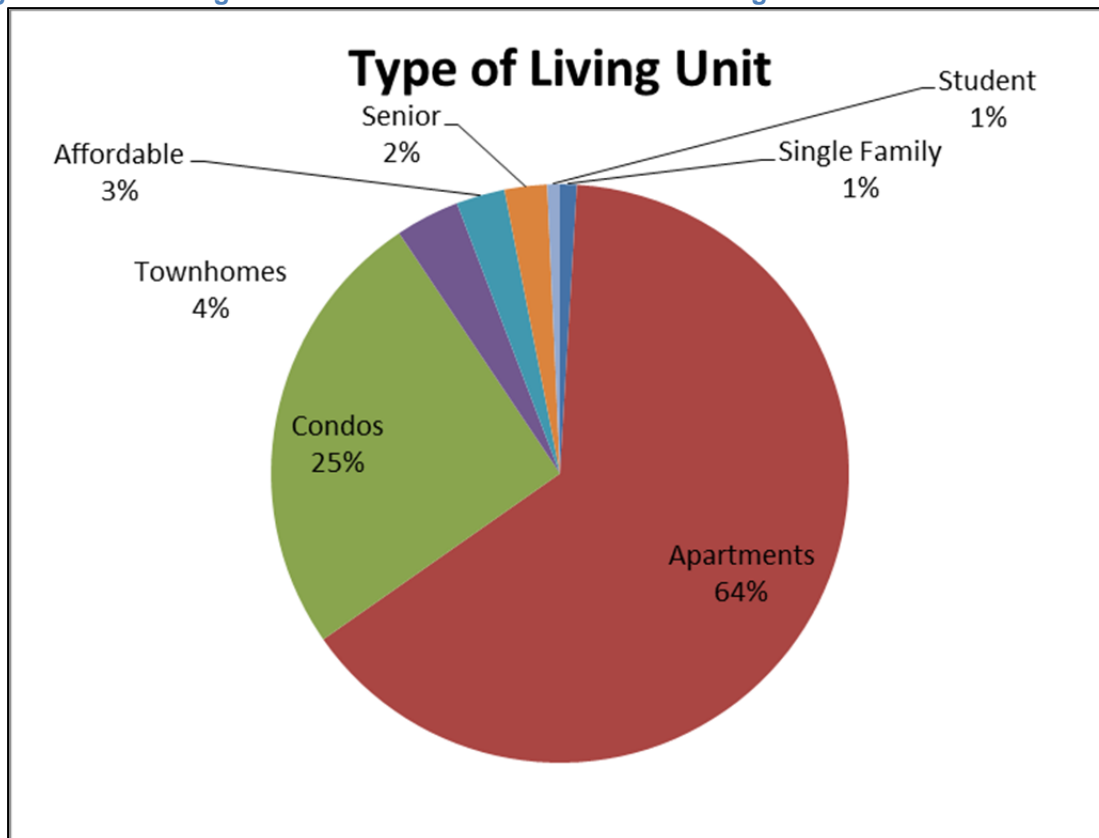
<i>Station Area</i>	<i>Commercial Projects</i>	<i>Residential Projects</i>	<i>Mixed-Use Projects</i>	<i>Total Projects</i>
Louisiana-Pearl	0	0	2	2
University	1	5	1	7
Colorado	1	1	1	3
Yale	0	1	0	1
Southmoor	1	0	1	2
Belleview	5	3	2	10
Orchard	0	2	1	3
Arapahoe	10	1	3	14
Dry Creek	2	4	1	7
County Line	1	0	1	2
Lincoln	3	5	3	11
Dayton	0	5	0	5
Nine Mile	0	0	0	0
Sky Ridge (planned station)	4	5	1	10

¹⁹ RTD/DRCOG TOD Project Viewer. This tracks all development activity taking place within a half mile of transit stations. Available at <http://www.drcog.org/index.cfm?page=TODProjectViewer> (last accessed January 4, 2013).

²⁰ RTD, *TOD Status Report 2011*. Available at http://www.rtd-fastracks.com/media/uploads/main/TOD_Status_Report_2011.pdf (last accessed January 4, 2013).

Of all the residential developments that have been proposed, including those that have been cancelled, most are high-density, multi-family apartments or condominiums. Almost 90% of all proposed residential development has been either apartments (64%) or condos (25.3%). Only 2.7% of these units are subsidized affordable units through local, state or federal housing programs (330 units total). Other units may be affordable at market-rate.

Figure 21: Percentage of Different Residential Units Built Along the Southeast Line since 1999

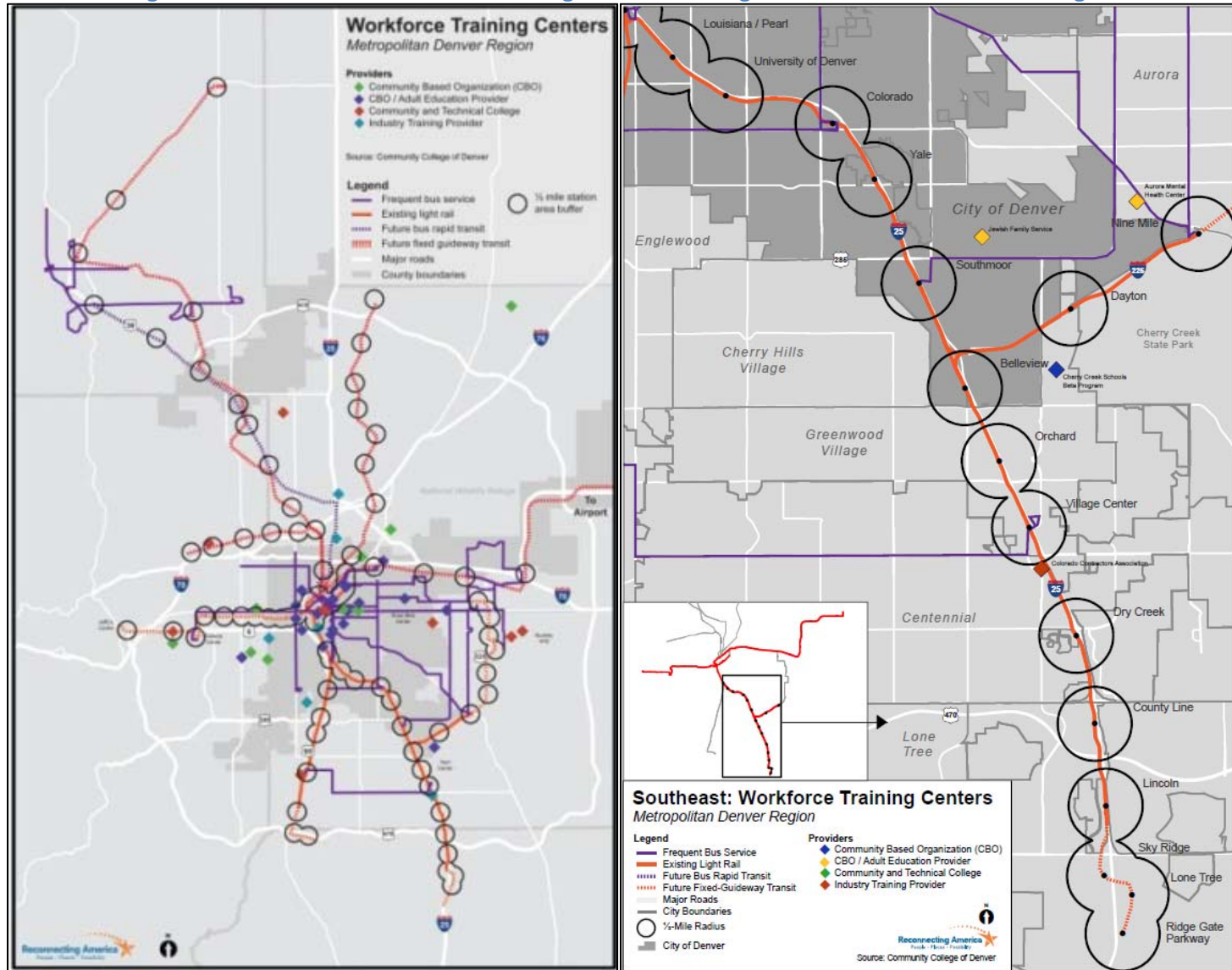


What Kind of Workforce Training and Work-Supportive Services Are Available?

People have many other places to go besides their workplace. Getting to work is just one part of the equation for many people. They also have to take their children to childcare or school, run errands, and access additional workforce training opportunities. These types of businesses are known as “work-supportive services”. If these destinations are not near transit stations, then low- and middle-skill workers are forced to endure long commutes taking care of all of their daily needs. Parents may choose to drive to work if their childcare options are not located near transit, and may end up paying more in transportation costs because of the limited availability of work-supportive services near transit stations.

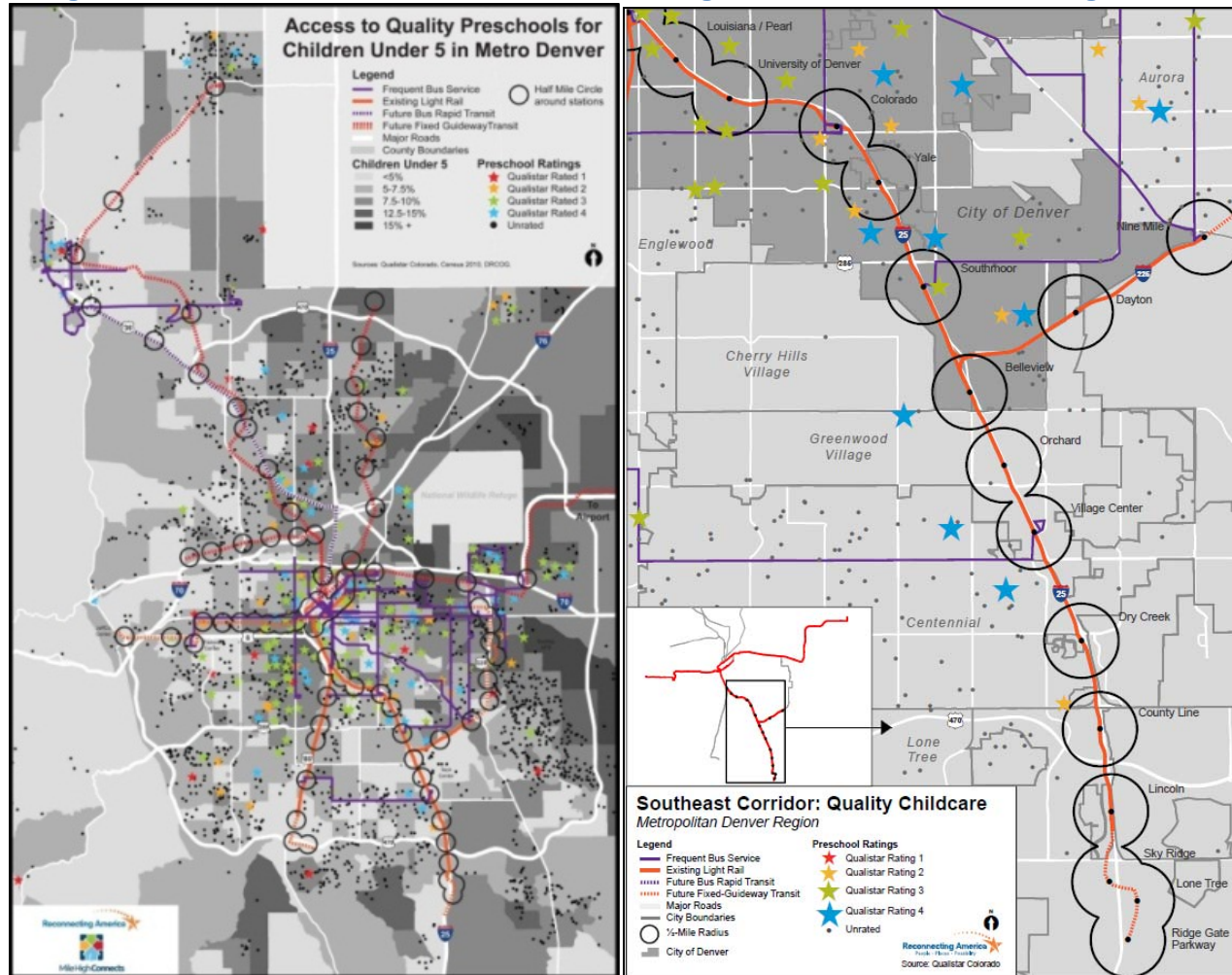
Figures 24 through 25 show the location of some of these work-supportive services along the Southeast Line. Workforce training providers are shown in Figure 24. There are very few providers within close proximity to the Southeast Line. Most are located in other parts of the region, including downtown Denver.

Figure 22: Location of Workforce Training Providers along the Southeast Line vs. the Region



There are also very few childcare providers near the Southeast line outside of the City of Denver. Most are located closer to downtown. The Tech Center has few to none in many station areas, which may limit many people's use of transit if they have to take their children to childcare.

Figure 23: Location of Preschools and Childcare along the Southeast Line vs. the Region, 2012



Putting It All Together: The Missed Opportunity of the Southeast Line

The job growth and real estate development trends since the light rail opened suggest most of the growth would have occurred regardless of the light rail line opening, and that very little proactive planning was done to encourage new job growth in middle-skill industries or to attract new real estate development for low- to middle-income households. The result is a light rail line that many view as an amenity rather than a mode of transportation that can provide greater access to opportunities for workers in the region. Left almost entirely to market forces, the Southeast Line remains a center of high skill office-based jobs and expensive housing options, with very few work-supporting businesses or workforce training providers, and severe last mile challenges to making transit work for most commuters.

Unlike other transit corridors that have been proposed since the Southeast Line, there was very little proactive planning by the jurisdictions along the line. There are no station area plans for any of the thirteen station areas and TOD is only addressed in larger neighborhood-scale plans or citywide comprehensive plans. In Denver, the Louisiana-Pearl and University stations were lumped in with neighborhood plans, while the remaining Denver stations (Colorado, Southmoor and Yale) have no station area plans. Greenwood Village, Centennial and Douglas County have since embraced TOD in their comprehensive plans but have not prepared station area plans for any of the stations. Most new development has been driven entirely by private real estate developers. This lack of planning has resulted in very few opportunities for community engagement or public input into what the Southeast Line station areas should provide in terms of housing, jobs and other community resources. The lack of engagement with the business community has led to minimal focus on connecting these existing industries and firms to transit, nor helping them think through the benefits of transit to their employees and bottom line. It also has led to minimal job growth outside of the industries that were already there, and almost no focus on growing opportunities for low- and middle-skill workers. The result is a transit corridor that supplements what is already there, instead of acting as a driver of economic opportunity for all residents of the region.

So What Do We Do? Recommendations for Other Corridors

The Southeast Line presents a cautionary tale for other transit corridors in the Denver region. While many communities are already being more proactive with their land use planning, the lack of an economic and workforce development emphasis in these plans is still troubling from a social equity perspective. To apply the lessons learned from the Southeast Line to other transit corridors in the region, the following recommendations are suggested to ensure that social equity and access to economic opportunity can achieve elevated importance in planning decisions.

Understand each corridor's strengths and weaknesses. Each transit corridor in the Denver region presents a different set of opportunities and challenges. The Southeast Line was already a major employment center for office workers in the Tech Center, and that did not change after the line opened. By mapping and analyzing data along each corridor, stakeholders can visualize where there are gaps in resources and prioritize investments in certain types of development. Communities and community-focused organizations should conduct more in-depth research and analysis on each station area, corridor and the municipalities as a whole to see what types of businesses and jobs are already there and how to retain and promote growth among them.

Incorporate economic development into station area and neighborhood plans. Engage local economic development staff in the planning process to understand their priorities and also what resources are available for improving connections to jobs and workforce training through transit. This will also help officials figure out what industries to target for the station areas, and what types of land use, zoning, etc. are required for the station area to thrive economically and equitably.

Conduct outreach to employers, workforce training providers and other supportive service providers about the benefits of transit. Survey results show that employers do not see the benefit of transit to their workforce, or to their bottom line. Education and capacity building efforts are needed to communicate these benefits to the business community, as well as the workforce, education and housing communities, if there are to be real changes in the way workers commute in the Denver region.

Improve last-mile connections. The Southeast Line's alignment along an interstate highway and major suburban office parks with large surface parking lots presents major connectivity challenges. While groups are already working to improve these conditions, more proactive efforts and investments are needed along other transit corridors to ensure that potential riders have good access from day one, and that employers are aware of the challenges that their workers face in using transit to get to work.

Engage community members in the planning discussion. Very little station area planning was done along the Southeast Line, so there were very few opportunities for community input. Advocates for affordable housing and other TOD-related issues played a limited role in any processes that took place. While grassroots community groups and nonprofit advocates are increasingly playing a role along other corridors, the Southeast Line provides a good example of what happens when very few people are involved in planning decisions, and the market is left to its own forces. Even if on the losing side, community members should be more engaged in decisions being made that affect their community.

Find local champions to sell the benefits of transit to other employers, developers and influential decision makers. Sometimes all it takes is one influential person to get the word out to others about the benefits of transit and TOD. These people would be within the local government, elected office, the private sector or even out in the community. Finding that person and getting them to spread the message can go a long way in building support for equitable transit service and TOD on other corridors.

Think comprehensively about services—jobs, housing and work supportive services should be planned and strategically placed in proximity to each other to fully serve workers & residents. Traditional land use pattern and zoning regulations have separated jobs from housing and led to sprawl in region around the country. So even when new transit service is built, most places that people need to go are still scattered throughout the region. Planners and other land use and transportation decision makers should prioritize locating affordable housing, job and work-supportive service near transit stations so that the future workforce does not have to drive everywhere they need to go and can save money for other needs.