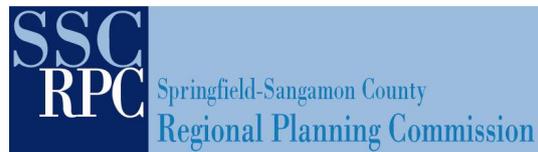


# Information Brief



July 28, 2010

## **Key Findings:**

After reviewing literature concerning Transit Oriented Development as a development strategy, the SSCRPC found:

- While TOD offers much promise as a development strategy, with anecdotal and case-based evidence of success, there is limited quantitative evidence at this point. Indirect evidence does support several TOD claims.
- Major requirements for TOD success include: project location; mix of transportation choices; housing and shopping choices; presence of quality-of-life amenities; and security of financial return for public and private investors.
- Major barriers tend to be: financial; political and regulatory; parking related; and land availability and use patterns.
- Neither community size nor transportation mode restrict TOD development, with successful TOD in smaller communities and around bus-based transit.

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## Transit Centers as Tools for Development & Redevelopment

### Transit Oriented Development: TOD

Efforts by the Springfield Mass Transit District (SMTD) to develop a “multi-modal” transportation facility in Springfield, intended to bring public transit and passenger rail service together at one site accessible to pedestrians as well as vehicular traffic, generated interest in the stimulative effect that such a facility might have on the redevelopment of the areas surrounding it. This was in part because the location proposed by SMTD was adjacent to an area of identified redevelopment need, but also because other cities are finding that when transit stations are made part of a well-planned development and re-development effort, they can have beneficial effects.

This type of development, which blends transit facilities, residential improvements and commercial redevelopment together as an economic development strategy, is often called *Transit Oriented Development*, or *TOD*.

Since the proposed SMTD facility was also to serve as a new station for passenger trains, recent developments concerning high speed rail (HSR) increased interest in the potential the multi-modal facility might offer as a pivot-point for redevelopment. The Illinois Department of Transportation’s 2009 HSR Environmental Assessment, for example, noted this possible benefit, saying that “...transit-oriented development would likely occur in already built-up areas” around HSR stations (IDOT, 2009, p. 365).

Of course the extent to which transit oriented development will occur around transit facilities is influenced by many variables, including the nature of the facility’s location itself. Because of interest in the potential for TOD related to the proposed SMTD multi-modal facility, as well as the anticipated importance of site location and planning in TOD success, the Springfield-Sangamon County Regional Planning Commission (SSCRPC) attempted to identify factors relevant in TOD planning.

This SSCRPC *Information Brief* does not attempt to synthesize all of the literature concerning TOD, but is offered as a starting point for possible TOD planning.

## Coming to Terms with TOD

The concept of transit oriented development began with the observation that people who depend upon public transit systems (bus or rail) for transportation, like to live near transit stops as well as shop in the area in which they live. This realization caused both planners and developers to come to the conclusion that transit facilities could provide a focal point for development and redevelopment, resulting in various benefits.

Because of the potential TOD offered, attention was given to the essential elements that defined such a development. These elements ultimately became components of the definition of TOD. They are suggested in the various definitions shown in the box to the right, but are particularly evident in Oregon's statutory definition of TOD, saying that it is:

[A] mix of residential, retail and office uses and a supporting network of roads, bicycle and pedestrian ways focused on a major transit stop designed to support a high level of transit use. The key features of TOD include (a) a mixed use center at the transit stop, oriented principally to transit riders and pedestrian and bicycle travel from the surrounding area; (b) high density of residential development proximate to the transit stop sufficient to support transit operations and neighborhood commercial uses within the TOD; and (c) a network of roads, and bicycle and pedestrian paths to support high levels of transit use. [Oregon Revised Statutes; Sec. 307-600-1]

Fundamentally then, transit oriented development does not occur simply in the presence of any transit stop (such as a bus stop) but in situations where a mix of uses are developed around a transit hub supported by the infrastructure necessary to move passengers to it; whether this involves those who arrive by car or, and more importantly, those who live nearby and can walk or bike to the station. In part it is the mix of uses planned to develop around the transit hub that becomes most relevant, as this mix of uses allows people to live, work and shop (at least for goods that would normally be available in neighborhood shops) in the vicinity of the transit facility.

One group of researchers spoke of TOD in this way:

The general concept of Transit Oriented Development is an interesting one. If utilized properly, it can be a great motivator for changing the lifestyle of the

### Some Definitions of TOD

**Moderate and high-density housing concentrated in mixed-use developments located along transit routes...The location, design, and mix of uses in a TOD emphasize pedestrian-oriented environments and encourage the use of public transportation** (*Community Green Line Planning Project*, "Putting Neighborhoods on the Right Track", Chicago)

**A mixed-use community within an average 2,000-foot walking distance of a transit stop and core commercial area. TODs mix residential, retail, office, and public uses in a walkable environment, making it convenient for residents and employees to travel by transit, bicycle, foot or car.** (*Calif. Planning Roundtable*)

**Moderate- or high-density housing concentrated in mixed-use developments that encourage the use of public transportation.** (*Wisc. Dept. of Natural Resources*)

**A form of development that maximizes investment in transit infrastructure by concentrating the most intense types of development around transit stations and along transit lines; development in such areas is designed to make transit use as convenient as possible.** (*Palo Alto, Calif.*)

From APA *Planner's Dictionary*

community. For example, if a community sees the vision and takes hold of it, TOD could change the way one views the neighborhood environment and the natural structural design of our neighborhoods in general. For instance, generally in the average neighborhood, one would not consider having a center with a rail or bus station surrounded by relatively high-density development. However, in a transit oriented community that is exactly what may be seen. There may be a few multi-story residential buildings as well as commercial buildings within the same neighborhoods. More residential areas such as small-lot, larger lot housing, and townhomes could then possibly surround these areas. The design of the transit oriented neighborhood is typically one-quarter to one-half mile from the transit node...The built environment is designed for the benefit of the pedestrian. (Moses et al., 2009, p. 1)

### **Tumlin and Millard-Ball on Aspects of TOD:**

- It lies within a five-minute walk of the transit stop, or about a quarter-mile from stop to edge. For major stations offering access to frequent high-speed service this area may be extended to the measure of a 10 min. walk.
- A balanced mix of uses generates a 24 hour ridership, with places to work, live, relax and shop for daily needs.
- A place-based zoning code generates buildings that shape and define memorable streets, squares and plazas, while allowing uses to easily change over time.
- The average block perimeter is limited to no more than 1,350 ft, generating a fine-grained network of streets, dispersing traffic, and allowing for the creation of quiet and intimate thoroughfares.
- Minimum parking requirements are abolished, and maximum parking requirements instituted: for every 1,000 workers, no more than 500 spaces to as few as 10.
- Parking costs are "unbundled", and full market rates are charged for all spaces, although an exception may be made for validated parking for shoppers.
- Major stops provide BikeStations, offering free attended bike parking, repairs and rentals. Minor stops provide secure and fully enclosed bike parking.
- Transit service is fast, frequent, reliable and comfortable, with headway of 15 min. or less.
- Roadway space is allocated and traffic signals timed primarily for the convenience of walkers and cyclists.
- Auto level-of-service standards are met through congestion pricing or disregarded entirely.
- Traffic is calmed to 30 mph on major streets, and 20 mph on lesser ones.

Tumlin and Millard-Ball offer specific design guidelines as part of an attempt to better define a TOD (2003, p. 17). These are presented in the box to the left.

The nature of the TOD community described above is unlike the vast majority of developments that occur in most communities. This suggests that a very thoughtful planning process is required. As major transit facilities are planned, it is relevant to consider their location in light of the possibility that the facility could become part of a strategy to encourage development and redevelopment if the area is amenable to a mix of uses and can offer easy non-vehicular access.

### **Benefits of TOD as a Development Strategy**

Aside from its use as a focal point for mixed use development, TOD is often seen as a tool for promoting "smart growth", improving liveliness and economic development in urban settings, and expanding lifestyle and transportation choices for citizens with changing interests and needs. For example, in its 2004 study of TOD in the U.S., the Transit Cooperative Research Program (TCRP) claimed that TOD "can breathe new life and vitality into areas of need by channeling public investments into struggling inner-city settings" (2004, p. 3). They state that "by creating more walkable, mixed-use neighborhoods with good transit connectivity, TOD is thought to appeal to the lifestyle

preferences of growing numbers of Americans, such as childless couples, those Americans belonging to 'Generation X,' and empty-nesters" (2004, p. 3).

As an element of a smart growth strategy, TODs are said to help reduce urban sprawl and automobile dependence by strategically locating new construction and redevelopment within and around complex transportation and urban hubs or networks. As transit hubs most often exist in urban areas with existing infrastructure, they are seen as a way to encourage the public to move back to older, previously developed areas, rather than to undeveloped suburban and rural areas where residents are largely auto dependent. This can help to reduce urban sprawl. The idea is to encourage smart growth in communities that want to maximize transit ridership and reduce traffic congestion through traffic calming techniques. This includes taking advantage of communities that have neighborhoods, commercial and retail entities, and easy-access to public transportation within close proximity to each other. Urban sprawl calls for streets that are designed for heavy traffic flow and increased automobile speed. Smart growth street designs comprise traffic calming in settings where a variety of public activities are encompassed, such as they are in TOD areas (Moses et. al., 2009, pp. 9-10).

The economic development and revitalization benefits are realized when cities and public transportation agencies create new markets for TODs by realizing the potential for growth around transit stations. This can also help to improve quality of life through comprehensive transportation and land use planning. The TCRP found that "between 1990 and 2000, the average nationwide travel time to work rose from 3 minutes, to 25.5 minutes" (2004, p. 84). Citizens who travel to and from work and their homes can experience benefits by reducing transportation times and their dependence on automobiles through a successfully implemented TOD. TCRP also found evidence that people living near transit stations are "five to six times more likely to commute via transit than other residents in a region" (2004, p. 134).



**TOD Transit Stop  
Boston Redevelopment Authority**

The Center for Transit-Oriented Development (CTOD) believes that the focus of TODs should involve creating communities that are attractive, sustainable, and pedestrian friendly (see, <http://www.cnt.org/tcd/ctod>). The communities contemplated would involve housing and transportation options that are convenient and affordable, requiring well-organized locations where walking and biking are the norm and transit provides an alternative and limitation to automobile traffic. In these situations transit also becomes the norm for efficient travel, as TODs provide a variety of options for transport that are safe, easily accessible, and central to the community.

But it would be a mistake to assume that the benefits of TOD occur simply through the presence of a transit station. In addition to transit, TOD's must focus on the development of a mixture of residential and shopping areas that urge people to become more pedestrian due to the close proximity of housing to businesses and transit. Subsequently, a community sees an economic benefit as revenue is produced for both public and private entities that are located within a walkable community.

Much promise is offered by advocates of TOD. A critical question, of course, is whether or not the promises the TOD concept offers can be achieved.

## Evidence of TOD's Promise

Even if TOD shows promise in *concept*, it begs the question of whether or not this promise can be demonstrated in *practice*. While there is a relatively large literature concerning TOD and its promise as an economic development strategy, and the SSCRPC found that a 2002 TCRP literature review provides a useful starting point for those interested in the subject, the literature assessing its real world success is limited and most often anecdotal rather than quantitative.

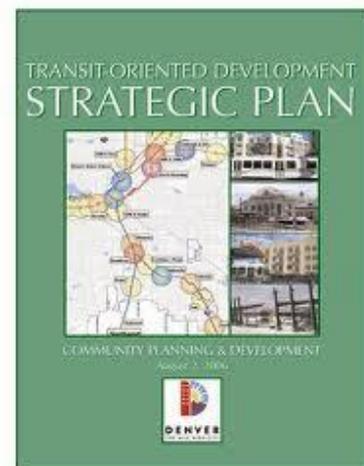
We believe that this is because: while there are examples of TOD throughout the country, the strategy is still relatively new, leading to little quantitative research; even though the elements necessary for TODs are known, there are a mix of approaches and definitions that makes quantitative comparisons difficult; changing market conditions can affect the results of comparison and longitudinal studies, inserting confounding variables; and because TOD depends upon the existence or creation of transit hubs as focal points, meaning that there are fewer examples for study and which occur only in a limited number of communities.

It is also difficult to come to terms with measuring the success of TOD because while there are a wide range of anticipated outcomes and benefits, there has not been closure on the objective measures that should be used, and data can be hard to come by. The National Cooperative Highway Research Program (NCHRP) of the Transportation Research Board provides a useful digest of what such measures might be (2005).

But we also find that there is some evidence, however indirect, that indicates that TOD can achieve the promises offered.

Among the many outcomes TOD is promised to provide are the revitalization of urban areas (neighborhood revitalization and economic development leading to job growth), improved transportation (reduction in on-road traffic congestion through increased transit ridership), and enhancement of urban areas and the environment (by virtue of promoting more compact urban development that preserves open space). And there is some indirect evidence that TOD can have these intended effects.

For example, numerous studies (see TCRP, 2002, pp. 35-37) demonstrate that all else being equal, being near a passenger rail stop increases property values in various degrees, though the specific effects of TOD on surrounding property values has not been determined in any detail. But in 2002 the TCRP could find no studies that gauged the real estate benefits arising *directly* from TODs (pp. 39-40). However, there is some indication that one form of transit oriented development (the transit joint development, which will be addressed below) resulted



City & County of Denver TOD Plan

in increased rent and land values, as well as lower vacancy rates and the faster absorption of new space (TCRP, 2002, p. 40).

Cervero (2004, pp. 23-24) also offers some rather convincing anecdotal evidence that TOD can have a positive impact on land values, using results from Dallas' Mockingbird station (residential rental rates in the TOD were 20% higher than comparables outside the area) and the Englewood, CO, CityCenter project (residential rental rates in the TOD double that of comparables, Class A office space at \$21-\$25 per sq. ft. compared to \$13.50-\$17 outside of it, retail space renting for approximately twice that of other space, and 100% occupancy of commercial space compared to 90% city-wide). On a more quantitative note, Cervero reports that a study applying a hedonic pricing model to the Santa Clara County, CA, TOD found that substantial benefits accrued to residential parcels within ¼ mile of a light rail station: large apartments, for example, commanded a premium of about \$9 per sq. ft. and, compared to parcels within four miles of the station, this translated into an overall land-value premium of 28% (Cervero and Duncan, 2002).

Renne and Wells (2002, p. 20) offer some additional evidence of a positive impact for TOD. They report on studies finding that:

- The price per sq. meter for commercial property falls by \$75 for each meter away from transit stations. Prices rise by \$443 for locations within special public interest districts (Lewis-Workman and Brod, 1997).
- The price per sq. ft. for commercial property decreases by about \$2.30 for every 1,000 ft. further from a station (FTA, 2000).
- In San Diego, CA, home sale prices increased by \$272 for every 300 ft. decrease in distance from a transit station, and in San Jose, CA, home sale prices increased by \$197 for every 100 meter decrease in distance from a station (Landis, et al., 1995).

Similar results have been demonstrated regarding retail development being encouraged in transit oriented development areas. Niles and Nelson (1999) suggest that while local area benefits may arise in the immediate vicinity of a TOD, such as those due to an increase in walking trips, regional benefits are not as likely to occur. This is largely due to the commercial marketplace not valuing the financial rewards of station-area locations as much as planners might, because the larger market must take into account factors associated with store siting (e.g.: the influence of agglomeration and scale economies; the desire for visibility, access and parking; and concerns about zoning and public resistance), regional market structures (e.g.: retail activity being increasingly polycentric and dispersed; shopping centers dominating the market; smaller malls clustering around major malls; and the growth of "big box" market share), and consumer behavior (e.g.: bargain hunting and comparison shopping; preference for variety; and the consumer's desire for destination and schedule flexibility.)

There is also some evidence that would lead one to believe that an indirect economic benefit may accrue to a community hosting a TOD project. Renne and Wells (2002, p. 18-19) quote a Portland, OR, study that found that since TOD results in more contiguous, compact and in-fill development, local infrastructure costs can be reduced by as much as 25% when compared to more dispersed development patterns. Such an outcome would make additional public resources available for other purposes, potentially offering tax savings that would encourage additional, community-wide growth.<sup>1</sup>

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<sup>1</sup> See also NCHRP's comments concerning redistributive and generative impacts (2005, p. 4).

Research does show that living and working near transit stations correlates with increased ridership (TCRP, 2002, p. 40-43). In a San Francisco area study, for example, those living near a transit station were found to generally be four times as likely to commute via transit as other residents. Cervero (1994) found that those living in a TOD were as much as five times more likely to commute by rail than those who did not, though this study also indicated that almost 43% of those living in a transit based community were commuting by rail prior to their moving there. We do not take this latter point as a negative finding, however, as it may indicate that TOD holds promise as a means of encouraging residents to move back to older areas of a city where TODs might locate. This may be of particular benefit to younger commuters, those of limited means, senior citizens, and those with disabilities who see the benefits of living near a transit hub.

The correlation between living in a TOD community and using such transit was also found in Washington, DC, Santa Clara County, CA, and Portland, OR, studies, although the Portland study had a confounding variable, according to the TCRP review. Overall, the review of the literature conducted by TCRP found evidence that TOD and like forms of development can increase transit ridership, and for a number of reasons.

However according to the TCRP's literature review, while anecdotal information exists, the benefits of TOD on air quality, energy conservation and social policy have never been quantified (2002, pp. 43-44).

It is somewhat intuitive that to the extent that TOD increases the use of transit – as well as walking and biking to transit stations – it will have the related effects of reducing energy use and improving air quality. Some of the studies showing that TOD can increase transit ridership are mentioned above leading credence to this claim.

It is also intuitive that if TODs can result in new development – particularly the redevelopment of older areas in the urban core – this would result in both environmental and social benefits. And there is some case-based evidence for this, with Cervero (2004, p. 10) offering examples of TODs successfully spurring the redevelopment of declining neighborhoods (e.g., downtown Long Beach, CA, and Arlington Heights, IL), creating new urban villages (e.g., Pleasant Hill, CA, and Orenco, OR), generating new life in older suburban downtowns (e.g., Bethesda, MD, and Plano, TX), and helping places affected by slow commercial encroachment (e.g., Ballston, VA, and Rutherford, NJ). But again, these results are anecdotal.

An additional example of this anecdotal information as it pertains to social policy is provided by Good Jobs First.

While various environmental and “smart growth” reasons are given for encouraging TOD, one important aspect is the extent to which such development provides additional access to jobs for those most in need of them. Through a grant from the Ford Foundation, Good Jobs First (Grady and LeRoy, 2006) assessed the ways in which 25 TOD projects had provided benefits to those with low to moderate incomes. They conclude that:

TOD has the potential to connect low- and moderate-income people to job opportunities to which they may otherwise have no access. The costs of owning a car, including insurance, maintenance and gas, can be prohibitive for many people. TOD can give people who are dependent upon public transportation the opportunity to live and/or work near transit. (p. 3)

After reviewing these cases, they reported “proof that the economic development goal of poverty reduction can be integrated with public transit” when the leaders of the effort are intentional about this outcome. They go on to suggest a reform of job subsidies to “make them location-efficient” as a way of codifying this intention (p. 2).

## Conditions for Success

As noted previously, most definitions of TOD include some common elements. The TCRPC (p. 6) found three elements to be the most common – mixed-use development, development that is close to and well-served by transit, and development that is conducive to transit riding – and four others that are found to be important to success in some other definitions – compactness, pedestrian- and cycle-friendly environs, public and civic spaces existing near stations, and stations as “community hubs”.



Bus stops and streetscape in Mass. TOD

Assessing the importance of these components becomes critical in determining the suitability and feasibility of a TOD project; and transit oriented development may not be suitable in all situations or in all locations. Some have even argued that TOD mainly benefits large, densely populated cities with booming economies. For example, TCRP research (2004, p. 134) found that “the most direct benefit of TOD is increased ridership and the associated revenue gains” where existing ridership already exists.

The SSCRPC finds that there do appear to be four general factors upon which the success of a TOD project is dependent and which should be taken into account in TOD planning.

### Location

As realtors are fond of saying, the three most important factors in real estate are *location, location and location*. As one might expect, this appears to hold true in the case of TOD as well. For a TOD project to be successful, it needs to be located next to a residential area with easy access to public transportation. Ditmar and Ohland (2009) list three key components to TOD success associated with location which we find significant:

- **Population Density:** Sufficient customers need to be within walking or bicycling distance of a transit stop to allow the system to run efficiently. Since the intent of a TOD is to entice the public to live, work and shop in the vicinity of a transit station, simply allowing easy vehicular access does not provide for the type of development and redevelopment that TOD is expected to encourage. There must be a large enough population in the immediate area to support transit use as well as the commercial operations that successful TODs anticipate.

While planners may differ on the distance that the public will accept as being within easy walking distance, the SSCRPC typically considers one-quarter-mile

as being within this range. We are not alone in this, as, for example, the San Diego, CA, definition of a “transit-oriented development area” begins by defining it as an “area within one-quarter-mile radius” (*APA Planner’s Dictionary*), and, as noted in the sidebar on page 2 of this *Information Brief*, the California Planning Roundtable discusses it in terms of a 2,000-foot “walking distance”. Moses et al., also hold that the “design of the transit oriented neighborhood is typically one-quarter to one-half mile from the transit node” (p. 1), and Tumlin and Millard-Ball, as noted previously, suggest a quarter-mile from stop to TOD edge, or a 10-min. walk if the TOD has high-speed service.

- **Transit Accessibility:** Having a large enough nearby population to support transit use is not sufficient for TOD success if the transit system itself is not easy to use. Transit stations and stops need to be centrally or conveniently located within the TOD and provide the service necessary to allow riders to reach their destinations easily. For example, the San Diego definition of a TOD area includes the requirement that there must be “a frequent and consistent level of bus service (as typified by a 10- to 15-minute frequency of service)” (*APA Planner’s Dictionary*). The Tumlin and Millard-Ball criteria presented on page 3 of this *Information Brief*, suggests a headway of no more than 15 minutes.
- **Pedestrian Friendliness:** Since the successful TOD is built upon a non-vehicular passenger base, the TOD location must have a network of streets that is interconnected and scaled to the convenience of pedestrians.

In a report for the Brookings Institute, Belzer and Autler (2002) went even further in discussing the importance of location to TOD success. They wrote:

Location efficiency requires neighborhoods that provide high-quality transit, a mix of uses, and pedestrian-friendly design. Proximity to transit is just one of several key variables that determine the location efficiency of a neighborhood. Other critical factors include net residential density, transit frequency and quality, access to community amenities, and a good quality pedestrian environment (good sidewalks, safety, reasonable topography). Location efficiency can be enhanced by the introduction of additional mobility choices such as car sharing, which makes it even more feasible for residents not to own a car. (Belzer and Autler, 2002, p. 9)

Moses et al., suggest that pedestrian friendliness also requires that traffic calming features be included in the design of the TOD. Traffic calming – engineered features designed to slow down motor vehicles by altering driver behavior – result in improved conditions for non-motorized road users (p. 1-2). Since traffic calming can alter driving patterns, including moving potential customers arriving by car away from commercial areas, the SSCRPC believes that the integration of traffic calming into commercial portions of a TOD would have to be carefully considered. This would particularly be the case in areas where successful commercial activities already exist. Since the majority of the commercial opportunities offered by a TOD are usually neighborhood retail or office, this integration should not present a significant challenge if well planned.

## Choices

A successful TOD should offer choices for people who live in or visit the development. Belzer and Autler suggest (p. 15) that these choices include:

- **A mix of housing types:** A diverse mix of housing types that reflects the regional mix of incomes and supports a regional mix of family structures.
- **A mix of housing costs:** The TOD should include a greater range of affordable housing options than one finds in most residential developments. In their article for the American Planning Association, Tumlin and Milliard-Ball (2003, p. 2) specifically addressed the topic of choice in terms of affordable housing options, saying, “Since low-income households tend to own fewer cars and are more likely to use transit, an affordable housing component of a transit-oriented development can add more riders, as well as furthering other public policy objectives”.
- **Diverse types of retail:** This diversity will of course be limited by the market area and the particular desires and interests of the resident consumers, so assessing the success of achieving retail diversity should be measured in terms of how well the retail mix meets the needs and desires of the residents as they themselves define it.
- **A balance of transportation choices:** A transit oriented development should provide the opportunity to get around on foot, by bicycle, or on transit; and greatly enhance the mobility of children and seniors (Belzer and Autler, p. 15). People are more likely to use a transit facility when the area provides them with a range of transit options to meet their needs.



From Essex, VT, TOD master plan

## Quality of Life

Transit oriented developments can only be successful if they improve the quality of life of those who live near or frequently use the transit facilities. As people become more concerned about the effect of vehicular traffic on air quality, traffic congestion, and energy costs, a TOD project may come to be seen as a means for reducing these problems, making such development more attractive.

While the perception of quality of life can differ vastly from one person to the next, Belzer and Autler (pp. 12-13) list a few factors that TOD can help improve. These include:

- **Increased mobility choices:** Such as pedestrian friendliness and access to public transportation.

- **Decreased congestion:** By increasing transit use, congestion is expected to decrease along with the commuter's burden.
- **Improved access:** TOD projects are seen as improving access to retail and service establishments, as well as recreational and cultural opportunities. This latter improvement is particularly seen as benefitting young people as it allows them to become involved in extra-curricular activities within the neighborhood. It is also seen as improving access to such public spaces as parks and plazas, which are often lacking in the areas in which TOD projects occur.

But as to what should also be included under the topic of quality of life, Grady and LeRoy (pp. 6-7) conclude that there are other conditions to be met if the TOD is to provide benefits to those of low- to moderate-income. These include:

- Prioritizing transit access as a primary component of the project, not just something that the rest of the TOD occurs around;
- Ensuring that jobs in the TOD area are accessible to those of limited means;
- As noted above, providing affordable housing in the area;
- Ensuring that TODs develop in low-income and mixed-income areas, thereby providing "increased opportunity to traditionally disenfranchised populations"; and
- Involving the community either by bringing neighborhood activism into the planning or creating a formal community input process.

### **Financial Return**

A key aspect in TOD success is the financial return expected by both the public and private sectors. Most TOD projects include a mixture of both public and private investment. Typically the public sector's investment is made by overseeing and providing the transportation component (all of the transportation access ways, not just the transit station itself) and in some cases, the parking. The private sector, on the other hand, typically oversees and provides the commercial development, office space, and residential development, and in some cases the parking.

The cost of these investments is not inconsequential, and both the public and private sectors must see the potential for a return on their investment before the project begins. Belzer and Autler list the types of financial outcome that each entity should expect to receive as an outcome of their investments (p. 14):

- **For the local governments:** Higher tax revenues from increased retail sales and property values.
- **For the transit agency:** Increased fare box revenues and potential ground lease and other joint development revenues. It is possible that in some cases increases in land value could cover a significant portion of the cost of transit investments.

Grady and LeRoy also note that TOD can be seen by a transit agency as “a way to maximize the return on investment in public transportation systems” (p. 3).

- **For the developer:** A higher return on investment.
- **For employers:** Shorter and more predictable commute times and easier employee access.

Belzer and Autler (2002) address this from a different perspective: *value recapture*. Renne and Wells (2002) relate this to advantages that accrue to residents of location-efficient neighborhoods. They point out that such residents spend less on transportation compared to other residents who live in transportation-dependent suburbs, and that what are called “location-efficient mortgages” (LEMs), offered by Fannie Mae, may represent a new tool that can lower their mortgage costs by living in a TOD area (p. 4).

## Challenges to TOD Success

If addressing the items mentioned above help create the opportunity for TOD project success, it is equally important to understand some of the significant obstacles that are anticipated.

### Financial Barriers

As a general statement, the creation of TOD areas is not an inexpensive undertaking, and the public and private investment required may be affected by the size, scope and place of the project. This being the case, financial obstacles can arise in the implementation of TOD. Some issues arise from the high costs that often accompany redevelopment in general, but they also grow from the anticipated risk of what is often a complex development occurring in previously developed areas where structures and infrastructure already exists that may be incompatible with the TOD plan. The redevelopment plan may require a re-orientation or re-designing of existing public infrastructure in the area to make it more pedestrian friendly, for example.



Las Colinas transfer station  
plan in Irving, TX, TOD

Additionally, there may be risk in aligning rail lines or transit centers near low-cost corridors where development potential is low, as the private sector will assess the market potential of the area before any sizable financial commitment is made. While the public sector’s interest may be directed toward locating a transit facility in a deteriorated area in the hope that it will generate redevelopment, the private sector may see the previous deterioration of the area as an indication that it is a poor candidate for development in the regional marketplace. When the public and private sectors determine priorities for investment, the municipality’s desire to revitalize a target area may be in conflict with the private sector’s assessment of that area as a likely candidate for development success.

But Belzer and Autler note that those considering TOD must also keep in mind that financial returns are not the only benefit of such development, and that a balance should be struck between meeting the financial goals and the other, non-monetary, ones, so that TOD projects

are not judged purely on their monetary return alone (pp. 13-14). For example, the use of TOD in the redevelopment of otherwise blighted or deteriorating areas could be considered a significant purpose for municipal investment aside from any direct return from increased tax revenue. And the redevelopment of a blighted area can generate new avenues and areas for private investment outside of the TOD area itself. We have sometimes seen this in the case of tax increment financing project areas where the stabilization that the public investment makes in the TIF district creates an incentive for redevelopment of properties outside the district but adjacent to it.

To the extent that public investment is needed, the SSCRPC found that Illinois has not provided any tools specifically designed to help finance or support TOD. The lack of economic development tools dedicated to this use does not appear to create a barrier, however.

Previously we mentioned the Good Jobs First (Grady and LeRoy) study of 25 TOD projects around the country. As part of their review of these cases, they considered the potential for economic development subsidies, looking at both those that were community development corporation (CDC) and developer-led. They reported that:

In every case of CDC-led TOD and in most cases of developer-led TOD..., economic development subsidies helped make the project happen. However, in only a few cases – such as those involving the Transit-Oriented Development Property Tax Exemption in Portland, Oregon – were these subsidies awarded through programs that explicitly tied the assistance to the project's transit accessibility. In other cases, the subsidies were necessarily meant to promote TOD. (Grady and LeRoy, p. 2)

They did not find this surprising since they had previously found that no state required subsidized development projects to be transit accessible, and localities also failed to make this linkage. However, the end result appears to be a finding that public investments necessary to fill financial gaps in TOD projects could be met through current state and local programs, even when transit accessibility for economic development project funding is not specifically required.<sup>2</sup>

### **Political and Regulatory Barriers**

Interest and political groups can also cause hang-ups in the planning and implementation of TOD. Assessing the mixed land use that occurs as part of a TOD can cause differences of opinion about where components of a transit system should be located, even creating competition between alternative locations. This may cause a TOD plan to be caught up in legislative and regulatory debates leading to investors and contractors backing out as funding or other decisions are subjected to prolonged approval processes and uncertainty about outcomes.

In discussing various barriers to TOD, the TCRP offers such an example:

One of these barriers is the congestion “conundrum”: the fact that nodal development around a transit station increases spot congestion, prompting some jurisdictions to downzone... Another barrier is the logistical dilemma of accommodating multi-modal

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<sup>2</sup> The SSCRPC notes that the Illinois General Assembly has considered specific inducements for TOD. For example, four years ago a bill passed the Senate to approve TOD as eligible projects under the State TIF Act. The bill was held in a House committee, however, where it later died.

access needs, which often results in station road designs and parking layouts that detract from the quality of walking. (TCRP, 2004, p. S-5)

Both of these issues involve aspects of TOD project planning and decision making that can delay financing and implementation.

Clearly TOD success is dependent upon the resolution of institutional issues that can span many key areas. The 2002 TCRP (pp. 10-26) literature review including a wide-range of matters associated with community collaboration and outreach to stakeholders that would have to be taken into account in TOD planning. This includes the sorting out of the roles that transit agencies, municipalities and their agencies, and developers will have in the planning, financing and development of the TOD.

### **Parking-Related Barriers**

While it may not seem as consequential as the financial, political and regulatory ones, a major planning challenge for TOD is the accommodation of parking. As noted previously, TODs are most successful when they are pedestrian and bike friendly. The intention is to have transit users live, work and shop near transit facilities, not just drive in to use them. But issues concerning parking can arise as a potential complication for TOD, even when transit stations offer locations where the use of automobiles is miniscule.



From Ottawa, CA, TOD plan

For example, investors and planners usually “insist that code-standard parking be provided in station areas” (TCRP, 2004, p. 115). Consequently, the plan to reduce traffic congestion where a transit station is created may not be feasible if there are parking areas that encourage people to use their automobiles. And large parking lots in front of the facility will discourage walkers and bikers from entering it. In its 2002 review of TOD research, the TCRP noted that:

Accommodating commuter parking demand often results in a transit station platform surrounded by a sea of parking. This has limited opportunities for TOD in several ways. First, the parking separates the transit system from the adjacent community along with potential TOD parcels. Second, the parking creates an automobile-oriented environment, rather than the pedestrian environment that is essential for transit-oriented development. Third, the need for significant parking leads to siting stations in locations that are not conducive to TOD. Finally, regulatory requirements for replacement parking severely limit the possibility of converting commuter parking into TODs. (TCRP, 2002, p. 26)

Regardless of the location and the extent to which a transit station depends upon near-by pedestrian customers, accessibility of parking may be required to alleviate the concerns of citizens that primarily use their automobile.

## Land Barriers

A final specific challenge for a TOD relates to factors associated with land availability. In reviewing the case of the implementation of a rail-based TOD in San Diego County, CA, Boarnet and Compin (1999, pp. 90-92) point to several specific barriers that can arise. We believe that these are just as applicable to other forms of transit as they are to rail-based ones. They include:

- Existing land use patterns near stations can limit the opportunities for TOD. For example, constraints may be imposed by using existing right-of-ways.
- The difficulty of assembling large parcels of land can limit a TOD. The lack of undeveloped property may make it difficult to assemble small parcels of existing properties into tracts large enough to make the project feasible.
- The private land market may not sustain new development projects, including transit oriented ones. To the extent that the area's market has already absorbed all of the residential or other development it can support, or there is an excess of such uses available, the TOD project will be negatively affected by market forces.

It may not be surprising then that among the inducements offered to encourage TOD projects are land purchases on the open market for land banking and potential "deal-making", and assistance with land assembly (Cervero, 2004, p. 6).

Boarnet and Compin conclude that based upon the San Diego experience, and the various barriers encountered there, progress towards meeting a TOD's goals may be incremental (p. 92). They conclude by commenting:

The experience in San Diego County illustrates the importance of focusing not only on the TOD vision, but also on the details of how TOD plans are actually implemented. Regional authorities should attempt to understand factors such as market demand, land availability, fiscal pressures, and local goals, all of which have influenced transit-oriented development in San Diego County. Furthermore, local and regional officials should carefully assess TOD benefits and project costs. The lesson for regional authorities is that localities may already be doing that, at least in broad terms, and that TOD projects are pursued most aggressively when they are combined with local goals. This fact implies a process likely to resemble the slow, incremental implementation that has occurred in San Diego County. (Boarnet and Compin, 1999, p. 93)

It appears to us that the bringing together of TOD goals with local goals represents a more general challenge that should be considered as part of the TOD planning process.

## **The General Challenge**

In light of the conditions for success and the specific challenges to TOD we note above, it is not surprising that Belzer and Autler also suggest some more general ones (pp. 18-27) that planners and economic development professionals need to address. While the challenges are not insignificant, most can be overcome if there is a strategic plan in place that includes input from the various constituencies and stakeholders involved in the project. These challenges include:

- While we offer several definitions of TOD at the beginning of this *Information Brief*, there is no universal working definition of transit oriented development. Because of this, the actors engaged in TOD projects often bring different goals to the table, pursue strategies that work at cross-purposes to each other, and lack unifying policy objectives. All of these factors can impede TOD project success and the SSCRPC believes that they should be addressed at the start of the planning process.
- Transit oriented development must deal with the tension between *node* and *place*. That is, it must achieve a functional integration of transit *and* the surrounding uses.

Belzer and Autler (p. 18) offer the example of groups complaining that in a TOD the transit agency “runs the trains and nothing else.” This occurs because the transit agency has as its express focus ensuring that the node – the transit station and its connected system – is operating efficiently, so is less concerned about the larger development: the place. Developers and the supporting local governments, on the other hand, primarily focus on aspects of the place and its quality. They are oftentimes concerned about the number of parking spaces, for example, which may increase the quality of the place, but may also deter individuals from using transit. This can create a tension between these two interests as their goals for the TOD may be in conflict.

- Planners have few guidelines for translating the concept of location efficiency into concrete prescriptions for TOD in different settings. What makes a place a good one for TOD has not been codified as there has not been sufficient research to identify optimum locations for TODs. This leaves nothing to specifically tell developers and local governments that would help them identify the best places to achieve maximum results. Along with this, there is very little research that identifies which types of retail are most successful in TODs. This lack of information simply increases the perceived risk associated with the investments they are asked to make.
- TOD requires synergy among many different uses and functions, but this synergy is extremely difficult to achieve. As a result, TOD almost always involves more complexity, greater uncertainty, and higher costs than other forms of infill development.

This sort of development also typically involves a number of different organizations and, as with any complex project, it may be difficult to bring them all together. This leaves the different players in the TOD trying to navigate rules and regulations they may not be use to or clearly understand. It can, for example, lead to developers attempting to deal with and navigate transportation laws and regulations with which they have little or no experience.

- Transit oriented development typically occurs in a very fragmented regulatory and policy environment. There is often no comprehensive plan or vision, and because of this many local governments suffer from a significant leadership gap when attempting to implement such projects.

It appears to us that it is important for local governments to take the lead in planning the TOD. Local governments can of course help with land amenities, zoning, and basic infrastructure investment, but Belzer and Autler (p. 25) point out that developers nearly unanimously stress the importance of a good plan as necessary to provide a predictable environment for development. Unpredictability increases development risk, and since much of this unpredictability arises from the regulatory and policy environment, the local government must exert leadership as planning is done and the development process moves forward.

- Transit alone does not drive real estate investment when other conditions – particularly market conditions – are not supportive.

If a place is not fit for development, adding mass transit into the equation will not suddenly make the land marketable. For example, in low income areas where there is little real estate demand, simply adding mass transit will not greatly increase the demand for real estate in the area. Equally, a TOD will not create a market for new residential development in a community that already has a surplus of available residential properties, unless that development would fill a currently underserved market niche.

Many of the conditions noted above come to the fore when case studies of TOD projects are conducted. For example, Moses and colleagues (Moses et al., 2009), evaluated TOD projects in four communities: the Orenco Station project in Portland, OR; Atlantic Station in Atlanta, GA; Montage at Village Green in Sylmar, CA; and Village at Overlake Station, Redmond, WA. What is particularly interesting is the range of these communities and their projects. The four projects studied ranged widely in community size (Portland, pop. 1.9 million; Redmond, pop., 46,000), project cost (Atlanta Station, \$2 billion; Montage at Village Green, \$20 million), and TOD project scope (Atlantic Station, 15 million sq. ft. of retail, office, residential and hotel space, along with 11 acres of public parks; Montage, a residential development of 107 homes on a 9 acre site).

They came to the following general conclusions about successful implementation of a TOD (p. 41):

- *Each TOD has its own distinctive characteristics in addition to commonalities.* The SSCRPC believes that this indicates that there is not a single best approach for ensuring TOD success, and that unique community needs and conditions do not necessarily preclude success but must be taken into account in planning.
- *TOD neighborhoods typically include some type of public transit, as well as a parking design feature.* The inclusion of public transit is intuitive, as this feature is central to the nature of the TOD and generates the hub around which the development or redevelopment occurs. Their comment concerning parking is consistent with other TOD analyses.
- *A mixed-use community will generally have more than one real estate use, such as entertainment, office, retail and various types of housing.* But the researchers go on to find that a *TOD community is not necessarily a mixed-use community, although it usually is.* This appears to relate to their study of the success of the Montage project, which was a residential rather than mixed-use TOD.

- *Size is not an issue in the development of a TOD project. Large or small communities can benefit from implementing TOD.* This finding should provide some comfort to smaller communities considering TOD as a strategy. While two of the projects studied were in large urban areas (Portland and Atlanta), the other two (Sylmar and Redmond) were successful in much smaller communities.
- *When considering implementing a TOD project, it is important that there are incentives to help make the TOD project more attainable.* Related to this point, the researchers found that tax breaks, grants and infrastructure construction are some of the incentive strategies used by local governments to attract developers. These same incentives are used to induce many other types of economic development projects, and municipal officials have experience with them. We would note that not all incentives need be direct financial assistance. Cervero, for example, notes that one survey of 90 transit agencies revealed that, besides re-zoning as an inducement, the most frequently used tools to leverage TOD included funding the planning for the station-area and ancillary capital improvements, zoning density bonuses to encourage more affordable housing, and relaxation of parking standards (2004, p. 5).
- *Zoning is a necessary factor to consider when contemplating TOD and may or may not need revision.* Most zoning ordinances are not created to address the type of mixed-use development contemplated by TOD, and the SSCRPC does not find that zoning ordinances typically include this type of use as an identifiable zoning district. However, mixed-use developments are contemplated by Planned Unit Development (PUD) and Planned Experimental Development (PED) ordinances, which are quite common. If well planned, the special needs of a TOD could also be addressed through “overlay” or “floating” zoning districts.

## Forms of TOD

As we have seen, TOD is most commonly seen as a larger area of development or re-development where a mix of uses co-locate in the vicinity of transit facilities in the presence of a premium walking environment. Commercial development is intensified around the station, there is an inter-mixing of land uses, the area is made more bike and pedestrian friendly, and then a layering of public amenities (such as public spaces and streetscapes) is applied. We think of this as being the situation in which a site for the transit station is identified, or in which a station already exists, and then inducements are provided and investments made around it to match the area to the TOD concept.



Redmond, WA, TOD center

But there are different forms that TOD can take. Grady and LeRoy, for example, identified three in their review of just 25 projects: *Transit Communities*, which are massive mixed-use projects in which transit accessibility is a primary goal of a new community's design; *Mixed-Use, Urban Infill Developments*, which are similar to transit communities but have a smaller scope and utilize land once used for other purposes; and *Projects with an Affordable Housing Focus*, which are all or predominately residential developments (pp.

7-8). These forms differ based upon the nature of the project and its site, and may also differ based upon the primary form of transportation that serves the hub.

We believe that there are two other specific approaches to TOD that should be considered.

**Transit adjacent development.** One example of a different approach to TOD is sometimes termed *transit adjacent development*, or *TAD* (Parsons et al, 2001). As the name indicates, this is development that occurs physically near a transit station, but does not capitalize upon this fact as it does not necessarily attempt to promote transit ridership. Since it lacks any functional connectivity to the opportunity that the transit station offers, we believe that it may fail to achieve the same outcomes that a more mature TOD might offer, but could still find advantages growing from a transit center if that center included built-in retail or service establishments along with transit services. As the TCRP put it (2002, p. 7), the TAD may one day grow-up to be a TOD, “but the lack of consumer services, the absence of pathways and bike routes, or the presence of physical barriers render them as developments that are simply proximate to transit”. It may be possible to consider TAD as a development or redevelopment strategy if the transit center included a mix of uses itself, and the community was willing to find ways to improve pedestrian and non-motorized access in the area.

**Transit joint development.** One example of a different form of site development is sometimes called *transit joint development* (TJD). While a typical TOD can encompass multiple city blocks, the TCRP describes joint development as a type of TOD that is taken on as a project where transit agency property itself is the site for development:

Transit joint development is distinguished from TOD mainly by being tied to a specific real-estate project, venture, or brokered deal and involving the direct participation of a public entity, often a transit agency, in revenue streams and sometimes ownership. Joint development often occurs on a transit agency’s property or in its air rights; however, it can also occur on nearby private land if an improvement is physically or functionally integrated with a transit facility. Joint development at transit stations includes air-rights development, ground-lease arrangements, station interface or connection-fee programs, and other initiatives that promote real-estate development at or near transit stations to the mutual benefit of public and private interests. (TCRP, 2004, p. 8)

We believe that a good example of joint development at a minor scale might be one in which a transit agency constructs a transit facility in which retail or office space is built-in and made available for private lease or purchase. This is not unlike an airport offering retail or hotel space to those who want to offer goods and services to air passengers. It may be broader than this, however, offering space in the facility that has a street presence in the hope of enticing non-transit passengers as well as passengers to shop in the facility.

But as the TCRP definition of joint development makes clear, it is not necessary to limit these uses just to the transit facility alone; the joint development opportunity can be much larger. A transit agency or municipality can act as developer for a larger area, beyond the facility itself but inclusive of it, so that the plans are not just to create a transit station but to create a transit-commercial “hub” around which a mix of uses will locate.

Thinking in these terms, it may be possible for a project to move incrementally from TJD to TAD to TOD over time, if phased plans are created with this as the ultimate intent.

## Bus-Oriented TOD

TOD can differ based upon the mode of transportation offered as well as site and form of development.

Most of the research reported here relates to transit oriented developments in which light rail transit hubs and stations serve as the development's focal point. We suspect that this is because TOD began in large urban areas that were building light rail lines or had existing light rail commuter stations in deteriorated areas, and because there was already some experience gained from the inclusion of retail and other consumer services at light rail commuter and subway stations.



New Jersey DOT Transit Village Initiative

The assessment of the utility of bus-based TOD is very important, however, particularly for small- to medium-sized urban areas less likely to have light commuter rail service. Research conducted by the Southwest Region University Transportation Center under a USDOT grant (Moses et al., 2009) would indicate that community size does not appear to be a significant factor in TOD development, as this study looked at an array of projects (\$20 million to \$2 billion in size) and concluded that small to large communities can benefit from implementing TOD projects.

It is also of singular importance to the SSCRPC's work of considering the viability of this approach for Springfield. While the SMTD multi-modal facility mentioned at the beginning of this *Information Brief* is anticipated to include both inter-city, heavy, passenger rail service arising from the existing Amtrak connections and potential high speed rail service between St. Louis and Chicago, and may also include inter-city bus service via Greyhound, it will still predominately serve as a transfer center for intra-city public bus transit. If this facility were to become a focal point for some form of TOD, it is important to consider whether or not results comparable to TODs built around light-rail commuter systems in larger metro areas can be attained.

The consideration of bus-oriented TOD is still relatively new in the United States, and this is unfortunate in that some of the most successful TODs and TJDs reported by TCRP (2002, p. 4) occurred abroad in and around bus stations. They particularly note research on those in Ottawa, Canada, and Curitiba, Brazil, but comment has also been made concerning the Bogotá TransMilenio system (Rodriguez and Targa, 2004).

But there *are* domestic examples from bus-oriented TODs in Denver, CO, Santa Ana and San Diego, CA, Corpus Christi, TX, and Charlotte, NC, and one survey conducted in 2004 found that almost 8% of the TOD initiatives identified were bus-based projects located predominately in smaller communities (Transportation Research Board, 2004). Because of the expectation that TOD can develop around bus hubs, Calthorpe (1993) separates rail-based TOD from bus-based TOD, terming the former "Urban TOD" and the latter "Neighborhood TOD". So there is both actual and conceptual experience with the bus-based form.

Concerns are raised about the potential for TOD related to transit that is predominately oriented toward bus stops rather than light rail stops, particularly when the bus facility is not part of a rapid transit system (Currie, 2006). Currie provides a review of the strengths and

challenges of bus versus rail TOD, finding (particularly in the case of bus rapid transit) that while there are more challenges to the bus-based form than strengths, the strengths are such that they may balance out the weaknesses. Some of the weaknesses he found are listed in the box to the right.

All of these factors lead to an increased perception of risk for developers considering a bus-oriented TOD.

But many of the weaknesses noted by Currie are related to bus stops as the basis for a TOD rather than bus transfer stations or hub facilities. The consideration of TOD associated with bus stops appears in our opinion to be different from the consideration of TOD associated with bus stations and hubs, or with structures such as the multi-modal facility contemplated by SMTD. For example, the finding that development scale and magnitude offers an advantage to rail-based systems may simply mean that TODs centered around bus transit facilities will be smaller in scale and magnitude than those associated with commuter rail-based ones, and that this must be taken into account as TOD feasibility is assessed during planning.

However, strengths do arise from bus-based systems. For example, Currie notes that while bus-based TODs suffer from scale dilution and less urban density, they have the advantage of being ubiquitous and can operate in a complementary fashion with other forms of transportation: such as rail and auto. And since buses serve bus transit stations much more often during the day than commuter light-rail might, this service frequency becomes an advantage for bus-oriented TOD if passenger demand does increase.

While there may be concerns about the permanence of bus-based routes compared to rail ones, this very flexibility allows for additional passenger choice and for greater adaptability. In fact the concern about permanence may be overstated. Niles and Nelson (1999) contend that there is no basis to come to the conclusion that rail transit is any more permanent than bus, reporting historic evidence in this regard, including the fact that some Chicago bus routes have existed for almost 100 years!

#### **Bus-Oriented TOD Weaknesses (Currie, 2006):**

- **Concerns about the permanence of bus-based systems due to the increased ability for them to change routes.**
- **Development scale and magnitude being better for rail-based systems than bus-oriented ones.**
- **The “newness” of light-rail investments as an advantage over older bus-based systems.**
- **The demographic differences between bus and rail passengers, with rail passengers being seen as having higher incomes than bus passengers.**
- **The limitations inherent in creating pedestrian access and limiting parking near bus transit facilities.**
- **A lack of urban density associated with bus transit stations as a weakness, as it dilutes the scale of TOD development (although in this case he is addressing bus stops more than transit stations).**
- **Frequency and speed of the service, at least as this affects bus rapid transit systems.**
- **Noise and pollution seen as being associated with buses and their facilities.**
- **And what he terms “bus stigmatization”; buses are seen as a second-class form of transportation compared to rail.**

Currie also suggests that since bus transportation is much more cost-effective than rail-transit, this allows greater opportunity for expansion and development.

Overall, many of the weaknesses noted by Currie for bus-oriented TOD appear to be perceptual ones, such as those related to the “newness” of rail systems and “bus stigmatization”. Some others, such as the contention that bus riders offer a different demographic than light rail commuters, may be correct, but miss the distinction between the market opportunity created by a bus station or hub versus a bus stop.

There are some regional examples where such bus-oriented development is contemplated which can serve as “test-beds” for a potential Springfield inter-modal facility focused TOD.



Illinois Terminal

For example, in 1999 the Illinois Terminal was constructed in Champaign-Urbana. It is described as an intermodal facility, similar to that contemplated by SMTD, involving and providing more than one form or mode of passenger transportation. For passengers, the Illinois Terminal is home to the Champaign-Urbana Mass Transit District, Greyhound bus, Burlington Trailways bus, LEX Express, Megabus, and Amtrak. It also houses a Subway Sandwich Shop, City View (a banquet hall and meeting center), R.E.A.D.Y. School (an alternative school providing an educational program for students in grades 6-12), and the district headquarters of an Illinois state senator. This development looks very similar in style and function to the sort of joint development described by TCRP, above.

Similarly, John Deere Commons serves as a station for Moline, Illinois, MetroLINK. This intermodal facility allows tourists and area residents to board buses to other parts of the city, or buy passes for the trolley and water taxis. The John Deere Commons also features a Radisson Hotel, a 12,000 seat arena (the I Wireless Center), several restaurants, and the John Deere Pavilion, which is a museum on the history of agriculture. This also appears to be a bus-oriented TOD of the joint development type, but one that is larger in scope than the Illinois Terminal.



John Deere Pavilion at John Deere Commons

## Conclusions

After its limited review of the literature concerning TOD, the SSCRPC finds that while this development strategy offers much promise in concept, there is limited quantitative evidence so far to fully demonstrate success. At the same time, there *is* anecdotal – case-based – and indirect evidence that it can succeed. Examples are given in this *Information Brief* and more can be found in some of the literature cited. We suspect that as this strategy is used more often and in different settings around the country, research will provide more assurance that it can be successful, and local officials and developers will become better able to anticipate the situations where TOD should be considered and where it should not.

But even at this early stage of consideration, it is clear that there are factors and barriers to be addressed when considering TOD. We found that the major requirements for a TOD include factors related to the project's location, the mix of transportation choices provided, the degree to which housing and shopping options are included in the development, the presence of quality-of-life amenities in the area (particularly those intended to make the area welcoming to pedestrians and bikers as well as those living and working there), and some assurance for the public and private investors that their investments are not greatly at risk. We expect that this final factor will be better addressed as experience with TOD grows and additional research on it occurs.



Davis Square Streetscape

**Davis Square TOD area, Somerville, MA**

What is additionally interesting to us is that the major barriers to TOD appear to be similar to those one would find with most large development projects. These include barriers to financing the projects, political and regulatory problems that can affect timing and increase development risk, the availability of land in the vicinity of the transit station, and conflicts between the mix of uses that a TOD requires and the uses already in place in the area. Municipalities and developers have experience with successful developments that have overcome all of these hurdles.

What appears to us to be unique for the TOD project compared to typical commercial or residential ones, is the role that parking plays. In most large development projects the intention of the developer is to increase the availability of parking in order to appeal to auto-based customers. Municipalities may even encourage additional parking beyond what is actually needed through zoning and land development regulations that assume an auto-based clientele. The TOD assumes just the opposite, often putting it in conflict with developers, municipal regulators, and even citizens in the community who are asked to underwrite public investments for the development. This is because the TOD assumes, unlike typical developments, that its success will be largely based upon acceptance by pedestrians – rather than drivers – who will live in the area and walk or bike to its businesses, homes, shops and transit facilities. The inclusion of large parking lots and the active roadways that feed them are detrimental to the intent of the TOD, and will require a different orientation in our thinking about development.

But while there are barriers to TOD success, the research indicates that it can be successful if there is advanced planning and cooperative local leadership: both public and private. This element seems to allow TOD to overcome many of the barriers suggested in the literature, especially the financial and political/regulatory ones.

Of course, before one can say that a TOD should be developed in association with the SMTD's planned multi-modal facility mentioned at the beginning of this paper, more study must be given to determining whether or not Springfield and the facility's potential locations meet some or all of the factors the TOD research suggests. At the

**Oakland , CA, City Center TOD**

At the

present time this is made additionally difficult because the siting of this facility is largely dependent upon a final determination of the route that passenger rail will take through the city.

But since it appears that community size is not a negative factor, TOD projects can be successful outside of major urban areas, and primarily bus-based TOD's are possible at some level of development (including TAD and TJD), it is certainly something worthy of consideration, discussion and preliminary planning. The experiences of the transit oriented developments that have already occurred in Moline and Champaign-Urbana deserve careful study as Springfield considers additional downtown development and redevelopment options.

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**This *SSCRPC Information Brief* researched and developed by Bret Tate, Planning Intern, University of Illinois at Springfield, with additional research and editorial assistance by Norm Sims and Jeff Fulgenzi, SSCRPC.**

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The Springfield-Sangamon County Regional Planning Commission (SCRPC) serves as the joint planning body for Sangamon County and the City of Springfield, as well as the Metropolitan Planning Organization for transportation planning in the region.

The Commission has 17 members including representatives from the Sangamon County Board, Springfield City Council, special units of government, and six appointed citizens from the city and county. The SSCRPC's Executive Director is appointed by the Executive Board of the Commission and confirmed by the Sangamon County Board. The Commission's staff sees their mission as providing the professional expertise and objective analysis needed by communities in Sangamon County to better assess their opportunities, sharpen their visions, and design the strategies needed to achieve them.

The Commission works with other public and semi-public agencies throughout the area to promote orderly growth and redevelopment, and assists other Sangamon County communities with their planning needs. Through its professional staff, the SSCRPC provides overall planning services related to land use, housing, recreation, transportation, economic development, and the environment, and also conducts many special projects. Its Executive Director also oversees the Sangamon County Department of Zoning, which administers and enforces the County's zoning code and liquor licensing.

The Commission prepares area-wide planning documents and assists the County, cities, and villages, as well as special districts, with planning activities. The staff reviews all proposed land divisions and developments, and makes recommendations on all Springfield and Sangamon County zoning and variance requests. The SSCRPC serves as the county's Plat Officer, Floodplain Administrator, census coordinator, and local A-95 review clearinghouse to process and review all federally funded applications for the county. The agency also maintains existing base maps, census tract maps, township and zoning maps and the road name map for the county.

Along with *Information Briefs*, such as this one, the SSCRPC produces many reports and other publications of regional and community interest. These can all be found on the Commission's website.

**SSCRPC: Advising + Planning + Evaluating + Leading**

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