Realizing the Potential of Transit and TOD in the Indianapolis Region

Living Cities
Harvard Kennedy School of Innovation
March 7, 2011
About This Report

**Realizing the Potential of Transit and TOD in the Indianapolis Region** was prepared by the Center for Transit Oriented Development (CTOD), under a grant from Living Cities and the Ash Center for Democratic Governance and Innovation at the Kennedy School of Government, Harvard University. The Center for Transit-Oriented Development (CTOD) is the only national nonprofit effort dedicated to providing best practices, research and tools to support equitable market-based transit-oriented development. CTOD partners with both the public and private market sectors to strategize about ways to encourage the development of high performing communities around transit stations and to build transit systems that maximize development potential. CTOD works to integrate local and regional planning, generate new tools for economic development, real estate and investment issues, improve affordability and livability for all members of the community, and respond to imperatives for climate change and sustainability. The Center for TOD is a partnership of Reconnecting America, the Center for Neighborhood Technology, and Strategic Economics. For more information, visit CTOD’s website at [http://www.ctod.org](http://www.ctod.org).

**Report Authors:**

Kelley C. Britt, Reconnecting America, Center for Transit-Oriented Development  
Catherine Cox Blair, Reconnecting America, Center for Transit-Oriented Development  
Jeff Kingsbury, Greenstreet Ltd.  
Sean Northup, Greenstreet Ltd.  
Dena Belzer, Strategic Economics, Center for Transit-Oriented Development  
Marilee Utter, Citiventure Associates, LLC

**Acknowledgements**

The Center for Transit-Oriented Development would like to thank the City of Indianapolis and the Indianapolis Metropolitan Planning Organization. The authors are also grateful to several persons who assisted with data collection and participated in interviews, including:

Lori Miser, Anna Tyszkiewicz, and Jeremy Moore, Metropolitan Planning Organization; Mike Terry, Trevor Ocock, Samantha Cross, and Annette Darrow, IndyGo; Ehren Bingaman, and Christine Altman, Central Indiana Regional Transportation Authority; Maury Plambeck, Department of Metropolitan Development; Michael Huber, Office of the Mayor of Indianapolis; Mark Miles, Central Indiana Corporate Partnership; John Neighbours, Baker & Daniels; and Kim Irwin, Health by Design.

The authors are also grateful to Jayson White of the Urban Policy Advisory Group at Harvard University for support and counsel during the workshop and resulting report.
About The Sponsors

Living Cities

Founded in 1991, Living Cities is an innovative philanthropic collaborative of 22 of the world’s largest foundations and financial institutions. Its members are not simply funders. They participate at the senior management level on the Living Cities Board of Directors and contribute the time of 80+ expert staff toward crafting and implementing Living Cities’ agenda, which is focused on improving the lives of low-income people and the urban areas in which they live.

Harvard Kennedy School Ash Center for Democratic Governance and Innovation

Project on Municipal Innovation

State and local governments in the United States face immense challenges in the 21st century. Revenues from sales, property, and income taxes are set to decline dramatically as the baby boom generation enters retirement. This same trend demands that governments create more and increasingly complex public goods with markedly fewer resources.

For America’s cities, the challenges are particularly acute, as they face unprecedented budget deficits and the impending explosion of unfunded pension liabilities. At the same time, cities must repair crumbling infrastructure, fix troubled schools, and ensure public safety so that they remain viable and attractive for middle class residents.

In response, the Project on Municipal Innovation was developed to create a peer-learning network of urban policy directors, to identify and promote best practices, and to support the implementation of innovative ideas in cities across the country. PMI was established with support from Living Cities, a collaborative of 22 of the world’s largest foundations and financial institutions.
Primary Audience

This report is a toolbox of created to help inform Central Indiana cities and agencies to support the planning and implementation of transit-oriented development (TOD). The report provides history, context, and background information on the value and benefits of supporting the build-out of a robust transit system in Central Indiana. The report also contains case studies, recommendations and some possible tools to support a transit system and the associated investment and development opportunities that could occur with proactive planning and partnerships. The primary audience is the City of Indianapolis and its respective agencies, the Indianapolis Metropolitan Planning Organization and Indy Connect. The goal is for the Central Indiana regional partners to use the information, case studies and recommendations contained in the report to support making the case for transit and transit-oriented development to benefit the Central Indiana region.

This report may be a resource to the leadership and staff at:

- Indianapolis Metropolitan Planning Organization and IndyConnect
- Central Indiana Regional Transportation Authority
- Indy Go and its Board of Directors
- Elected officials and staff in the local cities, counties and at the state
- Regional transit, equity, housing, business, public health and other advocacy organizations
Table of Contents

I. Introduction .................................................................................................................. 6

II. Fundamentals of Transit and TOD ................................................................. 13

III. The Transit Region ................................................................................................. 23

IV. Station Areas and Local Communities ............................................................... 27

V. Transit and Employment ......................................................................................... 33

VI. Case Studies ............................................................................................................. 37

VII. Top 10 Recommendations ..................................................................................... 42

VII. Matrix of Policy, Regulatory, and Financing Tools........................................... 46

IX. Appendix A. Commute Patterns of Indy’s Three Largest Employers .............. 53
    Appendix B. PowerPoint Presentations ................................................................. 58
    Appendix C. TOD Checklist .................................................................................... 75
    Appendix D. Training Resource Guide ................................................................. 80
I. Introduction

Background

As the *Crossroads of America*, Central Indiana has the most interstate coverage of any metro area in the nation (accessible via Interstates 65, 69, 70, 74, 465, and 865) allowing 75 percent of the U.S. and Canadian populations to be reached within a one-day drive. Between 1990 and 2008, total road mileage in the region grew by 31 percent (3,807 to 4,997), and daily vehicle miles traveled (DVMT) went up 59 percent to 33.5 million.

While highways have been and will continue to be critical for the region’s economic development strategy as a logistics and distribution hub, they are increasingly costly to maintain. In Marion County, for example, 16 percent of all thoroughfares are in ‘poor’ or worse condition, and while the County invests $90 million in transportation infrastructure each year, it’s about $73 million short of what it would take just to maintain existing conditions.

In recognition of the growing issues around regional transportation, Central Indiana has begun a new regional transportation initiative. In 2009, a group of private sector and civic leaders called the Central Indiana Transit Task Force (CITTF) developed a multi-modal transportation strategy as a launching point for a robust public dialogue. The strategy included select roadway expansions, commuter rail service on existing freight lines, in-street light rail, bus rapid transit, highway congestion pricing and increased investment in the existing bus system.

Following the CITTF’s February 2010 presentation, the Indianapolis Metropolitan Planning Organization (MPO), Central Indiana Regional Transportation Authority (CIRTA), and the Indianapolis Public Transportation Corporation (IndyGo) established Indy Connect to work toward a defined regional transportation future. After the most intensive public outreach effort ever done in Central Indiana, a long-range, multi-modal transportation vision for Central Indiana was presented to the public in November 2010.

Concurrently with the public engagement process, the City of Indianapolis used a grant from the *Living Cities Project on Municipal Innovation - Technical Assistance* to engage the Center for Transit Oriented Development to educate policy makers and the public about what decisions are most likely to support transit system investment and result in successful transit oriented development (TOD). The goals of the engagement were to create a broader understanding among public officials, neighborhood leaders, transit and urban planners, and key members of the private and non-profit development community of what decisions need to be made and when in order to leverage a future investment in transit.
Back to the Future?

In 1910, 200 passenger trains were coming to and from Union Station in Indianapolis. Streetcars traveled on 100 miles of track around the growing city of 234,000 people, and the Indianapolis Traction Terminal at the corner of Market and Illinois, once the largest interurban terminal in the world, was handling 400 interurban trains per day and seven million passengers annually. Trains connected Indianapolis to Anderson, Fort Wayne, Kokomo, Lafayette, Marion, Muncie, South Bend, and Terre Haute, as well as smaller cities and towns. A hundred years ago, Indianapolis was the 22nd largest City in the United States and the public and private sector together built a transportation infrastructure that launched the Central Indiana region into the 20th Century.

Indianapolis’ legacy as a transit leader has eroded over time, however. The IndyGo bus system had a $3 million budget shortfall in 2010. Despite maintaining levels of service and fares on a reduced budget, IndyGo is no longer ranked among the 100 largest transit systems in the U.S. Nationally, use of public transportation is at a 52-year high, yet transit in the region only accounts for 1.1 percent of total trips, down 29 percent since 1990. In 2008, 97 percent of all trips were made by personal auto in the region, up from 95 percent in 1990. Without plans for a rapid transit system, Central Indiana is facing a growing competitiveness gap among peer cities, such as Minneapolis, Cincinnati, Pittsburgh, Nashville, Charlotte, Norfolk, and Oklahoma City, all of which have rail lines in operation or final planning.

Central Indiana’s Transportation Initiative

The public sector and civic leaders in Central Indiana are again envisioning a multi-modal transportation strategy for the region. In 2009, the Central Indiana Transit Task Force (CITTF), a group led and funded by the Central Indiana Corporate Partnership, the Greater Indianapolis Chamber of Commerce, and Central Indiana Community Foundation, was formed to develop and present the private sector’s preferred regional transportation strategy for Central Indiana (defined as the nine county region inclusive of a broader examination to the major higher education centers of Lafayette, Muncie, Bloomington).

1 Metro Magazine 2010 Bus Fleet Survey
The goals of the strategy were to include: a planning horizon measured in the medium as well as the longer term; a scope, cost, and value that is easily understood by the public; realistic funding options, capable of earning broad public support; move substantially towards an execution strategy capable of beginning implementation in the near future; and a plan to gain consensus among stakeholders, policy makers, and the public at large.

A consulting team was retained to make recommendations for a system that would take into account the unique traits of the Indianapolis region, including its position at the center of just-in-time logistics and supply-chain management; its position as a convention and sporting event host city; its desire to maintain a strong downtown center; its desire to foster economic growth and enhance its desirability to those looking for a place to live and work; and its desire to enhance workforce mobility and meet the needs of lower income individuals.

After evaluating several scenarios, the CITTF favored a strategy that includes roadway expansions (though reduced from the Indiana Department of Transportation’s current plan); commuter rail service north to Fishers and south to Greenwood on existing freight lines; in-street light rail southwest along Washington Street to Indianapolis International Airport; bus rapid transit; highway congestion pricing (e.g., tolled express lanes) and increased investment in the IndyGo bus system, with east-west routes to bring rail commuters to stations along the corridor and distribute disembarking passengers to their final destinations. With this system the CITTF estimated a 9.9 percent return on local investment, with incremental regional economic impact estimated at $27 billion and 4,500 new jobs.

The transit elements of the multi-modal transportation strategy, including both a significantly expanded bus system and an investment in rail, is estimated at approximately $2.4 billion in initial and replacement capital cost through 2035. The local share of the capital cost is estimated at $1.2 billion. Average annual operating costs are estimated at $107 million, with $95 million as the local share.

The CITTF estimated that the new funding sources needed for the system would cost a Central Indiana household $10 to $15 per month. However, the issue of land use in relation to transit, and how one supports the other, was not fully explored. As the CITTF report states:

“While the Task Force did not specifically address or study the topics of land use planning, we came to understand its importance to the success of economic development that might occur around any futures transit systems improvements. That is why we believe local governments and developers need to work together as this discussion moves forward to ensure that zoning ordinances and local land use policies are supportive of the potential future transit oriented development and establish the appropriate groundwork for its success.”

Following the CITTF recommendations, the Indianapolis Metropolitan Planning Organization (MPO), Central Indiana Regional Transportation Authority (CIRTA), and the Indianapolis Public Transportation Corporation (IndyGo) established Indy Connect
to work toward a defined regional transportation future. Indy Connect undertook a six-month public engagement process to educate and receive feedback on the proposed strategy in order to refine the plan. In the most intensive public outreach effort ever done in Central Indiana, Indy Connect collected more than 10,000 comments from throughout the region through more than 125 meetings, a website, a phone line, a mail-in survey and other media.

The current Indy Connect Plan, presented to the public on November 8, 2010, includes:

- **Bus Transit** – The current bus system is tripled under the Indy Connect plan, expanding the fleet, increasing frequency, extending operating hours and adding 38 additional routes, 15 express bus routes and 14 community-based circulators.

- **Bus Rapid Transit** (BRT) – Approximately 84 miles of BRT is planned for highly traveled streets to connect with other bus, roads, and bike/pedestrian pathways. The current proposal is for service that operates in either coaches or articulated buses, average stop spacing of half mile, signal priority technology and enhanced shelters (i.e., overhead shelter, seating, lighting, next bus display and possibly heat lamps).

- **Light Rail Transit** – BRT along the Washington Street corridor could convert to Light Rail Transit in future phases, connecting Union Station to the Indianapolis International Airport. Long-term, LRT would extend 31 miles from Plainfield on the west to Cumberland on the east.

- **Commuter Rail Transit** – Utilizing existing rail corridors, commuter rail service would extend 43 miles from Noblesville on the north through Fishers, Indianapolis, Greenwood and Franklin on the south. Long-term, commuter rail would extend another 15 miles from Downtown Indianapolis northwest to Zionsville.

- **Bike and Pedestrian Trails** – The plan also includes expanded bike and pedestrian pathways and trails as well as nearly 400 miles of expanded roadways and bridge improvements.

Indy Connect estimates the current plan will cost about $2.5 billion for the bus and rail system in initial and replacement costs through 2035 and an average of $135 million per year to operate and maintain. Indy Connect estimates residents in Central Indiana would pay an average of $15 per household per month.

In terms of land use, the Indy Connect model reflects the eventual allocation of about 15 percent of projected population and employment growth through 2035 to planned station areas. These areas would receive approximately 35,000 more households and 24,000 more jobs than under the MPO’s baseline growth scenario. This scenario is less aggressive than the land use scenario used in the CITTF study, which shifted about 68,500 households and 92,800 jobs to selected station areas. Similarly, tax increment finance (TIF) revenues in redevelopment districts around proposed rail station areas were assumed to cover up to 80% of project capital costs associated with
stations, as well as streetscapes, pedestrian and bicycle access facilities, and other improvements around stations. Value capture revenues from all sources are assumed to amount to $189 million or 2% of the total sources through 2035. The return on investment, job generation and economic impact metrics of the current plan are still being modeled.²

Indy Connect held a second series of meetings around the region to allow residents to ask questions and comment before presenting the plan to the Indianapolis Regional Transportation Council (IRTC). The IRTC is scheduled to vote in early 2011 to adopt the revised Indy Connect vision as the official Long-Range Transportation Plan for Central Indiana. More due diligence is planned in 2011 before the Indiana General Assembly will consider legislation in 2012 that allows counties and their residents the option of participating in and funding the transit system.

Central Indiana’s Transportation Implementation

CIRTA began work in February 2010 to evaluate national operating models of regional transit authorities to see what opportunities Central Indiana might pursue in moving forward with the implementation of the Indy Connect regional transit vision. The Indianapolis Public Transportation Corporation (dba IndyGo) and the Indianapolis MPO joined representatives from local governments, the Indiana General Assembly, and the business community to look at various organizational and governance approaches to regional transportation. In December of 2010 the CIRTA Board accepted a report that proposes an integration of IndyGo and CIRTA into one regional serving organization. The members of this organization would come from the individual counties that pass a referendum committing tax dollars and their county’s participation in the creation of a regional transit district. This district would overlap the existing jurisdictions of the MPO, CIRTA, and IndyGo and be responsible for the design, build, finance, operation, and maintenance of the major transit elements of the proposed system. The entity would represent a fair balance of the communities contributing financially to the development and operation of the system. This new transit agency will attempt to maximize public and private partnerships in a manner consistent with the operational goals of the transit agency and the community and economic development goals of the region.

A Time of Opportunities and Challenges

Concurrent with Central Indiana’s transportation initiative, new federal programs and policies are striving to better link transportation and land use. New funding opportunities are on the horizon for both planning and implementation of investment strategies, and top policymakers increasingly recognize the important connection between transportation, land use, the environment, and prosperity for regions, cities,
communities, and individual households. New initiatives such as the US Department of Housing and Urban Development’s (HUD) Sustainable Communities program and the Department of Transportation’s TIGER and TIGER II (Transportation Investment Generating Economic Recovery) programs are creating opportunities for planning and implementation assistance from the federal government. This funding comes with an expectation of improved regional performance on a variety of metrics and increased collaboration and cooperation across traditional jurisdictional boundaries and between land use and transportation planning and implementing agencies. There are also increasing needs for community involvement and education throughout the planning and implementation process.

Communities with progressive transportation strategies evolve to see transit as more than just transportation, but rather as a “vehicle” for economic development, to improve housing affordability and choice, to revitalize downtowns and urban and suburban neighborhoods, and to create lasting value for communities. Every dollar invested in public transportation provides $6 in economic return and every $1 billion invested in public transportation infrastructure supports approximately 47,500 jobs.\(^3\) The Indianapolis region could serve as a model for the country by demonstrating a well conceived vision for a robust transit system with strategic phasing of technologies and alignments.

There are a number of national and regional opportunities and challenges that need to be addressed:

**Opportunities**
- Changing demographics have created increased demand for housing, employment centers, and community services near multi-modal transportation options.
- Political leaders, including city officials, mayors, and state officials, and many citizens embrace better connections between transportation and land use.
- Continued transit expansion throughout the region creates new opportunities for anchoring sustainable communities.
- Momentum around livability issues due to the HUD-DOT-EPA Interagency Partnership and associated Federal programs is creating funding “carrots” to encourage communities not already engaged in making better connections between transportation and land use.

**Challenges**
- Local funding for planning and implementation is limited across the board.
- Regulatory obstacles are still an issue, particularly in working with INDOT and other governmental agency regulations.
- Most Central Indiana communities do not have local zoning in place to allow TOD, and rezoning is an expensive and time-consuming process.
- Federal funding systems, while part of a national discussion about reform, still favor highway construction over transit, rail, or bike/pedestrian infrastructure.

\(^3\) American Public Transportation Association
II. Fundamentals of Transit and TOD

1. Defining TOD

Transit-oriented development (or TOD) describes a fundamental set of objectives that can be achieved through integrated transit planning, development, urban design, streetscape improvements, and reinvestment. TOD connects transit networks and the places where people live, work, shop, learn and play to give people real housing and transportation choices.

While TOD has been primarily used as a term to refer to new real estate development, this concept can be applied to existing communities as well. Some of Indianapolis’ established neighborhoods already exhibit characteristics inherent in TOD: compact development, walkable areas with retail nodes integrated with larger residential development. Small improvements in civic infrastructure, planning, or the transit network itself can help to transform these neighborhoods into complete, transit-oriented communities achieving the many benefits discussed in this report.

The goals of TOD are broader than simply a better and more efficient transportation system and can be broken down into two primary goals: one regional and one local.

At the regional level, transit can facilitate and generate momentum for additional market-driven TOD investment that can be self-sustaining over time. This goal relies on transportation networks and development patterns that support:

- Access to economic opportunity by linking residents with employment and service destinations and supporting synergistic growth of job centers;
- Lower combined housing and transportation costs through the reduced need to own and drive cars to get to work and daily needs;
- Reduced public infrastructure costs by directing compact development to existing developed areas while preserving regional open space and farmland;
- Improved public health by creating walkable neighborhoods that encourage physical activity; and
- Cleaner air and water by reducing traffic congestion and air and wastewater-based pollution.

At the local level, TOD can direct the velocity and trajectory of neighborhood change when necessary to provide neighborhood stability. This goal relies on transportation and development investments that:

- Build transportation and housing that can make targeted neighborhoods more regionally competitive; and
- Promote the integration of a variety of investments to address issues such as the weakening real estate market, underdeveloped and underutilized land, mixed-income housing, asset building, and accessibility to employment opportunities available in the region.

The regional and local goals for TOD are not mutually exclusive. They will help shape the recommendations about where investments in transit and TOD should be focused.
Transit-oriented development depends on a high-quality, robust public transportation system. Transit access becomes more valuable and desirable as the transit network grows, and transit becomes more useful in connecting people with where they need to go on a daily basis. In Indianapolis, the current transit system is comprised of about 150 buses and 29 routes. By comparison, Charlotte, North Carolina, a city roughly the same size geographically and population-wise, has 325 buses and 74 routes.

In addition to this public transportation system, walking and bicycling are important components in a successful multi-modal transportation system that provides people with true travel choice. Efforts to support walking and biking as transportation options will also support transit and TOD outcomes. Investments in streets and roads have a greater return when they are designed to benefit all users of the transportation system, from automobile users to transit users, pedestrians, and bicyclists. Transit funding should not be thought of as an isolated investment, but as something that can support a range of travel options.

2. The Benefits of TOD

There are many benefits associated with successful transit-oriented development. TOD provides for a lifestyle that is convenient, affordable and active and creates places where young children can play and were seniors can live comfortably. TOD has the potential to add value to communities where transit investments already exist or as new investments are planned, providing value for the public and private sectors and for both new and existing residents.

Some key benefits that TOD can provide to Central Indiana residents and communities include:

- Enhanced economic competitiveness and access to jobs
- Increased efficiency of land use and infrastructure systems
- More affordable living for families by lowering housing and transportation costs
- Improved environmental quality and public health

These benefits – discussed below in further detail – can help Central Indiana realize the potential for TOD by building upon existing assets in the region.

Enhanced Economic Competitiveness and Job Access

Congestion and longer commutes threaten the economic strength of metropolitan regions by limiting the growth of existing employment and activity centers. Investing in new transit lines is one significant method that regions are using to retain their economic competitiveness, and in this aspect, Indianapolis has room for improvement.

The average Central Indiana commuter spends over one workweek each year stuck in traffic. In total, congestion costs the region about $456 million annually, or $836 per peak traveler, ranking Indianapolis 30th worst in congestion among the nation’s 85
In a separate 2008 study by HDR, Indianapolis had the highest overall congestion cost and cost per peak traveler when compared to peer cities such as Cincinnati, Columbus, Charlotte, Louisville, Kansas City and Milwaukee. Increasing Indiana’s road capacity has not done much to address congestion, and congestion-related economic costs will continue to affect the competitive positioning of the Central Indiana region in the future.

A regional transit network that connects major job centers offers commuters alternatives to driving, increasing the number of workers that can access employment centers without exponentially adding to the number of cars on the road. For instance, BART in the Bay Area provides access that has enabled job growth to continue in San Francisco’s financial district in spite of traffic congestion on the bridges. Regions with new transit lines that connect job centers have experienced higher-than-expected-ridership, creating a win for transit agencies as well as the regional economy.

The Indianapolis region is similar to other regions with populations around two million that do not yet have a robust transit system but are in the process of planning and funding transit systems. Regions such as Raleigh Durham, Cincinnati, and Nashville have positive momentum in planning to enter the FTA’s New Starts process to bolster existing networks or start on new ones using federal funding. Central Indiana has an opportunity to position the region for greater economic opportunity and growth by supporting a successful transit expansion. Indianapolis could be the next Twin Cities or Denver and serve as a model for other regions.

**Increased Efficiency of Land Use and Infrastructure Systems**

The spatial distribution of people and jobs within a region has a range of policy implications – from transportation to housing to economic development. Center Township, the historic urban core of the Central Indiana region, has seen a nearly 60 percent loss of resident population over the last 58 years, falling from 337,000 in 1950 to 139,000 in 2008. Jobs in the Indianapolis area are also rapidly decentralizing, moving farther from the city center. About one in five employees worked within three miles of Downtown in 2006, compared with one-third who worked more than 10 miles from the city’s center; a change from 1998, when about one in four employees worked close to Downtown.6 Meanwhile, as people and businesses move away from Center Township to the metropolitan fringe, they often leave behind a depleted tax base insufficient to maintain existing infrastructure and services. This has significant economic impacts, as Marion County gets only 20 cents back for every dollar that flows out with commuters. It’s been estimated that in total Marion County sent out $13.3 billion in 2006 and got back just $2.6 billion; a net outflow of $10.7 billion.6

Transportation and land use development patterns present a challenge to future sustainability in the region. While Central Indiana’s population increased 18 percent from 1990 to 2000, vehicle miles traveled (VMT) per capita increased 32 percent and

---

4 Texas Transportation Institute, "Urban Mobility Study," 2007.
urbanized land area increased 76 percent. The vast majority of that urbanized land area is characterized as automobile centric, with segregated uses and low residential and employment densities, which is inefficient to service with traditional infrastructure. Research indicates that a mix of land uses, pedestrian-friendly design and compact development has the benefit of reducing vehicle miles traveled from 20 to 40 percent and infrastructure costs from 32 to 47 percent versus conventional suburban, disconnected development patterns.

While the costs of services are lower, property tax revenues can also be higher with mixed-use, higher density transit-oriented development. For example, Asheville, North Carolina studied the retail and property tax revenue per acre and found a suburban retail big box store yields $51,600 per acre in comparison to $414,000 per acre for a six-story urban mixed-use development. Sarasota County, Florida found a greater disparity, where low-rise urban mixed use development generated over 10 times the revenue per acre of suburban big box retail. This is especially significant in areas with property tax caps, like Indiana, which need to grow tax revenues through increases in assessed values, rather than tax rates.

**Lower Housing and Transportation Costs**

Transportation costs are often a hidden factor in defining affordable living in the United States. Yet for the average household, transportation is the second greatest expense after housing, and collectively housing and transportation can make up more than half of annual expenses. Transit rich areas provide lower transportation costs and affordable living options for local households. Figure 4 shows the average household spending nationally; an average family spends approximately 19 percent on transportation while households with good transit access spend only 9 percent. Holding housing costs constant, households in transit rich neighborhoods can choose to spend their transportation cost savings in a variety of ways that meet their household needs and increase discretionary spending.

While many home buyers “drive to qualify” for lower cost housing at the edge of the urban area, additional transportation costs can quickly eat up housing savings, especially as gas prices fluctuate. A 2005 study reported that for every dollar saved on cheaper housing in the suburbs, households spend 77 cents more on transportation.

---

7 This is a weighted average. Urbanized area in the suburban counties grew by 595 percent between 1990 and 2000, from 47,480 acres to 329,836 acres, although some of the variance is attributable to the definition of urbanized area.


9 Minicozzi, Joe, Public Interest Projects, as reported in *New Urban News*.


To better understand the relationship of location efficiency to affordability, the Center for Transit-Oriented Development and the Center for Neighborhood Technology created the “Housing + Transportation Affordability Index,” which redefines the measurement of affordability to include both housing and transportation costs. Figure 5 shows housing and housing + transportation costs in the Central Indiana region. Central Indiana enjoys relatively low housing costs as a percentage of median household income. In Figure 5a, areas in blue indicate housing expense at or above 30 percent of median household income. When factoring transportation costs, a different picture of affordability emerges. In Figure 5b, areas in blue indicate housing and transportation expense at or above 45 percent of median household income.

In terms of direct costs and impact on spending, over 53 percent of the region’s households pay more than 45 percent of household income on housing and transportation costs. In Marion County, about one third of households pay more than 45 percent of household income on housing and transportation costs, while 82 percent of the suburban county households pay more than 45 percent of household income on housing and transportation costs. Households with good access to transit spend significantly less on transportation, allowing greater discretionary spending. This savings can be critical for lower-income households because transportation costs as a percentage of the total household budget varies greatly according to income; over 55 percent for very-low-income families. This severely limits the ability of these households to create wealth or meet daily living needs, continuing the cycle of poverty.

---

Improved Environmental Quality and Public Health

The main purpose of TOD is to increase the quality of life for residents by providing better places to live, work, and play. It also promotes a healthier lifestyle by creating infrastructure that supports walking and biking, which provides substantial benefits in reducing morbidity and mortality from several chronic diseases in adults, particularly cardiovascular disease.
Other quantifiable benefits include increased transit ridership, which can help alleviate traffic congestion, reduce car accidents, and decrease greenhouse gas emissions and pollution – an increasingly important issue in Central Indiana. Several Central Indiana counties do not meet National Ambient Air Quality Standards, which can result in EPA fines, withholding of federal highway dollars, and restrictions on other forms of federal funding. On top of near-total reliance on coal-generated electricity and a stock of older energy-inefficient buildings, increasing vehicle miles traveled, traffic congestion, and a shortage of mass transit all contribute to Indianapolis’ ranking as the second worst city out of the 100 largest U.S. cities in terms of carbon emissions. As such, federal carbon legislation could have a significant impact on the Central Indiana region and the State.

3. Barriers to TOD

Despite the range of benefits that TOD can deliver, it is a challenging development model to implement. Barriers to accomplishing quality TOD include:

- Sub-optimal transit alignments and transit technologies;
- Lack of adequate infrastructure;
- High land costs near transit;
- Complexity of building mixed-use projects;
- Difficulty in achieving revitalization without gentrification;
- Community opposition;
- Lack of supportive TOD policies at all levels; and
- Transit alone cannot create a hot real estate market. Market driven TOD only occurs in places that include a combination of characteristics, including, but not limited to transit.

Some of the barriers to TOD are a result of misconceptions that local leaders and advocates will have to refute. For example, there is often a misconception that transit is subsidized and roads are the free market alternative, when in fact the actual direct cost of highways would amount to about a $3.50 per gallon tax, or $9.00 per gallon if both direct and indirect costs were allocated. The cost of these subsidies, approximately $5,000 per car per year, is directly passed on to citizens in the form of increased prices for products or, more often, as increased taxes. This means that the hidden costs of driving are paid by everyone; not just drivers, but also those too old, too young, or too poor to drive a car.

Many of these barriers relate to the need for strategic transit planning that assess a range of opportunities including future land uses and development opportunities, and augmenting access to employment centers. Increased public and private funding for planning, land acquisition, infrastructure, construction and maintenance of transit-oriented development projects is often needed. To address this challenge, many state entities, transit agencies, metropolitan planning organizations, and local municipalities have adopted programs that provide financial incentives for transit-

---

oriented development. Section VII includes a list of state, regional and local programs and policies.

4. Scales of TOD

One key to building TOD in Central Indiana will be recognizing and supporting transit-oriented development at a range of scales (regional, corridor, station area, and site/project), and successful outcomes rely on coordinated planning between all levels. In addition to the station area scale, where planning for TOD typically occurs, and the regional scale, where regional goals and contexts are fully integrated, corridor level planning for TOD offers another important perspective.

- **City or Region Scale**: Multiple corridors in a city or region create a network of transit-oriented places and sites that integrate different functions and activity centers within easy access of transit. Planning at the regional scale can address problems such as need to connect job centers and the goal of providing disadvantaged communities to improved access to employment and retail opportunities. It is at this scale that overall mode shares and the health of a transit network can be most influenced.

- **Corridor Scale**: The stations along a transit corridor support diverse and complementary transit-oriented neighborhoods. As connections between adjacent station areas are strengthened through transit, the amenities and opportunities in one area are made more accessible to others. Effective, integrated corridor-level planning can encourage the momentum of market activity between station areas, thus augmenting and diversifying development and other opportunities.

- **Station Area Scale**: Planning for TOD at the station area scale should aim to ensure that the half-mile radius around a transit node contains a mix of uses and supports transit access and ridership. Planning at this scale should take into account the existing neighborhoods, since there are no one-size-fits-all solutions to TOD. Some neighborhoods may have good opportunities to grow neighborhood buying power through high-density, mixed-use development, while other neighborhoods may have more potential to take advantage of transit through street and roadway improvements.

- **Site/Project Scale**: Individual buildings and developments turn the principles of transit-oriented development into physical reality. The design of streets and buildings can have a large impact on the types of transportation choices people make. When buildings are designed to take advantage of walking and transit, with active ground-floor uses and high-quality materials, they encourage increased walking, biking, and transit, and contribute to neighborhood vitality. When streets are designed to safely balance the needs of all users, it becomes easier for people to take care of their daily needs using transit. Public spaces, too, can provide important community gathering places and centers for activity.

Buildings, neighborhoods, corridors, and regions that embrace transit-oriented development can reap the benefits of new community development partnerships and enhanced understanding among communities in addition to the physical development and infrastructure improvements. In order to fully realize these potential benefits,
collaborative partnerships are required among the various stakeholders involved in transit and TOD decisions.

Figure 7: TOD Players and Partnerships

6. Partnerships to Support TOD

Federal Agencies: FTA and FHWA oversee the planning and funding of corridors through the metropolitan planning and NEPA processes. DOT also provides grants, other funding and support for transit projects that can enable TOD. In addition, HUD has added a new line of funding for sustainable communities.

Regional Agencies: MPO’s and regional agencies provide technical and planning support, and allocate funding for transit supportive programs and infrastructure. Regional agencies also play an important role in convening the elected officials on issues of regional significance.

State Agencies: Although the role of state departments of transportation in TOD planning and implementation varies from state to state, the expenditure of state highway funds should be coordinated with the transit planning and construction. State housing agencies can provide funds to support affordable housing projects at stations.

Local Agencies: Local agencies are critical in making planning, and investment decisions for both land use and transportation. City and county planning, economic development, housing, and transportation staff are all stakeholders in TOD planning and investment. Local agencies bring both planning and capital resources, as well as regulatory and policy controls to TOD implementation efforts.
**Transit Agencies:** Transit agencies lead the planning, funding, construction, operation, and maintenance of the transit system. They have to coordinate with many stakeholders throughout the planning and construction process to ensure high quality TOD is realized. Transit agencies adopt TOD supportive policies and own land around transit stations that is well positioned for joint development.

**Private Developers:** A large responsibility for implementing transit-oriented development projects will rest on private developers of housing, office, retail, and other uses. These real estate professionals will have an important role not just in new construction, but also in reinvestment in existing neighborhoods and structures. Developers bring private capital and implementation resources to TOD efforts.

**Community Associations:** Community associations are important stakeholders in every neighborhood-level TOD planning effort. These organizations provide important organizing capacity to develop TOD visions and make them a reality. Community associations bring organizing capacity to TOD implementation efforts and may also bring development implementation capacity.

**Non-Profit Advocates, Organizers, and Community-Based Developers:** Because transit-oriented development is a tool for neighborhood revitalization and investment, job creation, and environmental protection, advocacy groups, regional, civic, and community based organizations have a critical stake in both planning and implementing TOD. Community engagement in planning for TOD depends on community-based organizations to bring their organizing resources to TOD visioning efforts, and many of these organizations also will be able to help implement TOD visions through development projects.

**General Public:** Residents, workers, employers, young and old, rich and poor, all have a stake in seeing transit and TOD investments made wisely. If done right, all of the benefits and outcomes will accrue to this group of stakeholders. When engaged early and often in a meaningful way, the general public will have a vital role in shaping the TOD future of Indianapolis.
III. The Transit Region

The demand for transit across the U.S. is growing, and more and more transit corridors are being proposed and built every year. Within Central Indiana, there is also growing demand for more transportation options. A 2008 Greater Indianapolis Chamber of Commerce survey of 1,400 Central Indiana residents showed that more than 87 percent agree that additional transportation options are needed in the region and more than 70 percent support dedicated public funding for transit.

In 2008, 78 regions in 37 states had proposed 400 transit projects worth $248 billion, and these numbers have continued to rise. Some projects are in regions where entire fixed-guideway transit networks have been funded and are under construction, such as Denver and the Twin Cities, while other projects are in regions that are aggressively enhancing existing systems, such as Portland and Los Angeles. But many regions start to build transit networks with a single major corridor, as is planned in Marion and Hamilton counties. With so many stations opening every year, there is a growing need to understand how corridor planning can facilitate not only successful transportation outcomes but also successful transit-oriented development.

---


16 For more information on what TOD is, see the first book in this series: TOD 101
1. The Transit Network

Transit system sizes vary from region to region, but generally all fixed rail or guideway (including every kind of rail transit and BRT) systems fall into four general size categories based on the number of stations served. Station numbers, rather than length of track, is important because it acts as a proxy for rider access and the number of both trip origins (usually houses) and destinations (usually jobs) being served. Not surprisingly, because larger transit systems provide greater regional connectivity, they have a much stronger impact on real estate values associated with transit, overall regional patterns, and economic development investment. The largest transit systems, with over 200 stations, also have a significantly higher proportion of
jobs near transit than regions with either large or medium size systems. Regions that have started with a single transit line and have fewer than 30 transit stations in their system, typically see little impact on real estate markets related to transit, except for very compact areas served by streetcars. However, most regions that have started out with small transit systems, like Denver, Houston, Charlotte, and Salt Lake City, have been working to expand these systems and are seeing the results in terms of economic development and TOD.

Anecdotal evidence from the Denver metropolitan region indicates that since the passage of Fastracks in 2004, the regional sales tax measure that allows for an accelerated build out of the transit system, businesses are starting to locate in places that will eventually have transit. In some cases, these businesses are relocating from elsewhere in the region, but in other cases, it appears that businesses are choosing to locate in the Denver region because it will soon be served by a comprehensive transit network connecting all of the region’s major employment centers and many of the region’s largest residential communities.

In addition to system size, another key to planning successful transit systems is to identify the region’s major employment centers/concentrations and then connect these centers/concentrations together through a transit network. Whenever possible, the regional transit lines should be brought into the middle of these employment centers. However, local circulators, including bus and streetcar networks can also provide the necessary connectivity between the regional system and an employment center that is not directly on the regional rail line. Transit corridors that connect multiple employment centers also have much stronger ridership, and therefore higher levels of fare box recovery than transit lines that serve only one employment cluster.

2. Types of Corridors

Corridor planning is a critical component of planning for TOD because transit lines get built out one corridor at a time. And, the great value created from constructing transit is from the new connectivity between places. In regions just starting to build or expand their transit network like Central Indiana, choosing the “right” corridor to construct first can foster regional support and momentum for transit and TOD. Corridor planning that incorporates a strategic, region-wide analysis of the impact of transit identifies where along the corridor transit will stimulate the real estate market. When done well, the strategic relationship between TOD and transit access also results in stronger transit ridership, not just more dense development, or higher real estate values. Existing transit lines can also benefit from corridor level TOD planning, especially when there is a need for community revitalization or market fluctuations make lower income neighborhoods vulnerable to displacement.
A transit corridor is a transit line or line segment that connects a series of station areas. The term “station area” is usually defined as the walking distance around a rail station (typically a half-mile radius), but the catchment areas for other transit technologies, especially streetcars and buses, may be defined differently.

There are three main corridor types that can be applicable to the Central Indiana region: Commuter, District Circulator, and Destination Connector. Each corridor is defined by what it connects, and different corridor types create different kinds of TOD opportunities.

**Commuter Corridors**

Commuter corridors connect a series of residential neighborhoods, or “origins,” to one major employment center, or “destination” and typically offer low frequency transit service. The residential neighborhoods along commuter corridors are often more suburban in terms of street and building design. Examples include the North Star Line, which connects downtown Minneapolis to residential communities to the northwest and Metra in Chicago, which operates more than ten commuter corridors connecting suburban neighborhoods to the central business district. While heavy commuter rail is often the technology used in commuter corridors, light rail and high quality bus can provide the same connections. The Blue Line in Sacramento, Southwest Corridor in Denver, and the Blue Line in San Diego are also examples of commuter corridors.

**District Circulator Corridors**

District circulators facilitate movement within an “activity node” – often a downtown, commercial, medical, or educational center. Circulators extend the walkability of these districts, making it easier to access the amenities within the area without a car. Circulators can also connect neighboring activity nodes, such as in Portland, where the streetcar connects the downtown to the Pearl District to the north and to Portland State University and the Oregon Health & Science University to the south. The Portland Streetcar maximized the TOD potential because it connected these important destinations with a significant amount of land available for development.

**Destination Connection Corridors**

Destination connectors link residential neighborhoods to multiple activity centers, including employment, medical and commercial centers and academic campuses. Recent transit investments in destination corridors have resulted in consistently higher ridership than estimated, creating a “win” for transit agencies and building regional support for future transit investments. Destination connectors encourage ridership in both directions at the same times of the day by linking to employment centers as well as other destinations. Some destination connectors also serve as commuter corridors. The Hiawatha line in Minneapolis, for example, is a destination corridor that connects downtown at one end to the airport and Mall of America on the other end.
IV. Station Areas and Local Communities

Station area planning is a critical component of successful TOD because station areas tend to build out over long periods of time. A plan that defines a vision for the station area and an investment strategy for the public infrastructure necessary to support access to the transit system and create high quality public places is important in leveraging private investment. In general, transit does, on average and over time, contribute to increased property values within the half mile radius around transit stops or station. However, the exact amount of this increase can vary considerably depending on a number of factors.

- Frequency of Transit Service
- Transit Connectivity
- Existing Real Estate Market Conditions
- Existing Land Uses in the Station Area
- Ease of Access to the Station (Pedestrian Connectivity, Parking)
- Regional Disincentives to Driving (Congestion, High Gas Prices)

In addition, transit will have its greatest impact where market conditions are already relatively strong. Areas with weak or “cooler” markets are less likely to experience an impact on property values, and are thus often more in need of strategic public investments.

Demand for Housing Around Transit

Demographic and economic trends have caused increased demand for housing near multi-modal transportation options, employment centers, and community services. *Hidden in Plain Sight*, a study conducted by CTOD in 2004, estimated housing demand within a half-mile of 42 existing and planned rail transit systems\(^{17}\). Based on demographic factors alone, the estimate predicts approximately 15 percent of households nationally will want to live near transit by 2025, more than double the number from 2000.

This estimate does not account for changing consumer preferences due to increasing transportation costs or desires for a more convenient lifestyle, and the changing perceptions of urban living that have led more empty nester households and households with children to remain in cities. Even this conservative estimate predicts a demographic engine that will provide a built-in market for TOD that can be captured through new development close to transit. In fact, there is some reason to believe that the demand for housing near transit will exceed this demographic estimate.

Three trending populations – the Baby Boomers, Generation Y, and childless singles and couples – will drive demand in the Indianapolis housing market for the next half century, and all three groups show a significant preference for housing with access to

\(^{17}\) “Hidden in Plain Sight”, Center for Transit-Oriented Development, 2006
transit. Understanding Central Indiana’s market segments, as well as their depth and characteristics, is important for defining the development potential of station areas, optimizing value capture opportunities and clarifying public investment priorities. It is also important in building support from legislators, public officials, the development community, and citizens.

**Baby Boomers**

The Baby Boomers are the generation of Americans born between 1946 and 1964. With roughly 78 million people (27 percent of the U.S. population in 2008) the Boomers have dominated the labor force and the housing market since the 1970s. There are over 417,000 Baby Boomers living in the Indianapolis MSA, accounting for approximately 25 percent of the region’s population\(^{18}\).

The first Baby Boomers are turning 65 this year, though many expect to work past retirement age. The Boomers’ housing and transportation preferences will continue to evolve as they age, and surveys have revealed that many in this generation want “safe urbanism” – walkable communities with access to urban amenities, culture, and education. Older Boomers with limited mobility will need smaller, more affordable homes with pedestrian or transit access to most amenities. Unlike other generations, the Baby Boomers are willing and able to pay for what they want, where they want it.

**Generation Y**

Generation Y – also known as the Echo Boomers or the Millennials – is the generation of Americans born between 1979 and 1999. With over 80 million U.S. residents, “Gen Y” is the largest and most educated generation in American history, but also the most economically challenged since the Great Depression\(^{19}\). Gen Y reached 30 percent unemployment during the recent recession, forcing many young adults to weather the downturn by staying in school, living with roommates or by living with their parents into their late 20s. The Indianapolis MSA has a Gen Y population of almost 472,000, accounting for 28 percent of the region’s population.

Though more of Gen Y has graduated high school and college than any previous generation, they have growing student loan and credit card debt and have little or no savings. Gen Y will rent for longer than previous generations before flooding the housing market in 2013; their home starts are expected to reach full force in 2016 and, like the Boomers before them, Gen Y will dominate the housing market for most of their lives. According to surveys, Gen Y is more concerned with the neighborhood than the house, and much more focused on “me time” than previous generations\(^{20}\). About 77 percent of Gen Y cites a preference for living in an urban core or in-town locations like Broad Ripple and Fountain Square. Over 50 percent will choose less than the ideal home if they can walk to shopping, entertainment and work, so homes can be smaller and neighborhoods denser, focusing on design and character over size. Diversity, walkability, and proximity to jobs will be keys to site selection and price

---

\(^{18}\) U.S. Census Bureau, 2005-2009 American Community Survey  
\(^{19}\) McIlwain, John K. Housing Gen Y: The Next Challenge for Cities. 11/23/2010  
\(^{20}\) Generation Y in the Marketplace. RCLCO. 9/16/2009
premiums, and many will look to work from home to maintain their desired work-life balance.

Although Gen Y is currently floundering economically, they are the highly educated workforce that regions all over the country are fighting to attract and retain; the loss of Gen Y is the essence of Indiana’s Brain Drain problem. Almost 50 percent of Indiana’s recent college graduates leave the state annually, as do over 90 percent of graduates with hometowns in other states, while the largest in-migration to Indiana consists of those with less than a 10th grade education. Only a third of Indiana’s workers have a high school diploma or the equivalent, and only 28 percent of Indiana’s workers in the prime age group of 25-34 have college degrees (compared to 39 percent nationally). According to the Indiana Fiscal Policy Institute, 60 percent of Indiana’s workforce will have to hold college degrees by 2025 for the Indiana economy to stay productive21.

Gen Y is the next generation of the Indiana workforce; the entry-level employees needed to keep businesses growing, innovating, and producing. New technology has made them the most mobile generation ever - for Indiana to remain economically competitive in the 21st century, it must create employment and lifestyle opportunities for the talented young college graduates that are more appealing than opportunities in other states.

**Childless Singles and Couples**

It is estimated that 48 percent of a region’s TOD demand will come from singles or other households without children. These households have traditionally favored denser, mixed-use neighborhoods that have good access to employment and entertainment centers. The Indianapolis MSA experienced a 37 percent increase in one- and two-person, childless households between 1990 and 2009, and they now account for over 61 percent of the region’s households22. Single parents are another large and growing market segment, and their housing preferences correspond with those of childless singles and couples: smaller, more affordable homes with easy access to amenities. These households are also concerned with safety and school quality.

The other half of TOD demand will come from family households, or those with children. Mirroring U.S. trends, about a quarter of the households in Central Indiana are comprised of two parents and school-age children. These households have traditionally favored lower-density housing types, such as single-family detached housing. The split in demand means that development in transit-served areas will need to meet a range of housing and affordability options.

**The Walkability Premium**

Walkable communities are convenient, connected, and healthy, enabling a stable work-life balance and easy access to shopping, entertainment, and work. In national surveys, one-third of consumers said they would pay more to walk to shops, work, and entertainment, and two-thirds said that living in a walkable community is important.

---

22 U.S. Census Bureau, 2005-2009 American Community Survey
More than half of Gen Y would trade a smaller home for proximity to shopping and work, and even among families with children, over one-third were willing to trade lot size and “ideal home” for walkable, diverse communities.23

Beyond the simple convenience of walkable neighborhoods, large numbers of urban Gen Y workers are opting not to own a car at all. The percentage of new cars sold to 21- to 34-year-olds hit a high of nearly 38 percent in 1985, but stands at around 27 percent today, according to CNW research.

Though the specific amount of the walkability premium varies widely depending on the factors listed at the beginning of this section, strong anecdotal evidence does exist. Walk Score is a website that measures proximity of an address to services and assigns a score between 1 (Car-Dependent) and 100 (Walker’s Paradise). Figure 11 shows the Indianapolis Walk Score map; only a few areas scored above the city’s average of 41 (Car-Dependent). CEOs for Cities studied 15 housing markets and found that in the typical market, an additional one point increase in Walk Score was associated with between a $500 and $3,000 increase in home value.25

---

23 Generation Y in the Marketplace. RCLCO. 9/16/2009
24 www.WalkScore.com
25 Walking the Walk: How Walkability Raises Home Values in the U.S., CEOs for Cities
Nationally, market research and case studies consistently prove demand for TOD. Demand for housing near transit exists and will continue to grow, but this latent market potential will not be captured without effort on the part of communities to understand the local market and create transit oriented districts that incorporate the appropriate public amenities to respond to market demand.

Local investment opportunities and partners

Many of the benefits from TOD, including higher property values related to the increased connectivity from transit, also rely on the range of public place making investments necessary to create a walkable neighborhood. This includes good sidewalks, street trees, public plazas and parks, and, to the extent possible a retail district offering goods and services catering to people’s daily needs. In looking at station area improvements along a variety of transit lines, it appears that for every $1 invested in transit, local communities need to invest an additional $0.50 to support pedestrian connections and other station area improvements. While these costs can vary depending on the condition of the area and the need for utilities and other infrastructure that might be necessary to support higher density development, communities should be prepared to make their own investments in station areas beyond what a regional or even local transit provider is already contributing.

Financing these public improvements associated with TOD can be challenging and most communities rely heavily on value capture mechanisms such as tax increment financing, benefit assessment districts, or other kinds of developer exactions. In strong real estate markets where the transit is adding significant value, these value capture mechanisms can be very effective. However, in places where the market is not as strong and the public sector is interested in leveraging more private sector investment, other strategies may need to be deployed to finance the desired place making amenities. Strong, or hot real estate markets that can support these TOD amenities are often in downtown or downtown adjacent neighborhoods near employment concentrations and/or near arts and cultural centers. In a place like Indianapolis, where most of the station areas will not be in these downtown type neighborhoods, communities will probably have to consider making some up-front investments in infrastructure and amenities to transform existing auto-oriented corridors into more pedestrian-scaled districts.
V. Transit and Employment

Job Cores and Regional Employment

Traditionally, 30 to 40 percent of all regional employment occurs within job “cores”, or job centers with high concentrations of employees. In a recent RCLCO study on the relationship between job cores and employment, 10 specific job cores were identified in the Indianapolis region. The number of job cores in a region relates directly to the region’s total employment, so one of the most reliable ways of fostering regional economic growth is to add employment centers.

Job cores are also most likely to be located within the favored quarter, which is a phenomena that occurs in every major city where 80 percent of executive housing and 80 percent of high wage employment occurs within a 90 degree arc from the regional center. In Indianapolis, the favored quarter originates downtown and extends north, generally incorporating the area between I-65 and I-69. Another important distinction is that job cores occur in areas with diverse transportation access: highways, major roads, busses and rail. Therefore, if Indianapolis were to expand its economy with the creation of new job cores, the most likely location would be along a transit line and a highway or other major road north of downtown.

Connecting Job Centers to Transit

About 78 percent of quarterly job growth nationally occurs through expansion of existing firms, rather than creation or attraction of new firms. To ensure that job centers remain economically viable, they must be able to continue to support growth within existing firms and existing locations. However, congestion can act as a

---

26 RCLCO Job Cores Research
chokehold on future economic growth when commuting to suburban job centers means sitting in traffic on crowded freeways and no commute alternatives exist. The Central Indiana Transit Task Force estimated that the lack of transportation options and the accompanying increases in congestion result in economic losses of over $150 million per year. If left unaddressed, the losses are projected to grow to $690 million annually.

**Stable, Skills-Diverse, Upwardly Mobile Workforce**

Regional employers are largely dependent on predictable access to a well-trained workforce, and over time, jobs in every major industry have shifted away from the city center and towards the suburbs. Not only do employers face challenges in accessing workers with a broad range of skill sets from these locations, but these jobs are more difficult for low income residents to access from their inner city, urban, or rural neighborhoods. This can result in a significant cost to households and individuals as they spend more time and money commuting to work.

Instead of offering only one form of commuting to these job centers, enhancing access through expansive, integrated transit networks while supporting with transit-supportive development at stations throughout the region can connect lower income workers to higher-wage jobs, creating paths of upward mobility.

Linking transit to employment centers is a key to a successful transit system. In regions with transit systems, an average of 25 percent of all jobs are located near transit. But, in regions with extensive transit systems that connect all major employment centers, as many as 45 percent of jobs can be near transit. These jobs tend to be in the government sector, but also in sectors tied to critical regional innovation including research and development across many industries, large universities, and major medical research institutions.

Figures 13 and 14 show how the Central Indiana region’s employment centers link to the current Indy Connect proposed transit network. Large employment centers in downtown Indianapolis, IUPUI/medical district and the Castleton/Fishers area are planned to have rail transit service. Other employment centers, including the North Meridian Street corridor, Carmel, Keystone, and the Indianapolis International Airport are planned to be served by new bus rapid transit and expanded IndyGo bus service.

---

Figure 13: Overlay of current Indy Connect plan and Regional Employment Clusters (over 15,000 workers)
Figure 14: Overlay of current Indy Connect plan and Regional Employment Intensity
Case Study: Bus Enhancement Systems – BRT Euclid Corridor/Health Line, Cleveland, OH

The Cleveland Clinic and University Hospitals championed the city’s new bus rapid transit line along historic Euclid Avenue and helped brand it as the Health Line in addition to contributing over 300 million in renovation and new construction along the corridor. The Greater Cleveland Regional Transit Authority (GCRTA) planted 1,500 trees along the route, and partnered with city staff and local development corporations to promote development including both market-rate and affordable housing.

Despite the challenging financial climate, the renovation of Euclid Avenue has become an economic development engine for the city. To date, more than $4.3 million has been invested in neighborhoods along the line. East 4th Street is one of the many examples of the resulting redevelopment. Formerly, an alleyway, it has been transformed with overhead strand of lights, patio dining, plantings, art, awnings and neon, and become a thriving pedestrian-oriented restaurant and residential center.

Even as GCRTA loses riders and cuts service on other routes, the bus line and the free trolleys on Euclid are expected to carry 4.6 million riders this year, the most passengers on Euclid Avenue since 2000.
Case Study: Bus Enhancement Systems – BRT Emerald Express/Green Line, Eugene, OR

The EmX (Emerald Express) route, run by Eugene’s Lane Transit District, is a 4-mile $24 million corridor between downtown Eugene and downtown Springfield via the University of Oregon, which opened in 2007. The BRT line has 60 percent of its right-of-way reserved for buses alone and features extended buses with doors on each side, neighborhood-integrated stations, and offers reliable and fast service every 10 to 15 minutes due to signal priority. In three years, ridership doubled and exceeded 20-year projections. For a medium-sized region like Eugene/Springfield, a BRT line ended up being a good investment. The project was completed fairly cheap, as far as transit systems go, because the city agreed to allow the bus line to run in the center of the street.

To aide in station area planning, Nodal Development Overlay Zones were created as a key strategy for integrating land use and transportation planning throughout the region resulting in the downtown Eugene and downtown Springfield stations to become mixed-use centers with restaurants, shops, and other convenient services.

Due to the popularity and high ridership of the EmX Emerald Line, a second phase, the EmX Pioneer Parkway Line, has been planned to extend deeper into Springfield to connect to a new regional medical center, Sacred Heart, being built in the Gateway District. This extension is set to open in January 2011.
Case Study: Station Area Planning for Commuter Rail – Prairie Crossing, IL

About 45 miles northwest of Chicago, Prairie Crossing is one of the nation’s first conservation communities, demonstrating how sustainable development can be the economic engine for land conservation and stewardship. A restored 1880’s barn serves as a community and fitness center and a charter elementary school emphasizes citizenship and learning from experiences of the natural environment. The Prairie Crossing Farm allows residents and the larger community to buy fresh organic produce, while horse owners manage the Prairie Crossing Stable and adjoining pastures.

The 678-acre community includes 36 condominiums and 359 single-family homes clustered on a quarter of the site, leaving 470 acres in restored prairie, constructed wetlands or agricultural land. Part of the U.S. Department of Energy’s Building American and Energy Star programs, Prairie Crossing’s green building practices result in home energy costs that are 50 percent of conventional homes.

Prairie Crossing is also an example of transit being central to the community’s positioning strategy. It’s unique because two commuter rail stations are within a 3-minute walk from one another; Metra’s North Central Service (NCS) to O’Hare International Airport (35 minutes) and the Milwaukee District North Line (MD-N) into Union Station downtown (70 minutes). Almost 300 trains a week stop at the two stations, offering virtually unprecedented rail access for a suburban community. In time, Metra predicts Prairie Crossing will become a regional transit center. However, when the project commenced in the mid-1990’s the commuter rail lines existed, but the stations did not. The Prairie Crossing developer lobbied Metra for the stations and after approval, the developer completely revised the Prairie Crossing master plan, adding a mix of land uses and increasing density to optimize the opportunity presented by the stations. While Prairie Crossing residents utilize transit on a regular basis but, not everyone is taking the train to downtown Chicago. Employment centers have developed around other station areas along the lines, illustrating the importance of planning the corridor as well as station areas.

Widely acclaimed by the national media, the community has sold at a premium since inception, and resale’s now command more than a 100 percent premium over comparable homes in the submarket. About a quarter of Prairie Crossing residents cite the proximity to transit as a factor in their purchase decision, and over a third of residents commute regularly by train.
Case Study: Existing Freight Rail Corridors to Commuter Rail - Austin, TX

In 2000, Austin, Texas proposed a comprehensive transit system. The $1.9 billion plan included a 52.3-mile rail system, with multiple routes and 41 stations, and projected ridership of 59,400 daily trips by 2007 to serve the growing MSA of 1.7 million. The first-phase was a Light Rail Transit (LRT) line to serve the very busy Lamar-Guadalupe corridor with a 14.6-mile line, running on the Capitol Metro Transit Agency (CMTA) railway, and then largely in transit reservations and dedicated lanes on Lamar and Guadalupe into Austin’s CBD. With 16 stations, the first-phase was projected to cost $739 million\(^{30}\), and ridership for this starter segment was forecasted to reach 37,400 average weekday boarding’s by 2025. A referendum to approve the project was narrowly defeated by less than 2,000 votes.

In mid-2003, a scaled-back alternative plan was championed, utilizing an existing freight rail line as an "urban commuter rail" approach. This meant that rail would bypass the heart of the city and the heavy traffic flow of the Lamar-Guadalupe corridor. For the Lamar-Guadalupe corridor, a "Rapid Bus" service (with hints of "Bus Rapid Transit" characteristics) would be substituted for rail. Keeping initial capital costs as low as possible was a major objective in the alternative plan, as was a conscious departure from the LRT proposal that had been rejected by voters in 2000.

The $120 million Red Line project, which was viewed as a more politically palatable solution, went to referendum was subsequently approved by the voters. In March 2010 the Red Line opened, with 32 miles of rail line running from a northern terminus station at Leander, Texas south to downtown Austin using diesel multiple units (DMU). The Red Line operates over a portion of a former Southern Pacific branch, shared with contractual short line freight railroad operations – although heavy freight railroad service is shut down when MetroRail service is scheduled, and vice versa. Projected ridership was 1,600 to 2,000 within the first six months, however a year after opening, the Red Line draws only about 800 to 1,000 daily passenger trips operating weekdays and AM-PM peak periods only. A recent increase in mid day service has pushed that ridership between 1,100 and 1,300\(^{31}\).

\(^{30}\) http://www.fta.dot.gov/publications/reports/reports_to_congress/planning_environment_2915.html
A major part of the Austin ridership problem exists in adhering to a railroad branch line that skirts the central part of the city. The route also circumvents the high-traffic Lamar-Guadalupe corridor, some of Austin's densest neighborhoods, and several employment cores, including the University of Texas campus and surrounding neighborhoods, the Texas State Capitol Complex, and most of the city's downtown. As a result, Capital Metro must run connector bus service, dedicated solely to meet up with train arrivals and departures. This means not only that the majority of passengers must transfer to relatively slow buses at a considerable distance from their final origins and destinations, but it imposes a major additional expense on the transit agency.

In comparison to Austin's low ridership, Charlotte (which has a comparable MSA population to Indianapolis and Austin) drew 16,000 riders initially, while larger markets like Phoenix and Houston drew 35,000 and 40,000 respectively. Ensuring the success of a catalyst line is critical for any region hoping to launch a comprehensive transit vision and the key to success is connecting major destinations along the corridors, not just between terminals, allowing people can go where they want to go.
VII. Top 10 Recommendations

The following recommendations were developed from site visits, data collections and through a series of interviews with key stakeholders in the region, including local, county, state and transit agencies, consultants, and others. Furthermore, they identify investment priorities, strategies, and activities that will move the Indianapolis region towards transit-oriented development at all scales and through all stakeholders.

1. **The phasing of a regional transit system is critical, particularly the initial phase:** A transit system should be a part of a larger vision and strategy for regional economic growth and competitiveness. Corridors and technologies should be selected that maximize ridership, connect to employment centers, position the region for economic development and catalyze new investments. Regions without a strong and well-funded bus system, like Indianapolis, must prioritize funding and alignment to ensure the success of the initial line. Case studies consistently show that the long-term viability of a regional transit system is directly related to the success of the initial line, which is critical in gaining political and community support for further investment.

2. **Optimize both transportation and development objectives:** Transportation policy and well-executed TOD should support both transportation and development objectives of a transit system. As such, transit system policies, including station area decisions, should be made to both optimize ridership and development yield, which is important for value capture and the financial feasibility of the system.

3. **Destinations matter:** A local decision to build a transit line is as much, if not more, about connecting people to jobs, education and cultural opportunities and stimulating economic development, as it is about the expected cost of the capital expenditure. Research has shown that not only do developments around the station areas matter in terms of generating transit ridership, but the presence of business districts and employment density affects the use of transit much more than waiting for residential uses to sprout up along the line. As such, priority should be placed on lines which reach the greatest employment density.

4. **Understand the demand for TOD in Central Indiana:** Nationally, market research and case studies of other communities consistently prove demand for TOD. Understanding the depth, segments and characteristics unique to the Central Indiana market is important for defining the development potential of station areas, optimizing value capture opportunities and clarifying public investment priorities. It is also important in building support from legislators, public officials, the development community, and citizens.

5. **Proactively plan station areas:** Traditionally, land use planning and conventional zoning has fostered segregated uses, auto-centric parking requirements, minimum lot sizes, and low density. These policies often
do not optimize the development yield supported by TOD and can suppress the assessed values of station areas. Important for value capture and transit system funding, property tax revenues can be significantly higher per acre with TOD, especially in communities with property tax caps like Indiana. Communities that have successfully implemented TOD create land use plans and development regulations which allow for compact, mixed-use development and public improvements to facilitate access from nearby neighborhoods to the stations. The MPO and CIRTA should work with local jurisdictions to support station area planning efforts along the transit system.

6. **Be prepared to catalyze development:** Transit investment alone is often not sufficient to generate transit-oriented development. This is especially true in ‘cooler’ market locations, such as Indianapolis, which may need to catalyze the market by making up front public investments. Because neighborhoods will have different needs and opportunities for TOD, it is important to establish clear investment goals and priorities for all scales of TOD investment. Identifying the stations in most need of or most ready for streetscape and access improvements, affordable or market-rate development, or other investment needs is important in building consensus around TOD investments. Local jurisdictions need to identify necessary infrastructure improvements at station areas and start early to locate funding sources such as a capital improvement program, a business improvement type-district or tax increment financing.

7. **Coordinate public policy and align resources:** Ensuring a dedicated funding source is important for new communities adopting a regional transit vision because it helps attract private investment. Local, regional, and state-level policies also need to be aligned to leverage transit investment and support the emergence of transit-oriented neighborhoods. Policies and programs from local zoning codes to state economic development incentives should be assessed for how they can support transit and TOD. TOD is more successful if both public and private investments are planned as part of a regional transit or TOD strategy. This improves the efficiency and the cost-effectiveness of transportation investments and yields more value to more people.

8. **Build the right organization:** Traditionally, coordination among stakeholders happens on a project-by-project basis. However, for the purposes of creating and implementing a TOD strategy a coordinating body that can continue to think strategically about opportunities and align public, private, and non-profit resources is important. Regions and municipalities often designate a TOD champion, empowered to work across jurisdictions and departments to accelerate TOD implementation. Typically, the “champion” resides either in the transit agency or the MPO. In Indianapolis, that champion should be the MPO, which is organized and empowered to advance a regional vision that includes transit. Operationally, a merging of CIRTA and IndyGo may be beneficial in consolidating resources toward implementation of a regional transit system, with a governing board aligned by contributions, benefits, and
representation. The Met Council in the Twin Cities, Metro in Portland and the Denver Regional Council of Governments all have TOD programs with a key, designated staff person.

In addition, working groups focused on TOD at a corridor scale can build coalitions, which is absolutely necessary to sustain and create partnerships. Composed of public, private and community stakeholders, working groups can be useful in connecting jurisdictions and stakeholders working on similar issues across the region, identifying opportunities and challenges, and building peer-to-peer learning opportunities. The MPO and CIRTA should convene a Northeast Corridor Working Group. This Working Group that might include a policy or steering committee composed of elected and appointed officials as well as a technical committee of staff from each jurisdiction and other agencies such as the MPO and CIRTA.

9. **Continue community outreach and education programs and processes:** Planning and investment in TOD needs to be something that happens *with* communities, rather than *to* communities. Early involvement and engagement happens throughout the process to understand local and regional visions is critical. The Indy Connect initiative has successfully engaged the Central Indiana community in a transit discussion. That momentum should continue and expand, through the planning, financing, and development phases. This momentum also provides an opportunity to cultivate community champions. Community change can be scary or threatening but when community leaders understand the benefits that transit and TOD provide – specifically access to jobs and services, and housing choice - they can become advocates for more transit, better zoning and new community investment.

10. **Develop a Regional TOD Strategic Plan:** Coalesce these recommendations and the existing character images already developed for the station areas to develop a broader TOD Strategic Plan. The plan should be prepared concurrently with the refinements of the long-term regional transportation plan, focused on the ‘development’ part of TOD. The plan should analyze the potential for TOD in the Indy Connect plan, define station area typologies that evolve from the character images, recommend phasing of public investment and station areas to leverage private investment, and assess regional and local policies and programs that support or impede effective TOD. Like the long-term regional transportation plan, the TOD strategic plan should be monitored and revised accordingly.

Many cities and regions around the nation have recently turned to typologies as a key tool for structuring short- and long-term investments in transit communities. A TOD typology provides a means of classifying and differentiating the many transit rich places by grouping these areas based on key shared characteristics. It can be used at a variety of scales, including both the corridor and the region. Typologies have seen
a variety of uses in different regions, but they are almost always used to communicate and assist with complex decisions about TOD, identify priority areas for investment, and assess the types of policies and incentives necessary to realize a corridor- or region-wide vision for TOD. This approach to TOD recognizes that there are limited resources and investments throughout a corridor or region that cannot be made simultaneously. By clearly articulating the expectations and objectives of investments in TOD, all stakeholders, from private developers to community members to policymakers can have a clearer understanding of the outcomes and process of TOD. The cities of Baltimore and Denver have developed TOD strategic plans that include a set of strategies and detailed recommendations for a set of station typologies. This plan is best led by the MPO in partnership with local jurisdictions.
VII. Matrix of Policy, Regulatory, and Financing Tools

State Programs

The state programs listed here generally provide regional and local agencies with money to conduct planning activities related to TOD and also to acquire land in anticipation of TOD. To have an impact, most state TOD programs rely on regional or local agencies applying for or otherwise taking advantage of them. A number of different state agencies may offer programs that support TOD, including State Departments of Transportation (DOT), Departments of Housing and Community Development or Departments of Commerce and Economic Development.

<table>
<thead>
<tr>
<th>Table 1. Local Programs that provide Grants, Loans, Tax Credits, or Direct Financial Incentive to TOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE</td>
</tr>
<tr>
<td>CALIFORNIA</td>
</tr>
<tr>
<td>TOD Housing Program (Proposition 1C), California Department of Housing and Community Development</td>
</tr>
<tr>
<td>Community-Based Transportation Planning Grants, California Department of Transportation</td>
</tr>
<tr>
<td>CONNECTICUT</td>
</tr>
<tr>
<td>TOD Bond Program, State of Connecticut</td>
</tr>
<tr>
<td>Housing Incentive Zone Program, State of Connecticut</td>
</tr>
<tr>
<td>ILLINOIS</td>
</tr>
</tbody>
</table>

Realizing the Potential of Transit and TOD in the Indianapolis Region
Business Location Efficiency Incentive Act (SB 2885, 2006), Illinois Department of Commerce and Economic Opportunity  | Implementation  | Provides 10% tax credits to businesses selecting sites within one mile of affordable housing and public transportation. The incentives are part of a larger Economic Development for a Growing Economy (EDGE) program, which provides tax incentives for businesses to locate in Illinois when they are actively considering a competing location in another state.

**MARYLAND**

2008 TOD Law (Section 7-101(m) of the Transportation Article), Maryland state legislation  | Planning/Implementation  | Maryland passed legislation in 2008 that makes TOD a transportation purpose, making it eligible for funding from the Transportation Trust Fund and for support from state staff. The law allows MDOT to designate specific TOD projects and then direct departmental resources and support to these projects. (14 sites were designated in June 2010.) Designated TOD sites are eligible for financing from MD Economic Development Corporation, priority assistance from MDOT and other agencies, predevelopment planning and feasibility analysis funded by MDOT; and priority consideration for the location of State offices. MDOT capital program has $3 million in dedicated funds for the implementation of TOD projects. ([program website](#))

Maryland Sustainable Communities Act (HB 475), Maryland State legislation  | Implementation/Property acquisition  | The Maryland Sustainable Communities Act of 2010 authorizes $10 million in grants for historic structures and expands eligibility for the grant program to include non-historic structures in TOD sites. ([program website](#))

Sustainable Communities/Community Legacy Program, Maryland Department of Housing and Community Development  | Planning/Implementation  | The Sustainable Communities Program (formerly Community Legacy Program) provides grants and loans to local governments and community development organizations for capital projects aimed at strengthening communities through activities such as business retention and attraction, encouraging homeownership and commercial revitalization. The evaluation awards points for proximity to transit. In FY 2011, the program has $4.2 million in capital funds. ([program website](#))

2008 TOD Law (Section 7-101(m) of the Transportation Article), Maryland state legislation  | Planning/Implementation  | Maryland passed legislation in 2008 that makes TOD a transportation purpose, making it eligible for funding from the Transportation Trust Fund and for support from state staff. The law allows MDOT to designate specific TOD projects and then direct departmental resources and support to these projects. (14 sites were designated in June 2010.) Designated TOD sites are eligible for financing from MD Economic Development Corporation, priority assistance from MDOT and other agencies, predevelopment planning and feasibility analysis funded by MDOT; and priority consideration for the location of State offices. MDOT capital program has $3 million in dedicated funds for the implementation of TOD projects. ([program website](#))

Maryland Sustainable Communities Act (HB 475), Maryland State legislation  | Implementation/Property acquisition  | The Maryland Sustainable Communities Act of 2010 authorizes $10 million in grants for historic structures and expands eligibility for the grant program to include non-historic structures in TOD sites. ([program website](#))

**MASSACHUSETTS**
<table>
<thead>
<tr>
<th>Commercial Area Transit Node Housing Program, Massachusetts Department of Housing and Community Development</th>
<th>Implementation</th>
<th>Financing assistance to rental housing projects near transit, including zero interest loans, 30-year deferred payment loans at zero interest for rental housing projects or homeownership projects that carry a 30-year deed restriction that limits the sale price of the home to a percentage of area median income. Projects must be located within a quarter-mile of existing or planned transit stations. Priority is given to projects within existing TIF areas. Funded at $10 million through the 2002 Housing Bond bill. Project funding no more than $750,000 or $50,000 per unit. (program website)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MassWorks TOD Infrastructure and Housing Support Program, Massachusetts Department of Housing and Community Development</td>
<td>Implementation</td>
<td>Provides grants for pedestrian &amp; bicycle facilities, housing projects, and parking facilities within 1/4 mile of a rail or bus station or ferry terminal. There is a 25% affordable housing set-aside requirement (80% AMI). Program funding of $30 million comes from a 2004 bond. Project funding maximum of $2.5M. (program website)</td>
</tr>
<tr>
<td>Housing and Smart Growth Incentives (Chapter 40R), Commonwealth of Massachusetts</td>
<td>Planning/Implementation</td>
<td>Provides direct funding to cities that create zoning districts for compact housing near transit (or in existing commercial districts) and an additional per-unit bonus for building permits issued in transit zones. Initial award is calculated based on the difference between number of housing units allowed under current zoning and number of units allowed under more compact rezone. There is also a 20% set-aside requirement for affordable housing for all buildings containing more than 12 units. Payments range from: $10,000 for up to 20 units to $600,000 for 501 or more units of housing. (program website)</td>
</tr>
<tr>
<td>Smart Growth School Cost Reimbursement (Chapter 40S), Commonwealth of Massachusetts</td>
<td>Planning/Implementation</td>
<td>Works with Chapter 40R: Housing and Smart Growth incentives (above), to ensure that municipalities are able to accommodate an increase in public school enrollment that may accompany increased density around transit stops. Provides direct payments, in grant form. (program website)</td>
</tr>
<tr>
<td>MINNESOTA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land Acquisition for Affordable New Development (LAAND) Program, Minnesota Housing, the Metropolitan Council, and the Family Housing Fund</td>
<td>Property Acquisition</td>
<td>Loan financing to acquire land for affordable housing projects in places that are close to job growth areas or significant numbers of lower wage jobs, allow for density that is consistent with achieving affordability, minimize vehicle miles traveled, are proximate to public transit and implements existing community. (program website)</td>
</tr>
<tr>
<td>NEW JERSEY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Jersey Transit Village Initiative, New Jersey Department of Transportation</td>
<td>Planning</td>
<td>Multi-agency task force reviews applications from municipalities to be designated as transit villages, which then makes them eligible for state assistance. Once designated as a Transit Village, municipality is eligible for $1 million planning grant. (program website)</td>
</tr>
<tr>
<td>Urban Transit Hub Tax Credit, New Jersey Economic Development Authority</td>
<td>Planning/Implementation</td>
<td>Tax credit to developers, landowners or tenants to encourage investment around heavy rail stations in nine urban municipalities. Capital investment must be at least $50M in a single business facility that employs at least 250 people onsite. (program website)</td>
</tr>
</tbody>
</table>
Regional and Transit Agency Programs

Regional agencies, including metropolitan planning organizations (MPOs)\textsuperscript{32}, Councils of Governments and transit agencies, have played a key role in promoting TOD. Transit systems typically cross-jurisdictional boundaries and spread throughout metropolitan regions. TOD-supportive programs offered by regional agencies can help provide local communities with the resources they need to create station-area plans or advance TOD projects. Regional agencies program federal transportation funds and, while discretion over those funds varies from state to state, many MPOs can decide to dedicate some of this funding to programs that advance transit and transit-oriented development. Regional funding programs that support TOD can also incentivize and reward local jurisdictions that adopt land use plans that support regional planning goals.

<table>
<thead>
<tr>
<th>TYPE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALIFORNIA</td>
<td>Requires stations to meet planned density thresholds and conduct station-area planning in order to receive transit funding. The policy has three key elements: (1) minimum density thresholds near transit stations, (2) consideration of jobs, housing, station access, design standards, parking, etc. based on the character of the area and any unique circumstances, and (3) creation of corridor working groups to help meet the density thresholds. Funding: 2008 Strategic Plan identifies $222 million</td>
</tr>
</tbody>
</table>

\textsuperscript{32} For more information on the role that MPOs can play to support transit-oriented development, see TOD 204: Regional Planning for Livable Communities (CTOD, forthcoming in early 2011)
to speed project delivery and close funding shortfalls, 2008 Strategic Plan identifies 19 rail and bus transit expansion projects totaling approximately $10.5 billion

| **Transportation for Livable Communities** | **Planning/Implementation** | Includes two components: capital grants and planning grants. Jurisdictions can receive extra transportation funds for planning new projects within one-third a mile of a transit stop with service at least every 15 minutes during peak hours. **Funding:** TLC allocates $27M per year to projects that meet smart growth criteria. Since 1998, over $200 million has been allocated to local communities to better connect housing with transit facilities. |
| **COLORADO** | **Station Area & Urban Center Planning Funds, Denver Regional Council of Governments** | **Planning** | **Station Area/Urb

| **DENVER METRO MAYORS CAUCUS TOD FUND, CO HOUSING AND FINANCE AUTHORITY** | **Implementation** | Seven cities that are part of the regional Mayors Caucus pooled their Private Activity Bond authority to finance the construction or rehabilitation of multifamily rental projects near existing or planned transit. Money cannot be used to purchase or hold land. Projects must meet criteria related to size, affordability and transit accessibility gain access to lower debt financing costs and to Low Income Housing Tax Credits. The fund has $65 million. [program website](#) |

| **DISTRICT OF COLUMBIA** | **Transportation/Land Use Connections Program, Metropolitan Washington Council of Governments** | **Planning/Implementation** | Provides a web-based information sharing hub for jurisdictions, and technical assistance grants for planning and capital projects that are sustainable and reduce congestion. Provided $220,000 in FY 2010 to fund seven technical assistance projects. Grants ranged from $10,000 to $60,000. [program website](#) |

| **GEORGIA** | **Livable Centers Initiative, Atlanta Regional Commission** | **Planning** | Planning grants that encourage local jurisdictions to plan and implement strategies that link transportation improvements with land use development strategies to create sustainable, livable communities consistent with regional development policies. Funded with federal STP dollars at ~$5M annually. [program website](#) |

<p>| <strong>BELTLINE AFFORDABLE HOUSING TRUST FUND, ATLANTA DEVELOPMENT AUTHORITY</strong> | <strong>Implementation/Property acquisition</strong> | Grants available for private developers and Community Housing Development Organizations to create and preserve affordable housing within the Atlanta BeltLine Tax Allocation District (a future 22-mile transit loop). Program funded with $8.3 million of general funds from the City as well as a set aside of BeltLine tax increment revenues. Projects receive up to $2.5 million per multifamily development or $750,000 per single family development. <a href="#">program website</a> |</p>
<table>
<thead>
<tr>
<th>ILLINOIS</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Planning Program &amp; Sub-regional Planning Program, Chicago Regional Transportation Authority</td>
<td>Planning</td>
<td>Provides funding and planning assistance for planning projects that benefit both the local community and the RTA transit system. Projects within the program include planning for transit-oriented development, access and circulation improvements in and around transit facilities, improved job access, improved mobility for seniors and people with disabilities, and increased transit usage. In 2010, ~$1.5M was awarded for a total of 10 projects. (<a href="#">program website</a>)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NEW YORK</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Linkage Planning Program, Capital District Transportation Committee</td>
<td>Planning</td>
<td>Provides funding for consultant or CDTC staff technical assistance for joint regional-local planning initiatives that link transportation and land use. Program is part of implementing regional long-range transportation plan, which calls for reducing regional vehicle miles travelled. Linkage program has funded 66 plans through roughly $4.2 million in program funds since 2000. Funds are a combination of federal, state and local funds. (<a href="#">program website</a>)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OHIO</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation for Livable Communities Initiative, Northeast Ohio Areawide Coordinating Agency (MPO for Cuyahoga, Geauga, Lake, Lorain and Medina counties)</td>
<td>Planning</td>
<td>TLCI helps communities in Northeast Ohio obtain federal funding and technical assistance for planning transportation processes that strengthen community livability. The TLCI’s planning grant program allocates approximately $1M each fiscal year, with individual grants of up to $75,000. Projects have to advance ten goals (safety, economic vitality, community identity, etc.) and many types of projects have been funded including a few TOD plans. (<a href="#">program website</a>)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OREGON</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TOD Implementation Program, METRO Portland (MPO for Portland region)</td>
<td></td>
<td>Uses a combination of local and federal transportation funds (STP &amp; CMAQ) to enhance the economic feasibility of higher density mixed-use projects served by transit. The program creates public-private partnerships and provides grants to private developers to support cost premiums associated with TOD (i.e. structured parking). Applicants considered on a rolling basis. Program funded at $5M for two years. Awards vary but are typically ~$300,000 per grant. (<a href="#">program website</a>)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PENNSYLVANIA</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Transportation &amp; Community Development Initiative (TCDI), Delaware Valley Regional Planning Commission</td>
<td>Planning</td>
<td>Grants to local communities to create plans that “link transportation improvements with land use strategies, enhance established communities, and build upon existing public and private assets.” Funding comes from federal STP funds. Up to $1.6 million available each year. (<a href="#">program website</a>)</td>
</tr>
</tbody>
</table>
### TEXAS

| Sustainable Development Funding Program, Dallas/Fort Worth (TX): North Central Texas Council of Governments | Planning/Implementation/Property Acquisition | Cities apply for planning, capital and land acquisition funding for projects that encourage public/private partnerships that positively address existing transportation system capacity, rail access, air quality concerns, and/or mixed land uses. Funds for the program come from local infrastructure funds “swapped” for federal CMAQ and STP funds or for toll revenue. ([program website](#)) |

### WASHINGTON

| TOD Program, Central Puget Sound Regional Transit Authority (Sound Transit) | Planning/Implementation/Property Acquisition | Provides funding to jurisdictions, developers, and other entities for joint development costs, strategic land acquisition, and the creation of TOD feasibility studies. The FY2001 budget was $1.03 million. ([program website](#)) |
Local Programs

Local (City or County) TOD programs that provide direct funding focus primarily on implementation of TOD projects. Local agencies, such as a city or county redevelopment authority, planning department or office of economic development, may have relationships with developers and housing authorities and may be able to work with these key players to determine what type of support is needed to move TOD projects forward. Because they operate at a local scale, these TOD programs can be tailored to meet the specific needs of a target community or even an individual transit corridor.

<table>
<thead>
<tr>
<th>Table 3. Local Programs that provide Grants, Loans, Tax Credits, or Direct Financial Incentive to TOD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ARIZONA</strong></td>
</tr>
<tr>
<td>TOD Bond Program, Phoenix Community and Economic Development Department</td>
</tr>
<tr>
<td>Implementation</td>
</tr>
<tr>
<td>The Department gained authority to spend approximately two million dollars on acquiring land for TOD</td>
</tr>
<tr>
<td>and to reimburse developers of TOD for infrastructure improvements. Funds have been used to pay for</td>
</tr>
<tr>
<td>the construction of sidewalks, landscaping and utility relocations for a downtown project adjacent</td>
</tr>
<tr>
<td>to a light rail station, and to acquire a two acre parcel adjacent to a planned light rail station for</td>
</tr>
<tr>
<td>future TOD development. (no website available)</td>
</tr>
<tr>
<td><strong>CALIFORNIA</strong></td>
</tr>
<tr>
<td>TOD Housing Incentive Program, City/County Association of Governments of San Mateo County</td>
</tr>
<tr>
<td>Implementation</td>
</tr>
<tr>
<td>Provides grants to cities and the county to create housing within 1/3 mile of transit stations. Under</td>
</tr>
<tr>
<td>the program, a jurisdiction receives funding based on the number of bedrooms in the housing units.</td>
</tr>
<tr>
<td>Eligible projects receive up to $2,000 per bedroom. Projects must have a density of at least 40 units</td>
</tr>
<tr>
<td>per acre. The Association of Governments allocates up to 10 percent of the county’s State Transportation</td>
</tr>
<tr>
<td>Improvement Program funds to the TOD Incentive Program. (no website available)</td>
</tr>
<tr>
<td><strong>COLORADO</strong></td>
</tr>
<tr>
<td>TOD Acquisition Fund, Urban Land Conservancy, Enterprise Community Partners, the City and County of</td>
</tr>
<tr>
<td>Denver and several other investors</td>
</tr>
<tr>
<td>Property Acquisition</td>
</tr>
<tr>
<td>Acquires properties in current and future transit corridors, with the goal of creating and preserving</td>
</tr>
<tr>
<td>up to 1,200 affordable housing. The Fund is capitalized at $15 million, with an eventual goal of $25</td>
</tr>
<tr>
<td>million in total loan capital. The Fund will purchase and hold sites for up to five years along transit</td>
</tr>
<tr>
<td>corridors. (<a href="#">program website</a>)</td>
</tr>
<tr>
<td><strong>MINNESOTA</strong></td>
</tr>
<tr>
<td>Capital Acquisition Revolving Fund, Minneapolis Community Planning &amp; Economic Development Department</td>
</tr>
<tr>
<td>Property acquisition</td>
</tr>
<tr>
<td>Funding to acquire property or provide loans for private sector property acquisition and site assembly</td>
</tr>
<tr>
<td>for sites located on commercial and transit corridors and at commercial nodes for mixed commercial</td>
</tr>
<tr>
<td>and residential use. At least 20% of the housing units must be affordable at &lt;50% area median income</td>
</tr>
<tr>
<td>(AMI). Funded with $1 million in Community Development Block Grant (CDBG) money, other funding comes</td>
</tr>
<tr>
<td>from Neighborhood Revitalization Program funds. (<a href="#">program website</a>)</td>
</tr>
<tr>
<td>Transit Oriented Development Bond Program, Hennepin County</td>
</tr>
<tr>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td><strong>NORTH CAROLINA</strong></td>
</tr>
<tr>
<td>South Corridor Land Acquisition Fund, Charlotte</td>
</tr>
<tr>
<td><strong>OREGON</strong></td>
</tr>
<tr>
<td>TOD Property Tax Abatement Program, Portland Development Commission</td>
</tr>
<tr>
<td><strong>WASHINGTON</strong></td>
</tr>
<tr>
<td>Transit-Oriented Community Development Fund, City of Seattle</td>
</tr>
</tbody>
</table>
IX. Appendix

Appendix A. Commute of the Largest Regional Employment Centers
Appendix B. PowerPoint Presentations

Presentation Overview

1. Fundamentals of Transit and Transit Oriented Districts
2. The Transit Region
3. Station Areas and Local Communities
4. Households and Businesses
5. Concluding Thoughts
Fundamentals of Transit and Transit Oriented Districts

Defining TOD

The synergy between communities and transit that delivers regional mobility choices and reduces auto dependency.
Who Benefits from TOD

<table>
<thead>
<tr>
<th>Actors</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transit Agencies</td>
<td>Ridership &amp; Revenue</td>
</tr>
<tr>
<td>“Regional Economy”</td>
<td>Greater “Agglomeration” benefits</td>
</tr>
<tr>
<td>“Regional Environment”</td>
<td>Reduced VMT, reduced GHG emissions</td>
</tr>
<tr>
<td>Local Government</td>
<td>Opportunity to boost tax base</td>
</tr>
<tr>
<td>Households and Businesses</td>
<td>Increased mobility, lower transportation costs, better health</td>
</tr>
<tr>
<td>Property owners</td>
<td>Market acceleration in high performing locations</td>
</tr>
</tbody>
</table>

How Does TOD Work

People within a half-mile radius are 5 times as likely to walk to a major transit stop than others. Those who live further from a transit node are less likely to bother with the train or bus.
Jobs as Important as Housing

Transit is in a Building Boom

- $250B in transit planned nationally
- $9.5B spent by FTA in last 6 years
How Can We Maximize Those Benefits

1. Transit Region
2. Station Areas and local Communities
3. Households and Businesses

The Transit Region
Four Types of Transit Corridors

Corridor Type:
- Commuter
- District Center
- Planned Growth
- Divisive Contraction

Corridors Serve Different Roles Based on Defining Characteristics

- **Congestion Relief**
  - Complements existing commute flows
  - Limited emphasis on development

- **Future Growth and Development**
  - Addresses future congestion
  - High development opportunities on corridor

- **Equity**
  - Connects low-income neighborhoods to job centers
  - Provides low-cost access relative to automobiles

- **Economic Development**
  - Placed along older arterial corridors
  - Transit investment intended to spur re-development
Destination Connection Corridors Often Have Strongest Ridership

Transit Corridors Connect Multiple Station Areas
“TOD” is about the District, Not Individual Development Projects

Two types of opportunities:

- **Transit-Oriented DISTRICT**
  - Area within a 5 - 10 minute walk of the station

- **Joint Development**
  - Individual development project on publicly owned land

---

**TOD is not a “Once Size Fits All” Product**

<table>
<thead>
<tr>
<th>TOD Type</th>
<th>Desired Land Use Mix</th>
<th>Desired Housing Types</th>
<th>Commercial Employment Potential</th>
<th>Proven Route</th>
<th>Transit Connectivity</th>
<th>Color Code</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Center</td>
<td>Office, retail, entertainment</td>
<td>Multi-family and mixed</td>
<td>Strong economic growth</td>
<td>4 avenues and stations</td>
<td>Improved services and Daniels Center</td>
<td>Red</td>
<td>Indianapolis CBD (Transit Center)</td>
</tr>
<tr>
<td>Urban Center</td>
<td>Office, retail, residential</td>
<td>Multi-family and mixed</td>
<td>Strong economic growth</td>
<td>2 avenues and stations</td>
<td>Improved services and Daniels Center</td>
<td>Yellow</td>
<td>O’Rourke Street Station (SLO)</td>
</tr>
<tr>
<td>Suburban Center</td>
<td>Retail, office, residential</td>
<td>Multi-family and mixed</td>
<td>Strong economic growth</td>
<td>3 avenues and stations</td>
<td>Improved services and Daniels Center</td>
<td>Green</td>
<td>New Street Station (PCC)</td>
</tr>
<tr>
<td>Neighborhood</td>
<td>Retail, office, residential</td>
<td>Multi-family and mixed</td>
<td>Strong economic growth</td>
<td>2 avenues and stations</td>
<td>Improved services and Daniels Center</td>
<td>Blue</td>
<td>11:24 Bus Station (New)</td>
</tr>
<tr>
<td>Main Street</td>
<td>Retail, office, residential</td>
<td>Multi-family and mixed</td>
<td>Strong economic growth</td>
<td>3 avenues and stations</td>
<td>Improved services and Daniels Center</td>
<td>Purple</td>
<td>11:24 Bus Station (New)</td>
</tr>
</tbody>
</table>
Station Areas and Local Communities

Land Values Generally Increase with Proximity to Transit Creating Benefits for Property Owners and Cities

Relative Value of Locational Attribute

- 2 to 5 miles
- 5 to 2 miles
- under 2 miles from station
But, the Evidence on Transit and Property Values is Uneven

WHY?

Many factors influence the impact of transit on property values:

- Frequency of Transit Service
- Transit Connectivity
- Real Estate Market Conditions
- Land Uses in the Station Area
- Ease of Access to the Station (Pedestrian Connectivity, Parking)
- Disincentives to Driving (Congestion, High Gas Prices)

Transit is not a market maker, it’s a market enhancer

Once Transit Lines Are built, Local Investment is Still Required to Facilitate TOD

For every $1 in transit investment, local communities need to invest and additional $0.50 to support pedestrian connections and other station area improvements
### Investing in Transit Supportive Infrastructure Has Other Co-Benefits

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Streetscape</td>
<td>General streetscape improvements</td>
<td>28% increase in home values</td>
</tr>
<tr>
<td>Walkability</td>
<td>Walkscore improved by one point</td>
<td>$700 - $3,000 increase in home values</td>
</tr>
<tr>
<td>Commercial infill development</td>
<td>Proximity to commercial corridor in &quot;excellent&quot; condition</td>
<td>11 – 23% residential price premium</td>
</tr>
<tr>
<td>Site remediation</td>
<td>Remediation of brownfield sites</td>
<td>3 – 11% increase in housing prices</td>
</tr>
</tbody>
</table>

### Different Approaches Are Necessary For Financing TOD in Strong and Weak Market Areas

**Financing Strategy in Warm or Hot Market Locations (aka “Value Capture”):**

- Private Development
- Public Sector Financing Strategies
- Infrastructure and Amenities

**Financing Strategy in Cooler Market Locations (aka “Unlocking Private Capital”):**

- Public Sector Financing Strategies
- Infrastructure and Amenities
- Private Development
Households And Businesses

TOD will Represent At Least 1/4 of the US Housing Market by 2030

Source: "Hidden in Plain Sight", Center for Transit-Oriented Development, 2006
Many Employers Prefer to Locate Near Transit

- 23 percent of all jobs in regions with fixed-guideway transit locate near transit stations
- In regions with large transit systems, as many as 45 percent of all jobs are near transit.

Employment Density More Important that Residential Density for Transit Ridership
Transit and Employment

- Employment grew by an average of 5% for all employment areas and for the region as a whole from 2002 to 2008.
- Employment grew in transit zones by 6.5% from 2002-2008.
- Anecdotally, the Denver region has attracted 45 new employers who cite existing and future transit lines as a major factor in site location decisions.
Lessons for the Indianapolis Region

1. Providing “mobility” choices has many economic, health, and environmental benefits.

2. Remember that “success” will rely on partnerships among the MPO/transit provider(s), individual communities, and the private sector.

3. A Transit network that clearly serves employment centers will contribute to the region’s overall economic competitiveness.

4. While transit systems get built out incrementally, it’s important to have a firm plan for the entire system that creates certainty and can drive investment.
Appendix C. TOD Checklist

Creating Transit Centered Communities
A workshop on the Principles and implementation of transit-oriented development

What to Look For in Good Transit-Oriented Development

This checklist is designed to help you evaluate the specific elements and items that go into transit-supportive station area plans and development proposals. Ultimately, good transit-oriented development depends on the successful integration of a carefully-designed transit system and carefully-designed development. An important element of successful TOD is engagement of the residents, the development community, the transit agency, and local governments to ensure that new investment achieves a balance of objectives. This checklist provides a menu of elements contributing to high-quality TOD that acknowledges the importance of good design, equitable development, market demand, and multi-modal transportation needs.

Local land use planners developing station area plans, architects and planners preparing development proposals, and development review staff will find these questions most helpful. Local elected officials and citizens can also use these questions as a guide for their own review of proposed plans and development proposals.

The checklist is divided into two sections: Station Area Planning—with questions about planning processes for the area around a transit station—and Implementation—with questions about individual development projects or proposals. There is some overlap, but some distinction as well.

Not all questions need to be marked “YES” in order to achieve transit-oriented development. Placing a priority on those questions most important to the local community and to local and regional stakeholders, achieving as many of these outcomes as possible will lead to quality communities around transit.
## Station Area Planning

Planning for potential station areas may begin at any time, and the earlier a community starts to think about future development around a station the better. Answering “yes” to all of these questions is a good indication that the plan provides a good framework for development that will support increased ridership and a healthy neighborhood.

<table>
<thead>
<tr>
<th>Plan Area and Process</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the planning area include at least the 1/2-mile radius around the transit station?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Does the plan address the use of land, the design of streets for pedestrians, bicycles, and transit, and access to transit facilities?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Does the planning process engage the community in decision-making through a visioning process or intensive charrettes?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Does the plan include a section on implementation and identify responsible parties for making the plan a reality?</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Land Use Planning</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the plan call for clustering the densest development around the transit station and other activity centers, with gradually decreasing densities further from the station?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Are the planned densities appropriate for the type of station area and its location?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Are the planned uses transit-friendly? Will many of the people traveling to them find it convenient to use transit rather than a car? (e.g. stand-alone “big-box” retail is not easily accessible other than in a car)</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Will the planned mix of uses attract people throughout the day and week?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Are non-compatible uses such as car washes, drive-thrus or auto dealerships phased out over time?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Are uses included that would be conveniences for surrounding residents, workers, and transit patrons, eg. coffee and newspapers, daycare and drycleaners?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Will new and existing residents and workers generate enough demand to support proposed retail uses or will the plan depend on customers from outside of the station area?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Will there be a phasing program for the different uses based on market demand?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>If vertical mixed use is not feasible (i.e. mixing uses in one building or project), are there opportunities to mix uses horizontally (i.e. mixing uses throughout the neighborhood in different projects)?</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Building Design</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are buildings required to have “active” ground floors with frequent entries and windows along sidewalks and walkways?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Are buildings required to build to the lot line or street frontage to activate the street?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Is parking hidden from view from the street behind buildings or in parking structures lined with other uses, such as retail or residential?</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>-----</td>
<td>----</td>
<td></td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
<td>Are there incentives or requirements for environmentally sustainable design and construction of buildings and the creation of green space?</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
<td>Are sidewalks and intersections designed for safe movement by all users, including pedestrians of all ages and abilities?</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
<td>Are streets designed to provide access for bicycles or is there a planned network of bicycle routes?</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
<td>Do streets provide access for transit vehicles?</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
<td>Are most of the roads through a project designed for speeds less than 25 miles per hour to improve pedestrian safety?</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
<td>Are streets designed to have adequate accommodation for street trees and plantings appropriate for the local climate?</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
<td>Is the design of public spaces appropriate to adjacent uses? (e.g., parks and playgrounds in residential areas, public plazas in commercial and retail areas)</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
<td>Are public spaces and parks accessible to other uses and well connected to regional open space networks?</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
<td>Will market-rate residential projects be required or encouraged to provide for a mix of incomes that reflect current community residents or identified future needs?</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
<td>Is any land set aside or targeted for subsidized housing?</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
<td>Are there plans to protect or replace existing affordable housing?</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
<td>Will there be on-street parking to buffer pedestrians from street traffic and create a reserve of short-term parking?</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
<td>Are there reduced parking requirements for buildings and uses most likely to attract transit riders?</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
<td>Are developers rewarded for reducing the amount of parking they build?</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
<td>Are there policies to allow for shared parking among compatible uses?</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
<td>Is parking priced to encourage transit use over driving?</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
<td>Do parking fees go to local improvements such as transit service or streetscape improvements?</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
<td>Does zoning or other development regulation allow for the types of development envisioned in the plan?</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
<td>Are there zoning tools such as form-based codes or incentive zoning used to facilitate investments that support the community vision?</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
<td>Are there value capture tools or specialized funding sources targeted to implementing the station area plan?</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
<td>Are tools such as Tax Increment Financing considered for implementation of individual development projects or streetscape improvements?</td>
</tr>
</tbody>
</table>
Implementation

A plan is only as good as its outcome. High-quality TOD plans can generate increases in transit ridership, pedestrian activity, and economic development. Answering "yes" to all of these questions is a good indication that the implementation of the plan will result into a healthy, vibrant, transit-oriented neighborhood.

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Pedestrian and Bicycle Environment</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>--</td>
</tr>
<tr>
<td>□ □  Are pedestrian pathways continuous and easy to navigate?</td>
<td></td>
</tr>
<tr>
<td>□ □  Are there protected places to walk, or wait for transit if it is raining or snowing?</td>
<td></td>
</tr>
<tr>
<td>□ □  Do buildings include a clear entrance so that people do not have to search for the way in?</td>
<td></td>
</tr>
<tr>
<td>□ □  Do pedestrian pathways and buildings incorporate universal design principles for accessibility?</td>
<td></td>
</tr>
<tr>
<td>□ □  Are there convenient, accessible and secure areas to park bikes at or in buildings or parking lots?</td>
<td></td>
</tr>
<tr>
<td>□ □  Are there tenant showers in commercial buildings for bicycle commuters?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Car Parking</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>□ □  Is parking screened from the street, e.g. a structured lot “wrapped” by residential or commercial space or a surface lot behind the building it serves?</td>
<td></td>
</tr>
<tr>
<td>□ □  Are different uses sharing the same parking spots at different times of the day?</td>
<td></td>
</tr>
<tr>
<td>□ □  Are there car share parking spaces in private parking lots or on the street?</td>
<td></td>
</tr>
<tr>
<td>□ □  Do the parking ratios reflect lower auto ownership rates typically found in households living within one-half mile of transit?</td>
<td></td>
</tr>
<tr>
<td>□ □  Will apartments and condominiums separate the cost of parking from rents and home prices?</td>
<td></td>
</tr>
<tr>
<td>□ □  Does the property manager have a transportation demand management strategy that may include free or discounted transit passes?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Market Assessment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>□ □  Is there good proximity to downtown, CBD or major employment centers?</td>
<td></td>
</tr>
<tr>
<td>□ □  Is this perceived as a strong or hot market?</td>
<td></td>
</tr>
<tr>
<td>□ □  Is there high quality transit service and frequency?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financing and Implementation Tools</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>□ □  Does the city/jurisdiction use capital improvement program (CIP), tax increment financing (TIF), business improvement districts (BIDs) or other funds for transit support improvements?</td>
<td></td>
</tr>
<tr>
<td>□ □  Is it a plan to revise existing zoning and development controls?</td>
<td></td>
</tr>
<tr>
<td>□ □  Does the plan consider how to fund transit, station access, and other infrastructure needs?</td>
<td></td>
</tr>
<tr>
<td>□ □  Has the city/jurisdiction or other entity set up a land acquisition fund for land around transit stations?</td>
<td></td>
</tr>
</tbody>
</table>
Appendix D. Training Resource Guide

TOD Training Materials

Title: Transit-Oriented Development: National Examples and Best Practices
Date: January 2009
Author(s): Center for Transit Oriented Development (CTOD) – Sam Zimbabwe
Summary: A 33-slide presentation detailing the economic, social, environmental, health, and transportation benefits of TOD. The presentation also outlines how TOD fits into the broader context of current development and transportation trends, and it provides useful advice on the implementation process.
Target Audience: All stakeholders

Title: Transit-Oriented Development: Factors and Elements of Success
Date: September 2008
Author(s): CTOD – Sam Zimbabwe
Summary: A comprehensive presentation on the best practices, benefits, and holistic impacts of TOD. In the presentation, the economic, social, health, and environmental benefits of TOD are represented in images, graphs and charts. The presentation does an excellent job of connecting TOD to regional issues, such as congestion mitigation, housing choices, and the potential of TOD to improve regional corridors.
Target Audience: All stakeholders

Title: NHI Transportation & Land Use Course – TOD Segment
Author(s): National Highway Institute (NHI)
Summary: This lesson, both the presentation and accompanying instructor’s notes, describes TOD in its many forms across the United States. The presentation provides statistics on the total number of TOD projects in the US, their transit system, data regarding the implementation tools the locality used, and the costs and benefits of TOD.
Target Audience: All stakeholders

TOD Publications & Best Practices

Title: Bus Rapid Transit and Transit Oriented Development: Case Studies on Transit Oriented Development Around Bus Rapid Transit Systems in North America and Australia

Title: Transit + Employment: Increasing Transit’s Share of the Commute Trip
Date: June 2008
Author(s): CTOD – Ellen Greenberg, Dena Belzer, edited by Gloria Ohland
Summary: A report on the impact and potential of TOD in improving the daily commute of America’s workforce. The report illustrates the significant number of transit trips in the major metropolitan areas of the US, and also the challenges those regions would face if transit service was decreased or failed to expand to meet rising demand. The report focuses on several large metro areas to demonstrate the best practices of TOD systems that are lynchpins of those areas’ job centers. Evidence is also provided regarding the strong connection between TOD and economic stability—TOD is often inextricably linked to good jobs in the CBD, and it is relied upon by
people across the socio-economic spectrum as their preferred means of transportation to important economic districts.

Target Audience: Elected officials, private sector, DOT, Planning Dept.

Title: **Station Area Planning: How to Make Great Transit-Oriented Places**
Date: February 2008
Author(s): CTOD
Summary: A report that describes the range of place typologies for transit stations. The typologies described in the report range from the regional to the neighborhood level, and are accompanied with images and statistics regarding the design, congestion mitigation, and economic impact that each typology can provide.
Target Audience: Elected officials, community, Planning Dept., DOT

Title: **Why Transit-Oriented Development And Why Now?**
Date: 2007
Author(s): CTOD
Summary: A report that primarily focuses on the economic benefits of TOD. Specifically, TOD’s ability to increase property values and serve as a stabilizing force in the real estate market.
Target Audience: Private sector, elected officials

Title: **Communicating the Benefits of TOD: The City of Evanston’s Transit-Oriented Redevelopment and the Hudson Bergen Light Rail System**
Date: June 2006
Author(s): CTOD - Cali Gorewitz and Gloria Ohland
Summary: A report about TOD projects in three localities: Hoboken and Jersey City, New Jersey, and Evanston, Illinois. The case studies in the report demonstrate how TOD can improve connections between the CBD and surrounding jurisdictions and, as a result, improve the local economy, manage growth, promote walking and biking, and preserve existing communities at the same time.
Target Audience: Elected officials, DOT, Planning Dept., community

Title: **Inventory of Transit Guidelines and Standards**
Date: 2009
Author(s): Reconnecting America
Summary: A list of over thirty TOD guidelines and standards published and adopted by transit and planning agencies in the US and Canada. The list provides the locality, date of publication, key sections, and a weblink for each publication.
Target Audience: Transit agencies, elected officials, private sector, Planning Dept.

Title: **Projects on Massachusetts Bay Transportation Authority (MBTA) Surplus Property**
Author(s): MBTA and Transit Realty Associates
Link: www.mbta.com/about_the_mbta/t_projects/projects_tod/?id=1082 and www.transitrealty.com/tod.asp
Summary: These websites describe current TOD projects in Massachusetts. The descriptions include a site description, outline of the planning process and, in some instances, a copy of the design guidelines regulating the development.
Target Audience: Transit agency, Planning Dept. 3 Creating Transit Centered Communities Resource Guide

Title: **Preserving and Promoting Diverse Transit-Oriented Neighborhoods**  
Date: October 2006  
Author(s): CTOD  
Summary: A comprehensive report that attempts to outline who lives near transit stops today, and who will live near transit 25 years from now. Key findings of the report are high levels of socio-economic diversity of areas close to transit stations, dependency of lower-income households on transit for mobility, economic benefits of TOD, environmental benefits of TOD, and increasing importance of transit service to all demographics.  
Target Audience: Elected officials, DOT, Planning Dept., private sector

Title: **An Ordinance to Amend the City of Raleigh Zoning Code to Include a New Overlay Zoning District to Regulate Future Development on Properties Surrounding Designated Transit Station Locations**  
Date: October 2004  
Author(s): City Council of Raleigh, North Carolina  
Summary: A city ordinance intended to promote the development of a concentrated mix of pedestrian-oriented land uses around passenger transit stations and stops. The ordinance lists the uses, densities, design qualities, and other regulations that the city believes will maximize the benefits of developing areas near transit facilities.  
Target Audience: Elected officials, Planning Dept., private sector

Title: **Planning for Transit-Friendly Land Use: A Handbook for New Jersey Communities**  
Date: June 1994  
Author(s): NJTransit  
Summary: This handbook describes strategies, techniques and tools to improve the relationship between land use planning and transit toward the creation of more pedestrian and transit friendly communities. The book features practical examples and implementation tools ways addressing all modes of transportation for transit friendly development in New Jersey  
Target Audience: Community, Planning Dept., elected officials

Title: **The Role of State DOTs in Support of Transit-Oriented Development (TOD)**  
Date: April 2006  
Author(s): Cambridge Systematics, Inc.  
Summary: The research described in this report addresses the role that State DOTs can play in supporting transit-oriented development. The report emphasizes prioritizing TOD in agency policy, revising agency protocol to remove obstacles to TOD, establishing partnerships, advocating for state policy changes, providing technical assistance, and conducting education and outreach, among other strategies.  
Target Audience: DOT, elected officials

Title: **Smart Growth/Smart Energy Toolkit: Transit Oriented Development**  
Author(s): State of Massachusetts, Department of Transportation and Public Works  
Summary: A state webpage that outlines the benefits of TOD, along with the state policies and incentives that are intended to promote TOD. The website also provides guidance on station area plans, design guidelines, zoning requirements, public investment policies, and fiscal policies that guide TOD.

Target Audience: Planning Dept., DOT, elected officials

Creating Transit Centered Communities Resource Guide

Title: **Transit Oriented Development: Moving from Rhetoric to Reality**
Date: June 2002
Author(s): Dena Belzer and Gerald Autler, Brookings Institute
Summary: This report shows that the potential for TODs has not been realized with most development being transit-adjacent rather than transit-oriented. The report suggests six performance criteria to define the success of TODs: 1) location efficiency, 2) value recapture from the perspective of the resident or user of TODs, 3) livability, 4) financial return to the investors, 5) choice of housing type, retail opportunities, and travel modes, and 6) efficient regional land use patterns that reduces land consumption, housing and job balance and traffic generation. The report spells out six challenges that must be met to advance the concept of TODs, including conflicts between the transit station and the surrounding neighborhoods, fragmented regulatory and policy environment, and unsupportive market conditions. Finally, the report recommends a series of actions to allow the various stakeholders to work together and specific actions for each one, including transit agencies, local governments, and developers and lending institutions.
Target Audience: All stakeholders

Title: **The Bus Route to Redevelopment**
Date: Winter 2009
Author(s): Darius Sollohub and Mark Solof, InTransition, NJTPA/NJIT
Summary: A case study of the Euclid Avenue BRT system in Cleveland, which attempts to prove that BRT can effectively spur healthy TOD. The case study outlines what elements are necessary for a BRT system to attract TOD and what aspects of BRT can prevent TOD from happening. The report also briefly cites the Boston BRT system for supporting evidence.
Target Audience: All stakeholders

Title: **Transit-Oriented Development in the United States: Experiences, Challenges, and Prospects**
Date: 2004
Author(s): Robert Cervero, et al, TCRP
Summary: An in-depth report describing the national state of contemporary TOD practices. The report is based on a combination of stakeholder surveys, interviews, and case studies. Discussed in the report are an overview of TOD in the United States, TOD and environmental policy, tools necessary to implement TOD, barriers to TOD, benefits—economic, social and transportation—and a long list of case studies to provide supporting evidence. The report also contains a bibliography and glossary.
Target Audience: All stakeholders

Title: **Value Capture: How to Get a Return on Investment in Transit and TOD**
Date: 2006
Author(s): Gloria Ohland
Summary: This paper presents examples of successful value capture programs including the traditional approach of direct charges in the form of property and sales taxes, lease and sales revenues, and fees from parking. The paper then discusses more specialized tools such as tax-increment financing, special assessment districts, equity participation, and public private partnerships. It gives numerous examples of the implementation of these strategies. The paper concludes with the presentation of some added ideas that have not yet been tried in the value capture arena.

Target Audience: Planning Dept., community, elected officials

Title: **Recommended Practice for Transit Agency, Community and Business Partnerships to Promote Transit-Oriented Development**

Date: October 2008  
Author(s): APTA

Summary: A comprehensive report outlining implementation policies, community processes, best practices, and outreach/marketing strategies for building TOD. The report also provides 8 case studies of successful TOD projects that have followed the process outlined in the report.

Target Audience: DOT, private sector, elected officials

Title: **Summary of Principles for TOD Guidance**

Date: October 2008  
Author(s): APTA Sustainability and Urban Design Standards Working Group

Summary: This summary document presents recommendations for TOD with regard to land use mixture, density, street design and network, and transit area “zones.” These best practices are a compilation of 19 guidance documents and Reconnecting America/Center for Transit Oriented Development’s Station Area Planning Guidebook.

Target Audience: Planning Dept., transit agency

**Related Planning Resources**

Title: **Houston, TX Access Management Guide – SH 6 Corridor Access Management Plan**

Author(s): Houston-Galveston Area Council (H-GAC)

Summary: A presentation outlining Houston’s *Livable Centers* initiative. Livable centers are areas containing quality places, “where people can travel between several destinations without having to use their cars.” The presentation focuses on the SH6 corridor, which the H-GAC has targeted for conversion to livable centers. The design and infrastructure investments that are needed for that conversion, and the political and public process that H-GAC plans to undertake to implement their projects are discussed.

Target Audience: All stakeholders

Title: **Indianapolis Regional Center & Metropolitan Planning Area Multi-Modal Corridor and Public Space Design Guidelines – Steps to Determine District Connectivity**

Summary: Step-by-step instructions intended to assist agencies and developers in identifying and selecting a pedestrian district within their communities, and to determine the connectivity needs of that area. This district connectivity exercise helps to identify deficiencies in pedestrian, bicycle, or vehicle connections. The document
states that by establishing multiple connections, it becomes more convenient and feasible to walk, bike, and use transit.
Target Audience: DOT, Planning Dept., community

Title: How Far, by Which Route and Why? A Spatial Analysis of Pedestrian Preference
Date: June 2007
Author(s): Marc Schlossberg, et al
Summary: This paper determined that people are willing to walk farther to reach light rail stations than previously assumed, and that time and distance are the most important factors in determining willingness to walk, and secondarily the amenities along the way, safety and avoidance of red lights are factors.
Target Audience: DOT, Planning Dept., elected officials

Title: Parking Policy for Transit-Oriented Development: Lessons for Cities, Transit Agencies, Developers
Date: 2005
Author(s): Richard Willson
Summary: This report discusses how excessive supply of parking brought on by parking regulations that mandate high parking ratios, work against transit use and other TOD objectives. It makes recommendations for Cities, transit agencies, and developers.
Target Audience: All stakeholders

Title: Transit Friendly Parking Structure Guidelines: Planning, Design and Stewardship
Date: April 2007
Author(s): Darius Sollohub, NJIT
Summary: This study addresses the issues and opportunities associated with the conversion of surface parking lots to structured parking, structured around three main sections: planning, designing and stewardship. It addresses community concerns and processes, alternative parking strategies, design and engineering aspects of parking structures, as well as financing options. New Jersey examples are cited.
Target Audience: Transit agency, Planning Dept., private sector

Title: Parking Alternatives: Making Way for Urban Infill and Brownfield Redevelopment
Date: November 1999
Author(s): USEPA
Summary: This guide reviews the costs of generic parking requirements, generally established as minimum ratios and based on suburban standards and proposes alternative strategies that enable a reduction in needed parking spaces. The report discusses the following innovative parking alternatives: In-lieu parking fees, shared parking, centralized parking, maximum limits, parking freezes, and demand reduction.
Target Audience: Transit agency, Planning Dept., private sector
Title: Zoning and Real Estate Implications of Transit-Oriented Development
Date: January 1999
Author(s): TCRP
Summary: This digest covers both the legal elements of TOD policies such as density and use regulations, transfer of development rights, and procedures for implementing TOD, as well as the legal basis for TOD, zoning authority, takings, environmental impact statements, intergovernmental agreements.
Target Audience: Transit agency, Planning Dept., private sector

Additional materials on TOD best practices and related planning topics are available on Reconnecting America’s Best Practices Clearinghouse: www.reconnectingamerica.org/public/practices

DRCOG Planner Idea Exchange
www.drcog.org/index.cfm?page=PlannerIdeaExchange

Portland Metro TOD Program
www.metro-region.org/index.cfm/go/by.web/id=140

Reconnecting America
www.reconnectingamerica.org