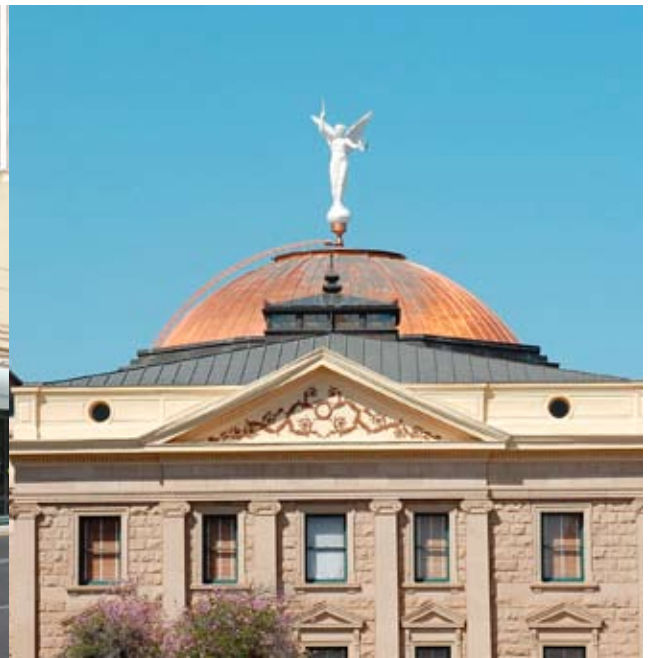


US EPA ARCHIVE DOCUMENT



Encouraging Transit Oriented Development

Case Studies that Work



LIVABLE COMMUNITIES

Keeping affordable housing in the transit-oriented mix

Good transit-oriented development can provide all the benefits associated with livable communities: a mix of uses that makes it possible to get around without a car, a greater mix of housing types and transportation choices, an increased sense of community among residents, a heightened sense of place.

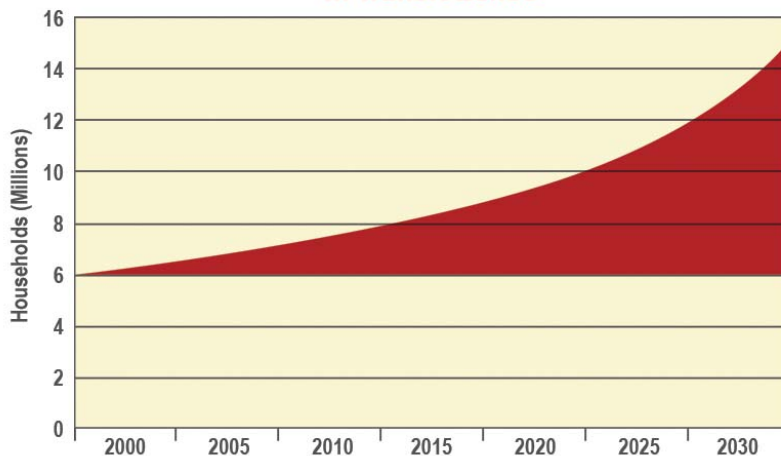
This kind of development produces lower greenhouse gas emissions (a recent study by the Center for Transit-Oriented Development shows that TOD produces 43 percent less emissions than conventional suburban development, www.reconnectingamerica.org), it promotes walking and biking and more active lifestyles, and it creates value for property

owners, businesses, local governments, transit agencies and residents. This is development that responds to the concerns of the 21st century because it's more environmentally and economically sustainable. And it provides a convenient, affordable and active lifestyle for people of all ages, including those who don't drive.

Increasingly Americans are showing a preference for more compact, walkable, mixed-use communities over typical suburban development, in part because traffic is so bad that no one wants to spend time commuting. But the changing housing market has as much to do with demographics: While the vast

majority of US households used to be families with both a mom and dad and more than one child, this demographic

**Projected Demand for Housing
In Transit Zones**



group now comprises just 25 percent of households and it is shrinking. More and more households are childless or headed by single parents, and single adults comprise 41 percent of households. The demographic groups that are increasing in size – households that are smaller, older and more ethnically diverse – are the same demographic groups that have historically shown a preference for higher density housing near transit.

Today many people want a "room with a view" within walking distance of coffee, restaurants, yoga, a dog park, art, film and culture. Lifestyles are changing, and convenience and affordability are paramount considerations. Research by the Center for Transit-Oriented Development shows that by 2030 nearly a quarter of all US households looking to rent or to buy are likely to want higher-density housing near transit. The Urban Land Institute has also noted the changing real estate market: ULI's annual "Emerging Trends in Real Estate"

Local jurisdictions control multiple pools of funding that can be used to support affordable and mixed-income housing in transit zones



The Rosslyn Ballston Corridor in Arlington, VA, illustrates how TOD can accommodate tremendous development in a livable community that provides benefits to both new and existing residents. This was a declining low-density commercial corridor 30 years ago when the local government decided to focus development around five closely spaced rail stations. Despite the enormous amount of development that has occurred, single-family neighborhoods have been preserved just a short walk away.

report has ranked locations near transit as a best bet for investors five years in a row.

Moreover, transit is proven to generate value that can be captured and reinvested in communities because it concentrates development and business activity and the tax base in a way that allows for focused value capture strategies. Tried and true value capture strategies include: property and sales taxes, real estate lease and sales revenues, farebox revenues, fees on everything from parking to business licenses, joint development, special assessment districts and public-private partnerships.

The Rosslyn Ballston Corridor in Arlington, VA, illustrates how TOD can accommodate tremendous development in a livable community that provides benefits to both new and existing residents. This was a declining low-density commercial corridor 30 years ago when the local government decided to focus development around five closely spaced rail stations, working with residents and the private sector. Despite

the enormous amount of development that has occurred, single-family neighborhoods have been preserved just a short walk away, and there has been only a modest increase in traffic. The overall results have been extraordinary:

- The assessed value of land around stations increased 81 percent in 10 years;
- 8 percent of county land generates
- 33 percent of county revenues – allowing Arlington to have the lowest property tax in Northern Virginia;
- 50 percent of residents take transit to work; 73 percent walk to stations.

Shifting demographics and the changing real estate market have opened up an unprecedented window of opportunity to channel growth into livable communities near transit. This opportunity should be exploited since it is increasingly clear that one of the most sustainable, low-cost, long-term solutions to a host of pending problems – including climate change and dependence on foreign oil -- is public-private investment in neighborhoods where people don't have to drive.

STATION AREA PLANNING

Getting the most out of transit-oriented development

Station area plans are conceptual or specific plans for the areas around transit stations or along transit corridors. There is some variation in what these plans contain, but they all lay out the basics, including zoning, design standards, parking requirements and information about transit access and bike and

pedestrian circulation. The most effective plans have a clear time frame and strategy for implementation, such as an investment or infrastructure improvement plan that has clearly identified funding

sources. Station area plans work best for encouraging TOD when there are significant development opportunities such as a large surface parking lot or other underutilized land; they are far less useful for development of a limited scope. Detailed station area planning efforts are especially important for high-priority sites.

VISIONING NEW STATIONS

Station area plans that are based on a visioning process with community input can help set standards and expectations before projects are proposed, smoothing the way for the approval of appropriate development. This certainty and predictability can help ensure that projects will be approved without delay or community opposition—both of which increase risk and result in increased development costs. The community

should be involved in determining what public infrastructure is needed, the desired mix of uses, whether there



The neighborhood surrounding Highlands Garden Village, a mixed-income, mixed-use urban infill project near downtown Denver, provided significant input on the project design, greatly enhancing its success.

should be public space and what kind, as well as other design considerations. In some cases plans may be advanced enough to allow for “by-right” zoning that can greatly expedite the time it takes to move from project conception to construction.

The developer of Mission Meridian Village in South Pasadena, just north of downtown Los Angeles, solicited the input of residents before building what was a relatively high-density mixed-use TOD project in a historic single-family neighborhood that had long resisted development. By cultivating their interest, input and enthusiasm he succeeded in getting their support for what became a catalytic and immensely popular development that activated and improved the entire neighborhood. Similarly, the neighborhood surrounding Highlands Garden Village, a mixed-income, mixed-use urban infill project near downtown Denver, provided significant input on the project design,

Detailed station area plans help leverage the potential of transit-oriented development



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greatly enhancing its success. In both instances community input resulted in a design that located new single-family homes on the sides of the development that faced existing single-family homes, with more density and commercial space facing the commercial streets. The result was a truly sensitive design that integrated significant density into single-family neighborhood.

Some elements of station area plans may be proscriptive, such as prohibitions on auto-oriented retail, or prescriptive, such as a provision that 50 percent of groundfloor space should be devoted to retail. Other elements can be “permissive.” For example, the developer may have the option of providing a certain feature, but it is not required. The challenge lies in finding the right balance between what is optional and what is required with the goal of ensuring that the plan will result in a successful project, but not scare developers away. Planners and policymakers should be careful not to let perfection get in the way of the good.

While some plans are custom-designed for specific stations, a “transit district” or “transit village” overlay zone can be applied more generally to ensure that plans or projects near stations meet certain criteria including a mix of uses, a pedestrian orientation, or a standard

of affordability. A “floating” TOD overlay zone offers more flexibility; it can be applied when the opportunity arises instead of pre-zoning the site before the market is ready – which can cause land speculation and higher costs, as well as difficulties for existing property owners. Transit agencies and cities should consider the corridor as well as the station area, and balance overall considerations about system performance with each station area plan. Considering the corridor as well as the station allows local governments to identify those stations that should serve as parking lots for commuters, and those that should be developed as high-activity nodes. Parking ratios can be reduced as neighborhoods near stations develop. At BART’s Fruitvale station in Oakland, for example, parking was reduced to allow for a higher density, mixed-use, mixed-income transit village that was developed by a local community organization. The lower parking requirements reduced development costs, which reduced the cost of housing and commercial space, resulting in a vibrant mixed-use pedestrian corridor with high-quality public space and plazas leading from the BART station to Fruitvale’s nearby commercial center.

COMMUNITY EFFORT

Following the lead of community-based organizations

Community development corporations (CDC) can use transit-oriented development to bring about comprehensive and lasting revitalization in neighborhoods and increase affordability because families that use transit spend less money on transportation. Community development

corporations can play an especially important role in neighborhoods that have been bypassed by the market and that aren't a high priority for local governments or transit agencies by initiating projects that will benefit the community.

Community Development Corporations play an important role in neighborhoods bypassed by the market

Community support for a CDC's efforts can go a long way toward convincing lenders to invest in and retailers to move into a community. It may be possible, for example, to attract an otherwise reluctant vendor, such as a grocery store, if community members say they will support the store.

TOD success stories

There are many TOD success stories involving CDCs: San Diego's transit-oriented Barrio Logan neighborhood was developed by a community services organization, as was the Lake-Pulaski neighborhood in Chicago, where a CDC named Bethel New Life made an El station the anchor for its revitalization efforts. Beginning with \$10,000 raised from a church congregation, Bethel New Life has since assembled and brokered

land around the station, building or rehabilitating 1,000 housing units and a new "green" station building that houses



The Dudley Village project developed by the Dorchester Bay Economic Development Corporation in Boston will bring 50 affordable housing units to Roxbury.

a child care center and retail, creating a comprehensive mixed-use development. The cities of Chicago and San Diego were both supportive of these developments but had prioritized development in neighborhoods where it was easier to attract developers. Bethel New Life had to buy land, develop the housing and negotiate with the city, developers and the transit agency in order to realize their vision. Financing came together through a combination of loans, grants, tax credits to make the deal work.

Similarly, four CDCs have come together in Boston to build mixed-income transit-oriented projects along the Fairmount commuter rail line to help ensure that gentrification doesn't displace current residents. The combination of a strong housing market and improvements to the commuter rail line -- including

better service and new infill stations -- had prompted developers to build market-rate housing in what had been high-poverty transit-dependent neighborhoods. The four CDCs mobilized support for the transit improvements, raised funds for planning and development capacity, and are developing projects near the new stations that provide affordable units and economic development opportunities for lower-income residents.

Perhaps the most famous example of a CDC-led TOD effort is the Fruitvale BART (Bay Area Rapid Transit) station near Oakland, California. This large mixed-use mixed-income TOD project grew out of community resistance to BART's plan to build a parking garage between the BART station and the Latino neighborhood's commercial center, which the community worried would hasten the decline of the already distressed neighborhood. BART withdrew the plan and agreed to work with the neighborhood on an alternative. The Spanish-speaking Unity Council, which had led the opposition, became the developer, working with a variety of federal and local partners to build the project. Fifteen years later, the Fruitvale "transit village" links the commercial center and BART station with a pedestrian corridor and plazas lined with shops, offices, apartments and community services – the village includes a clinic, child development center, senior center and library.

All of these examples illustrate how TOD can be used to catalyze neighborhood revitalization, ensure affordability, leverage public and private investment, provide more choices for residents, increase transit ridership, reduce traffic and pollution, and enhance the economic and environmental sustainability of a



The Fruitvale BART station in Oakland, a large mixed-income TOD project, grew out of community resistance to BART's plan to build a parking garage between the BART station and the Latino neighborhood's commercial center, which the community worried would hasten the decline of the already distressed neighborhood. The Spanish-speaking Unity Council became the developer, working with a variety of federal and local partners to build the project.

neighborhood. There are also some lessons learned: In each of the examples discussed above there were effective public-private-nonprofit partnerships, effective leadership, public involvement, creative financing, quality design and construction and -- perhaps most importantly -- perseverance.

RIGHT-SIZING PARKING

Taking advantage of transit-oriented development

Parking mandates crafted for single land uses overestimate the parking needs of development near transit and undermine opportunities for higher-value uses. Providing parking is expensive – estimated to cost from \$20,000 to \$40,000 per space in a parking structure and as much as \$60,000 or more per space in high-value real estate markets like San Francisco. Because parking requirements can

drive the budget for TOD projects, parking becomes a key factor in determining real estate prices.

Local parking standards are usually set in accordance with the Institute of Transportation Engineers trip generation and parking forecasts. The ITE model, however, is based on suburban examples where parking is typically inexpensive and plentiful, and because surrounding

low-density uses make travel by car necessary. The Center for Transit Oriented Development's database of transit systems and TOD shows that, in contrast, homeowners in walkable communities with a mix of uses and good transit access own 43 percent fewer cars than those who live in suburban communities.

There's increasing proof that TOD projects generate less traffic. The Transit Cooperative Research Program (TCRP) released new research in 2008 by PB PlaceMaking, Robert Cervero of UC-Berkeley, the Urban Land Institute and the Center for TOD that shows that transit-oriented housing produces just half as many car trips as conventional suburban development. The study counted the number of cars driving



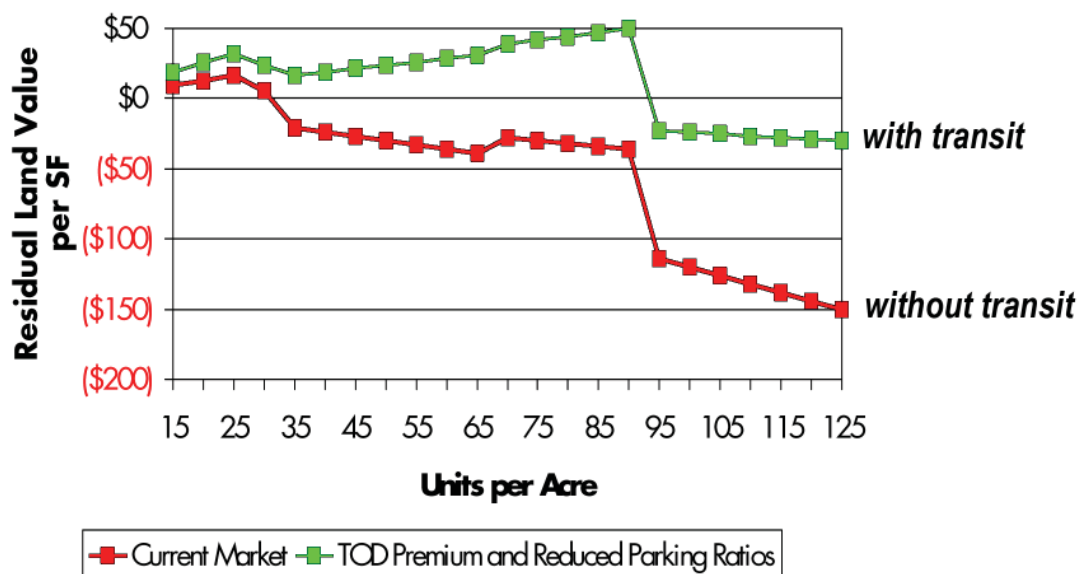
Source: Transit Cooperative Research Program

across pneumatic tubes stretched across the driveways of 17 transit-oriented housing projects in Philadelphia, Washington D.C., the San Francisco Bay Area, and in Portland, OR. The research was intended to provide guidance for an update of the ITE trip generation and parking generation rates.

ECONOMICS OF PARKING

Reducing parking requirements can increase the feasibility of mixed-income and mixed-use development, and from a design perspective largely determines if there is space for retail, childcare or other nonresidential uses. Consider, for example, a one-acre parcel zoned for up to 100 units of residential development. A parking requirement of two spaces for each residential unit would consume 320-350 square feet per space at a cost of \$20,000 to \$40,000 per space. Reducing the requirement to 1:1 would allow the project to save as much as \$2 million. By reducing the parking requirement to 0.75:1, enough ground floor space would be available to allow

Housing in transit-oriented developments produces as much as 50 percent less traffic than conventional developments



Source: Strategic Economics.

Higher-densities in transit-oriented developments are often not enough to make them pencil out. The lower line shows that a developer would require subsidies in order reach densities of more than 35 units per acre and 25 units per acre would be the optimal density. But if the higher rents a project near transit can demand and the lower development costs from reduced parking are added to the equation, the site's profitable maximum moves to the 90 units per acre range.

for a childcare center and 10,000 square feet of retail.

Similarly, the TCRP study showed that under the right conditions lowering residential parking ratios by 50 percent for TOD projects near high-quality transit service could provide for increases in residential density of between 20 to 33 percent and a savings to the developer ranging from 5 to 36 percent. The TCRP research suggests that reducing residential parking ratios for TOD makes sense and would help these projects realize the expected community benefits by limiting traffic, encouraging walking and biking and transit use, making TOD housing prices more affordable by limiting project costs, and providing room for higher-value uses.

COUNTING TOD TRIPS

In addition, neighborhoods may be more likely to support density near transit if they understand that TOD produces fewer trips than conventional development. The savings to developers

can be passed on to consumers in the form of more affordable housing. Lower parking ratios will help promote transit ridership. And less parking will mean that TOD projects are more compact and sustainable.

In Evanston, IL, for example, recent multifamily residential developments included a minimum of 1.25 spaces for housing units that are one bedroom or smaller and 2 spaces per unit for three or more bedrooms. But an onsite survey to determine whether all these parking spaces were actually used found an actual parking demand of 0.8 spaces to 1.18 spaces per unit. As a result, Evanston planners proposed reducing parking requirements and shifting from a per-bedroom rule to a per-square-foot rule that will range from one parking space for an 800 square-foot-unit to 1.5 spaces for 1,500 square feet or more.

For more information see: Parking Spaces/Community Places: Finding the Balance through Smart Growth Solutions. <http://epa.gov/smartgrowth/parking.htm>

SHARED PARKING

Making parking work 24/7 in mixed-use districts

Parking policy is every bit as important to creating vibrant, pedestrian-friendly mixed-use districts as streetscapes, parks and high-quality public space, because it largely determines whether a neighborhood is compact and walkable. Shared parking is a valuable tool because it provides for a more cost-efficient use of parking resources, and

provide private off-street parking, thereby allowing each public space to serve many users and destinations. It is estimated that 100 public parking spaces

Shared parking is most effective when land uses have significantly different peak parking characteristics

frees up land for higher-value uses, creative site planning and landscaping – all of which will enhance the vibrancy, appeal and value of the development.

Shared parking is a parking management policy that allows for parking spaces to be shared by more than one user, since most parking spaces are only used some of the time and many parking facilities include many unused spaces with patterns of usage that follow predictable daily, weekly and annual cycles. For example, an office complex can efficiently share parking facilities with restaurants or theaters, since offices require maximum parking during weekdays, while restaurants and theaters require maximum parking in the evenings and weekends. As a result, it is estimated that the total amount of parking can be reduced 40-60 percent.

One of the best ways to provide shared parking is to build shared parking facilities rather than having each building



WEEKDAY **EVENING** **WEEKEND**
Shared parking works best with multiple destinations with different peak parking demand periods.

can be the equivalent of 150 to 250 private parking spaces, and developers or building owners can be asked to pay in-lieu fees to fund construction of these public parking facilities. On-street parking is also easy to share since it's so visible and convenient, but in order to make this work the on-street parking must be managed for maximum use, particularly in busy commercial centers, by limiting the time to two hours or less, or applying short-term pricing. Parking can also be shared among a group of employees or residents: For example, 100 employees or residents can usually share 60-80 spaces since not all employees will drive to work at one time.

AGREEING TO SHARE PARKING

Shared parking is typically implemented by municipal governments, with sharing arrangements made between individual facility developers



The seven-story Gaia complex in downtown Berkeley, less than a block from the Berkeley BART station and the University of California-Berkeley campus, was allowed a height bonus in exchange for providing a performance and arts space. In addition to the cultural space, there is a cafe on the ground floor, a rooftop garden and a solarium as common areas. The 91-unit project has 42 spaces in parking lifts along with space for car sharing and bike storage facilities.

and managers. Some local jurisdictions incorporate language in local ordinances to permit and even encourage shared parking. These jurisdictions allow shared parking to meet minimum parking requirements for uses located in the same building and also permit off-site shared parking arrangements to meet on-site requirements for complementary uses within a defined area. These location requirements are typically based on acceptable walking distances. San Diego's municipal code, for example, states that shared parking facilities must be located within 600 feet of the uses served, while Eugene, Oregon, and Los Angeles both allow for 1,320 and 1,500 feet, respectively.

IN-LIEU PARKING FEES

The city of Long Beach recognizes that parking is expensive and consumes valuable land, and allows for shared parking and in-lieu parking fees. For example, the city's minimum parking requirements

would have required a proposed 162-room downtown hotel to provide 302 spaces, costing an estimated \$4.83 million, making the project financially infeasible. In the interest of encouraging urban revitalization the city agreed to lower the parking requirements to 218 and allow the developer to pay in-lieu fees of \$3,000 per space for a quarter of these spaces plus an additional \$50 per space per month to cover parking operating and maintenance expenditures. The revised parking requirements provided a savings of more than \$2 million to the developer and has facilitated the revitalization of the surrounding area, increased pedestrian traffic, generated approximately \$300,000 in property tax revenues and helps to support Long Beach's downtown.

AESTHETIC ZONING

Emphasizing form over use to create human-scale places

Most U.S. cities regulate development through conventional or Euclidean zoning, the primary purpose of which is to segregate incompatible land uses and accommodate the movement and storage of vehicles. But these codes date back to concerns about the industrialization of American cities at the

turn of the last century and aren't as relevant to the economic realities of cities today. Demographics in America are changing. Whereas

the family was the major demographic group in the 1950s, making the suburban single family home popular, singles and "non-family" households (single-parents, empty nesters, friends living together) have become the new majority. These households are much more interested in multi-family housing types -- including the loft and live-work space and condo -- in lively mixed-use neighborhoods that are walkable.

Mixed-use zoning has become popular as a result, and mixed-use districts are often overlaid on the conventional zoning grid through creation of special zones or districts. But this is a makeshift strategy and doesn't change the underlying requirements of auto-dependent planning, and many cities are instead turning to form-based codes to achieve more vibrant and human-scaled neighborhoods.

Form-based codes, in contrast to

conventional codes, focus on the architectural and urban "form" of the built environment, and regulate key aspects such as building heights and



One of the earliest codes was created for the new town of Seaside, Florida, in the 1990s. It was subsequently recognized as one of the most important planning efforts of the post-World War II era.

setbacks, windows and doors, the street and sidewalks. The intent is to get all of these elements to work together to create a desirable public realm and allow for the complexity, diversity and flexibility that can create dynamic and vibrant neighborhoods.

FLEXIBILITY IN CODES

Form-based codes are much more user-friendly than the typically complex and oft-amended conventional codes, which are composed of lengthy text and numerical descriptions. Form-based codes, in contrast, use charts and illustrations with the intent of simplifying the code; they depict desired outcomes through the use of two- and three-dimensional drawings and diagrams. Most importantly, form-based codes allow for much greater flexibility

Physical form and beauty of a city are defined by the sum of its public spaces



The former Safeway site on Columbia Pike will include an 188-unit rental apartment building. Approximately 34,340 square feet of retail and 14,650 square feet of office space will be included on the ground floor and mezzanine. There will be 408 parking spaces on three below-ground levels; at least 107 of which are non-reserved and shared for visitors and shoppers. The project also includes 79 bicycle parking racks. The project is in compliance with the Form Based Code and consistent with the goals of the Columbia Pike Initiative.

with regard to the uses located in the buildings so that property owners can adapt to changing market conditions, and to allow the mix of uses to change over time. They also simplify and streamline the planning process, thereby appealing to both cities and developers.

Form-based codes focus on the relationships between building facades and the public realm, the form and mass of buildings in relation to one another, and the scale and types of streets and blocks. The primary concern is the impact on the public realm or right of way, in acknowledgement of the fact that architectural design, how buildings relate to the street, and walkability are important elements in creating places that people want to visit -- which is why form-based codes focus on enforcing these elements instead of on restricting uses.

BUILT-IN INCENTIVES

One of the earliest codes was created for the new town of Seaside, Florida, in the 1990s and was subsequently

recognized as one of the most appealing and important planning efforts of the post-World War II era. Arlington, VA, adopted an optional form-based code for Columbia Pike in 1998 that incentivized its use by expediting projects that met code requirements -- thereby prompted a wave of development. It has been lauded as providing for up-front citizen consultation, less regulation, quicker approvals, and for making development less expensive (less parking, expedited approvals), which has allowed for the construction of more workforce housing. Denver is also adopting a form-based code to help implement the city's recent comprehensive plan, which directs higher-density development along public transit corridors in the hopes of promoting ridership.

COLLABORATION

Leveraging public-private partnerships for better results

A public-private partnership is a contractual agreement between a public agency (federal, state or local) and a private sector entity that leverages the skills and assets of both with the goal of delivering a service or development for public benefit. Public-private partnerships are especially useful for leveraging private investment in transit-oriented development, they are

more flexible than joint development arrangements, and they don't require publicly owned land – though, as with joint development, each partner brings something to the deal. Local governments, for example, can help assemble land, rezone it, and fund environmental remediation with a grant from the federal government. Private investment can also be leveraged if a local government provides an in-kind match, in-lieu-of fees, or gap financing.

Local governments can be particularly effective in incentivizing the kind of development they want by working with developers to mitigate the four risks associated with in the development process: They can help with entitlement risk by bringing communities to consensus on a station area plan that creates predictability for both the community and the developer, and by expediting the review process. They can help with construction risk by prioritizing inspection services for TOD, and by vetting contractors. They can help with financing risk by working with local banks to provide lower-cost mezzanine loans, a type of debt used for commercial and multifamily construction that is typically very expensive.

Government can also help with the

marketing of the finished development, advertising its proximity to transit, for example. Lenders typically want to be “taken out,” or paid off, as quickly as possible by a mortgage.

If marketing helps sell the units more quickly, transit access can help developers secure financing more quickly, lowering the costs at the end of the project. This cost savings can help subsidize below-market-rate units, or pay

for pedestrian amenities like parks and plazas and streetscapes. DART in Dallas has done a particularly good job of using transit to market TOD. The agency's real estate department reaches out to developers, providing them with a basic market analysis for sites near stations, including information about demographics, land ownership, characteristics of the surrounding communities. Some cities, like Portland, have made infrastructure investments -- including parks, sidewalk improvements, and transit stop enhancements – to increase the curb appeal and marketability of larger developments.

Local governments can also help with predevelopment costs, which are typically hard to finance, especially if the land to be developed has to be held for several years until it is developable because of zoning or design issues. Local governments can help by provid-



Portland's Pearl District streetcar

Melding of public and private goods is a progressive, pragmatic solution to the practical difficulty of getting things done.



One of the best examples of a successful public-private partnership that used transit to leverage large-scale redevelopment is Portland's Pearl District, a neighborhood built along a streetcar line. The streetcar was built to connect two large parcels of vacant industrial land north and south of downtown.

ing patient capital from funding sources such as redevelopment funds. They can also provide funding for public parking and therefore become an equity partner in the development. Value capture strategies and zoning incentives including density bonuses can be used to fund affordable housing and infrastructure.

One of the best examples of a highly successful public-private partnership that used transit to leverage large-scale redevelopment is Portland's Pearl District, a new neighborhood built along a streetcar line. The streetcar was built to connect two large parcels of vacant industrial land north and south of downtown. The city struck a deal with the owner of 40 acres: The city would build the streetcar past his property and make other improvements if he would up-zone his property from 15 dwelling units per acre to 125. This was in the early '90s, when there was no market for this kind of development, but today it is the city's densest and most popular neighborhood, and at build-out it will be home to 10,000 residents and 21,000 jobs. The streetcar was subsequently extended to the second vacant parcel, the South Waterfront, where an even more ambitious redevelopment effort is underway.

This private investment – an estimated

\$3.5 billion in 2008 – helped the city meet several public goals and objectives, including accommodating a significant number of new housing units within the city's urban growth boundary. The result:

- 10,000 units of housing, one quarter of which is affordable;
- 4.6 million square feet of commercial space within two blocks of the streetcar;
- Portland's 20-year housing goal was met in just 7 years on one-tenth the projected land;
- A record number of building permits were issued 7 years in a row;

Properties closest to the streetcar were developed at 90 percent of permitted density, compared to 43 percent of allowable density at 3 blocks and further away.

The Portland streetcar proved to be a public investment that attracted private investment that helped the city meet many public goals including affordable housing, very high-quality streetscapes and parks and plazas, and which generated a high volume of business activity for downtown. The streetcar has been so successful in stimulating development that there are now at least 60 US cities trying to follow Portland's example by building streetcars.

JOINT DEVELOPMENT

Leveraging agency land to improve TOD prospects

Generally speaking, transit agencies or cities cannot create transit-oriented neighborhoods that generate high ridership and achieve other public goals on their own. They aren't likely to own enough land at stations to create truly catalytic projects, and their real estate departments

may lack the necessary staff, resources and/or sophistication. However, many transit agencies and cities do enter into joint development with private

located, or to support additional transit investments. Moreover, transit agencies have found that joint development is a

The most common joint development arrangements are ground leases and operation-cost sharing

development partners on publicly owned land to ensure that it is built with uses that will support transit ridership, or development that supports other public goals including affordability and the revitalization of neighborhoods. Private developers bring their own resources, including additional property, and expertise to joint development projects, which can result in more successful development.

Research shows that transit can add significant value to land near stations. Developing the land maximizes that value and can yield significant revenues from long-term ground leases, rents or sales, as well as increased property and sales taxes and farebox revenues, and provide increased revenues from fees on everything from parking to business licenses. All these revenues can be used to fund additional improvements for the neighborhood in which the station is



A tripartite agreement among the MBTA, Massport, and a developer in South Boston led to construction of a new underground Silver Line BRT station.

cost-effective way to help ensure higher ridership – much more so than building costly parking structures or providing feeder bus service.

There are challenges, however. One key issue is the disposition of land. Many transit agencies prefer to lease their land rather than sell it outright, which can have a critical impact on the cost of financing. Lenders and equity providers perceive more risk with deals in which the land is not permanently secured to the real estate improvements they make. The cost of joint development is high to begin with – because of the added time and complexity of these projects – and the added cost of financing makes it hard to make these projects pencil out.

There may also be the thorny question of providing replacement parking for transit users – which has killed the financial feasibility of many joint



The Washington (D.C.) Metropolitan Area is, by far, the nation's leader in transit joint development. The region presently has some 30 joint development projects, including such notable air-rights developments (and revenue generators) as this Bethesda station project.

development projects. With the cost of structured parking estimated at between \$20,000 and \$40,000 a space, the requirement to replace a large surface parking lot with structured parking in order to make room for development can price most projects out of the box. In the recognition that joint development projects may be the highest and best use for transit agency properties, many transit agencies that engage in joint development are abandoning their one-for-one replacement parking policies for more flexible guidelines that allow replacement parking to be moved to other stations along a corridor.

JOINT-DEVELOPMENT EXAMPLES

The Washington Metropolitan Area Transit Authority (WMATA), the Massachusetts Bay Transportation Authority, and BART in the San Francisco Bay Area are among the transit agencies that have aggressively pursued joint development opportunities. In one of the more interesting and complicated joint development deals, BART's \$70 million West Dublin station is being built in part with \$15 million generated

by the pre-payment of lease revenues on development planned for 18 acres around the station. Other project partners included the state DOT, the council of governments, congestion management agency, and the cities of Dublin and Pleasanton, which surround the station and owned some of the land.

The Massachusetts Bay Transportation Authority has also been selling and leasing land near stations to private developers, and taking an equity interest in the development. At the Ashmont Square Station, for example, the MBTA entered into an agreement with a developer to build 150 units of housing on agency land. Proceeds were used to help fund construction of a new parking structure with 5,000 spaces near the station. MBTA also entered into an agreement with Massport and a private developer to construct a new underground Silver Line BRT station at the World Trade Center complex in South Boston, with each development partner contributing something to the deal.

LAND ASSEMBLY

Packaging a project to leverage development opportunity

Land assembly can be a challenge when developing pedestrian-friendly transit-oriented neighborhoods.

Neighborhoods around stations are often built-out, sometimes with transit-unfriendly uses, there may be few vacant or underutilized lots, and sites that are

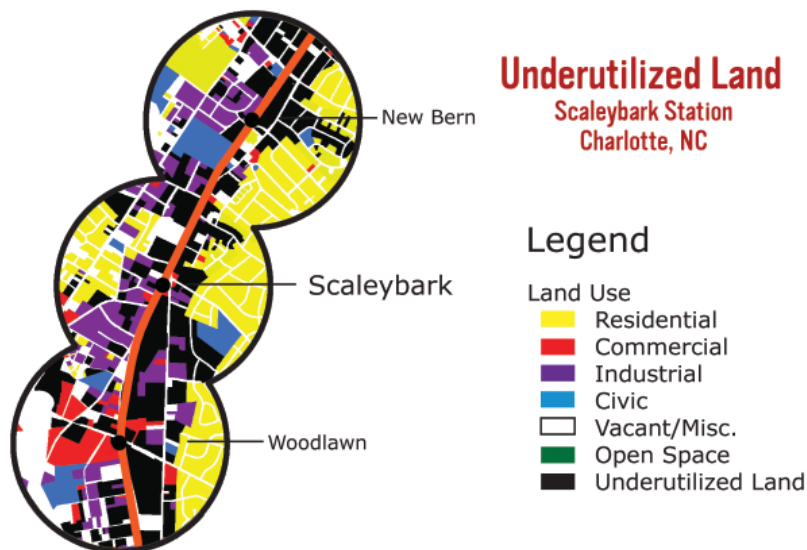
developable may be small, disconnected and not under the control of any one owner. Exceptional TOD projects require large sites, and large sites reduce construction costs, provide

for a more even quality of building design, and ensure a phased build-out that will maximize profits. For all of these reasons some local governments use their land assembly powers to acquire sites and then sell or donate the land to the development team. The power to assemble land provides leverage for public agencies, giving them greater say in decisions about the kind of development that should be built.

There are a number of innovative land assembly and financing techniques that are being employed, including making the planning of infrastructure investments and land assembly concurrent. Land acquisition or land-banking funds are being considered in many cities to enable the early purchase of land around stations or along transit corridors while the land is still affordable. Development fees, flexible state transportation and housing funds,

and grants from corporate and family foundations can be a source of capital for land acquisition.

Underutilized Land Scaleybark Station Charlotte, NC



Charlotte's Scaleybark station is surrounded by large industrial and commercial sites that are ready to be redeveloped, making it well suited for catalytic TOD projects

Local governments can help package and assemble land for development purposes

There are barriers to land assembly, of course, including the fact that property owners may be unwilling to sell or have unrealistic expectations about what their properties are worth, given the speculative rush that can accompany the construction of a new transit line. Moreover, it takes a long time to assemble sites and then get them entitled, zoned, platted and approved for development, and there are legal issues surrounding the use of eminent domain. Many developers are not able to handle the holding costs of long-term or even medium-term site assembly and entitlement, which is why the help of public agencies is often necessary.

Because of these difficulties, brownfield sites, underutilized commercial and industrial sites, and redevelopment project areas offer



Philadelphia has the third largest rail system in the United States but stations are dominated by auto-oriented uses. In addition, the Temple Regional Rail station and elevated rail line separate Temple University in North Philadelphia from the Asociacion de Puertorriqueos en Marcha (APM) community, which has long struggled to revitalize after population loss.

some of the best opportunities for TOD because they make large-scale development possible. For example, the City of Baltimore was able to offer 30 acres for redevelopment as TOD around the Metro station at Center Square. These sites link the Metro station to a light rail station surrounded by city and county offices and cultural attractions. Land assembly is also a major element of the Atlanta Beltline effort to turn more than 20 miles of mostly unused railroad tracks and adjacent land into an "emerald necklace" of parks, workforce housing and mixed-use development on either side of a transit line looping around the city.

REDEVELOPMENT AND TRANSIT

In Philadelphia, land assembly has been deemed so important to the stabilization and rebuilding of neighborhoods that the city has implemented a new approach driven by redevelopment considerations. The city has nearly 60,000 vacant parcels, but few are large enough to support significant and catalytic development that can spur other projects. So the city has begun acquiring large quantities of vacant land, and by holding title will be

able to market the land in accordance with neighborhood plans and dispose of the properties without the delays associated with a more piecemeal approach.

Land swaps are another option that can help clear the way for development of critical sites near stations. At the Fruitvale BART (Bay Area Rapid Transit) station, for example, the developer needed to assemble all the parcels of land at the site under single ownership. BART owned the land, but couldn't part with the property because of a long-standing policy requiring the agency to retain ownership of the land for long-term planning. The problem was addressed through a land swap in which the developer was awarded a 96-year lease on the land in return for a parcel the developer owned behind the transit station as well as several nearby vacant parcels owned by the City of Oakland. This swap gave the developer proprietary rights to the entire development site without reducing the value of BART's land assets near the transit station.

For more information, see: Tools for Mixed-Income TOD, Douglas Shoemaker with the Center for Transit Oriented Development

HOUSING TRUST FUNDS

Preserving affordable housing near transit

Housing trust funds establish a stable and steady source of funding for affordable housing outside of the unreliable political budgetary process, enabling jurisdictions to provide developers with a dependable funding source. These funds are typically established by the city, county or state via legislation or ordinance.

Socio-economic diversity enhances community stability and sustainability

While there are different constitutional or procedural issues that determine how this can be done in each jurisdiction, nearly

600 funds have been established in 43 states in the country, generating more than \$1.6 billion a year to support housing needs. State housing trust funds are the most significant source of money, and are usually funded with proceeds from the real estate transfer tax or documentary stamp tax. Cities typically use developer fees. Counties have a more difficult time finding a funding source, but they are well-positioned to provide broad support for affordable housing outside municipal boundaries.

PURCHASING AFFORDABILITY

Housing trust funds are used for a variety of purposes, including the construction and maintenance of affordable housing, homebuyer assistance, homeless shelters, gap financing (for projects where other funding sources leave a gap requiring

additional resources), loans for developers, and/or matching funds used to leverage private investment. One of



The City of Charlotte purchased property at Scaleybark station, which is surrounded by large industrial and commercial sites, to ensure that development remains affordable.

the appeals of a city-controlled fund is that it can be tailored to the particular needs and opportunities of a community.

Targeting these resources to sites near transit is especially important because transit-oriented development provides increased affordability. The American Public Transportation Association estimates that households that live near transit and use it can save \$9,499 a year on transportation compared to households that drive (www.apta.com). Research by the Center for Transit-Oriented Development shows that households living in walkable, mixed-use neighborhoods near transit spend about 16 percent less on transportation than households that live in conventional suburban development (www.reconnectingamerica.org). For these reasons, trust funds and well as other affordable housing resources should be used around stations and along transit corridors to preserve existing affordable

housing, to purchase rental properties for permanent use as affordable housing, and/or to build new affordable housing.

Charlotte, North Carolina, established an Affordable Housing Trust Fund to provide public funding to private developers in exchange for affordable units using a competitive bid process. The City Council set aside \$10 million for the fund in 2001, and voters then approved another \$35 million. The city has the flexibility to make the funds available as either a loan or grant for land acquisition or construction. By 2007 the fund had enabled the construction or rehabilitation of more than 2,800 units, more than half of which were for households earning below 30 percent of area median income. This number included 223 units of new affordable ownership housing, more than 900 new multifamily rental units, nearly 600 rehabilitated multifamily rental units, and more than 1,100 units for households with special needs. The average subsidy per unit was less than \$14,000 and sometimes included other affordable housing funds.

AFFORDABLE HOUSING

Land acquisition funds or land banking funds can also be used to secure sites near transit for affordable housing or transit-oriented projects while the land is still affordable. This is especially important now because changing demographics in the U.S. – households are older, smaller and more diverse – are boosting the demand for housing in these locations, driving up the price of real estate near stations. Land acquisition or land banking funds can also be used to acquire existing housing in order to preserve affordability in neighborhoods where gentrification is a threat.

Development fees, flexible state transportation and housing funds, and grants from philanthropic organizations are often used to create land acquisition



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funds.

The city of Charlotte has also established a land acquisition fund to purchase land near the stations planned along its South Corridor light rail line to ensure the development of mixed-income, mixed-use TOD. The City Council capitalized the fund with an initial grant of \$5 million. It is jointly managed by Coldwell Banker Commercial, the Charlotte Area Transit System, and several city departments. The first site, the Scaleybark station area, was purchased with the help of the city's Housing Trust Fund, and development is required to meet a minimum affordable housing threshold.