Urban Design Strategy Report

Chicago Metropolitan Agency for Planning
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Introduction

As commute times lengthen, energy prices rise, and housing preferences change, compact, walkable urban designs have gained a higher profile nationwide. The Chicago region is no exception. Affluent suburbanites are returning to the central city and new mixed-use, transit-oriented developments are emerging in communities like Glenview and Grayslake. Recent research links compact, mixed-use developments to improved health, vibrant economies and many other social and environmental benefits. As the GO TO 2040 plan develops, good urban design will serve as the foundation on which many other regional strategies are built.

This report defines "good urban design," identifies elements of this concept, and provides examples of how it can be measured. It also describes the effects of implementing urban design, rather than conventional development, in terms of economics, transportation, environment, and other areas. Finally, the report describes the differing effects of applying urban design in different parts of the region. This report addresses transit oriented development (TOD), which is essentially the application of urban design principles near transit; the redevelopment of greyfield sites; and the planning of new greenfield development sites using urban design principles within the development.

Definition of Urban Design

Throughout this report, we will refer to "good urban design," but there is no universal acceptance of what this means. Development patterns are often classified according to the "three D's," which are density, diversity, and design (Cervero and Kockelman). Two additional D's--destination accessibility and distance to transit--have also been suggested (Ewing et al). Well-planned, walkable communities have all of these characteristics – adequate levels of density, a diversity of land uses, well-designed streetscapes and buildings, clear destinations for the pedestrian, and proximity to transit.

Reid Ewing, a research professor at the National Center for Smart Growth at the University of Maryland, has researched how urban design affects human perception and behavior in well-designed places, and has developed some of the best definitions of good urban design. His research argues that good urban design shows

- **Imageability** the quality of a place that makes it distinct, recognizable, and memorable.
- **Legibility** visual cues that allow pedestrians and motorists alike to navigate the environment with ease

- **Enclosure** the degree to which streets and other public spaces are visually defined by buildings, walls, trees, and other elements.
- **Human Scale** size, texture, and articulation of physical elements that match the size and proportions of humans
- **Transparency** the degree to which people can see or perceive what lies beyond the edge of a street or other public space.
- **Linkage** the continuity of the form between buildings and streets specifically the sidewalks and crosswalks that lead you from one place to another
- **Complexity** the condition and cleanliness of a place.
- **Coherence** complimentary visual elements, all the buildings are similar in size and style
- **Tidiness** nothing looks damaged or is in need of repair, no eyesore

Included in these terms are many concepts like the skyline buildings create, open vs. built-up areas, streetscape, building materials and color, street furniture and public art.

Another commonly cited guide for good urban design is the Charter of the Congress for the New Urbanism.

Measuring "Good" Urban Design

Just as good urban design is difficult to define, it is equally difficult to measure. Currently there is no authoritative standard, but some academics and advocacy groups have developed criteria that rate developments based on aesthetics, spatial efficiency or environmental impacts.

Laurence Aurbach, a national urban design expert, explains the difficulty in evaluating neighborhoods. "Urban design principles are based on the hypothesis that certain physical patterns support high-quality urban environments," writes Aurbach. "That hypothesis should be tested, and a rating system can help to do so. At the same time, every rating system is based on abstractions and generalizations. Rating systems should be held accountable by asking are they truly identifying the urban design forms and patterns that contribute to beneficial outcomes?"

Aurbach has drafted his own design standards, which allocate points to developments that enhance streetscapes, encourage pedestrians, are close to schools or parks, etc. These criteria, and many others, are weighted and then totaled to give each development a single score, which is represented by stars (1-star projects have the lowest scores, 5-star projects have the highest).

The Leadership in Energy and Environmental Design (LEED) Green Building Rating System evaluates the environmental-friendliness of new developments. The U.S. Green Building Council established LEED certification in 1998 as a way to encourage efficient and sustainable building designs. Today, it has extended that mission to entire neighborhood developments. Using a point system and a list of nearly 50 criteria, LEED requires characteristics like compact development and "smart location," while rewarding projects that include additional elements, like wetland restoration (1 point) or housing-and-jobs proximity (3 points). There are four certification levels certified, silver, gold and platinum, respective of the number of points earned.

Obstacles to "Good" Urban Design

The subjectivity of urban design leaves it vulnerable to criticism. The compact, mixed-use developments advocated today are commonly incongruous – both aesthetically and philosophically – to the sprawling, rigidly separated land uses of the past 50 years. Critics often take issue with this compactness, citing fears that excessive density and traffic congestion will follow. A major draw of (and reason for) the conventional suburb is its promise of a private yard, free from the bustle of "downtown" districts. Mixed-use

critics often point to the dense nature of the developments as reasons to avoid them. Like those who criticize compact developments in general, mixed-use detractors feel housing, businesses, civic centers, etc. each have their own *separate* place in a community. Consequently, many advocates of compact, high-density urban-design have been forced to focus much effort toward easing the concerns of the general public.

Other obstacles to contemporary urban design are economic. New projects often require vast tracts of land containing many parcels. Aside from the political controversy this may cause, it can also be cost prohibitive to most developers. Similarly, these large developments require a large and diversified market for their homes and businesses. The scale of such projects leaves them especially sensitive to market conditions that may not always make design standards a priority to developers, according to a local New Urbanism expert.

Another challenge to good urban design is traditional or Euclidian zoning. Euclidian zoning addresses only land-use and not the form of the built environment. The result is a patchwork style of development that keeps housing, businesses and industry separate, preventing the complex integration of structures that walkable communities require. This zoning has directly affected the way communities across the nation have grown over the past century.

In contrast to single-use zoning, communities are beginning to explore ways to better address the built form of their environment through mixed use zoning and form-based codes. The Form-Based Codes Institute defines a form-based code as "a method of regulating development to achieve a specific urban form. Form-based codes create a predictable public realm primarily by controlling physical form, with a lesser focus on land use, through city or county regulations." Unlike design guidelines, which are proscriptive, form-based codes are regulatory and clearly state what a community wants to see in the built environment. By concentrating on the visual elements of the built environment a community desires, FBCs draft a picture of the features desired by a community. These codes address features such as façades, height, and mass of a structure.

Increasingly, communities are looking to form-based codes to help achieve their development goals. The State of California has adopted legislation authorizing municipalities to use form-based codes. In northeastern Illinois, Evanston and Glenview are presently exploring the benefits. National examples include Columbia Pike in Virginia, and Peoria and Normal in downstate Illinois.

Effects of "Good" Urban Design

Economic

The economic impacts of dense, mixed-use developments have been established through a number of studies. In 1999, the Urban Land Institute published a study of

four new walkable communities. This research claims that homebuyers were willing to pay $20,000 more for a house in a pedestrian-oriented neighborhood than for a similar home nearby (Ryan). A national survey of Americans' attitudes toward walkable communities revealed that "When thinking about deciding where to live, having sidewalks and places to take walks for exercise or fun is important to nearly eight in ten Americans (79 percent) and 'very' important to four in ten (44 percent). Having areas to walk in the neighborhood rates third on a list of seven items asked in the survey, behind feeling safe from crime and the quality of public schools" (Belden, Russonello and Stewart).

Pedestrian-oriented communities also benefit commerce. According to social scientist Richard Florida, American business is increasingly dominated by what he calls the "Creative Class." Florida argues that companies – and by extension, cities – that cater to this emerging generation of diverse, highly educated workers are showing the strongest signs of economic success. The traits that attract this Creative Class are often reflected in walkable communities where an eclectic mix of restaurants, shops and recreational venues provide an exciting and inclusive atmosphere.

The knowledge-driven, service-oriented nature of the "New Economy" thrives on the networking, accessibility and creativity that walkable communities tend to develop (Ryan). A 2000 article in the Brookings Review cites a study in the American Economic Review that found by doubling county-wide population density, especially in urban areas, a 6 percent productivity increase could be seen throughout the rest of the state. The Brookings article argued that this, along with similar studies, makes a "compelling economic case for fostering the development of our densest and most diverse employment centers – commonly known as cities" (Haughwout).

Good urban design also bears secondary impacts on local retail and economics. To attain the walkable "sense of place" that planners strive for, deterrents (like high-speed automobile traffic and wide streets with little pedestrian accessibility) must be minimized. By reducing street width, traffic is slowed, allowing for development in ways that high-speed thoroughfares would prevent while making existing commercial corridors more visible to drivers (because they must slow down and take in more of their surroundings) and more hospitable to pedestrians. Arguably, this increase in people on the street would serve local businesses.

A study of 22 U.S. cities that opened their multilane one-way streets to two-way traffic in an attempt to reduce vehicle speeds and encourage pedestrians reported many positive results. These included "improved business activity, increased investment on the street, improved traffic distribution (more choices on how to get around), helped create a more pedestrian-friendly environment, and produced a general feeling of improved

'livability, quaintness' and 'sense of community.' None reported significant negative effects or plans to convert back to one-way traffic" (Victoria Transport Policy Institute).

By minimizing infrastructure, cities also reduce long-term costs (though the upfront costs of retrofitting or redevelopment can be substantial), causing the tax rate to diminish while the tax base expands, creating a cycle of fiscal growth (Muro and Puentes). All of these benefits, when demonstrated across municipalities, form a greater gross regional product (GRP) than would otherwise exist (Basile Baumann Prost & Associates).

Additional economic benefits can be gained if walkable communities are planned with good access to transit. Transit boosts nearby land values by creating a well-connected, highly accessible space for homes and businesses (Cervero). It drives down the need for expanded infrastructure by concentrating construction along fewer roads, sewers and utility lines than auto-oriented sprawl would require – though, the costs associated with traffic congestion and some utilities can be higher in especially dense areas.

Municipalities without convenient rail or bus access could see their taxpayers and business patrons flee in favor of the more transit-oriented alternatives (Leinberger). Without specific attention paid to affordability, areas with transit access could become more exclusive, restricting transit for lower-income people who rely on it for transportation. To prevent this, affordable housing strategies should be implemented within TOD areas to maintain an even mix of incomes (Victoria Transport Policy Institute).

Over the past 20 years, cities across the region have rediscovered the compounding advantages of compact and efficient urban design. The city of Evanston raised its total equalized assessed value by 191 percent between 1985 and 2004 by developing around its transit stations. This allowed for its lowest tax rate since 1971 (Makarewicz and Benedict). In Park Forest, the private sector has invested over $24 million in and around the bustling downtown, which the city built on the site of a failing shopping center in 1995 (Congress for the New Urbanism). Similar positive scenarios have been replicated across the country.

Land Use and Development

Most experts agree that compact urban design principles encourage infill (and discourage greenfield development) because many modern TODs and TNDs are developed in already-built-out areas (Northeast Midwest Institute and the Congress for the New Urbanism). Older communities often have valuable characteristics for proponents of good urban design, such as transit access, short block lengths, and mixed-use development.

Therefore, the region-wide acceptance of good urban design principles would likely lead to reinvestment in older communities.

Even when built in greenfields, the compactness of well-designed, walkable communities minimizes development on open lands. In fact, some experts are encouraging developers and planners to look beyond infill because of greenfields' greater design flexibility, and the reality that infill development will not keep pace with the population growth expected in most metropolitan areas (Heid).

Transportation

Compact development has been proven to reshape urban transportation patterns – both in ridership and infrastructure. By better integrating transit into developments, communities have seen a shift from roads to rails as ridership numbers grow (Makarewicz and Benedict). This reduces the need for streets, allowing development to further focus on transit infrastructure and pedestrian corridors (Cervero). Yet, while TODs inherently provide a strong alternative to automobile travel, neighborhoods do not need transit to encourage non-automotive modes. The compact, walkable, mixed-use designs of TNDs – and some suburban retrofits – encourage pedestrian and bicycle travel where cars once dominated, whether transit is present or not (Coogan, Karash, Adler and Sallis).

According to a study of King County, Washington, residents of the most walkable neighborhoods drive 26 percent fewer miles per day than those living in the most sprawling areas. A meta-analysis of many of these studies finds that households living in developments with twice the density, diversity of uses, accessible destinations and interconnected streets when compared to low-density sprawl drive about 33 percent less (Ewing et al.). Another study claims that transit ridership rates at mixed-use suburban employment centers are on average 5 percent and 10 percent higher than at single-use employment centers; and grid-like street patterns and pedestrian-friendly designs have been associated with transit-usage levels that are as much as 20 percent higher than usage levels at typical suburban subdivision designs (Cervero).

Good urban design can also provide better access to jobs by allowing workers to live closer to transportation and by creating employment near transit nodes. According to a study of Evanston, TOD improvements allowed for 74,000 residents and 40,000 jobs within an 8-square-mile area. This enabled 40 percent of Evanston's residents to live where they worked, twice the rate of other suburbs in the region (Makarewicz and Benedict). On Chicago's West Side, the Bethel Center is a mixed-use development – operated by a community organization – that is connected to the Pulaski Green Line "El" stop. The impetus for this project came in 1992 under threats that the local El branch would close, adding insult to an economically injured neighborhood. When completed in 2005, the center itself created 100 jobs within the organization and throughout the

businesses housed in the development. It also reinforced the viability of the train line, ensuring that it remained an operational portal to jobs outside the neighborhood (Grady and LeRoy).

A limitation of urban design on jobs/housing balance is that walkable communities are ineffective in isolation and must be integrated into the transportation and employment networks of the greater region. According to a report by *1000 Friends of Oregon*, "the creation of isolated new pedestrian oriented developments on vacant sites in auto-oriented suburbia will not produce the same kind of effects on mode choice that traditional neighborhoods have produced, unless the supportive pedestrian environment is integrated, through transportation and land use planning, with proximity to a large number of employment opportunities and an adjacent network of other pedestrian oriented neighborhoods" (Parsons, Brickerhoff, Quade and Douglas)

Environmental

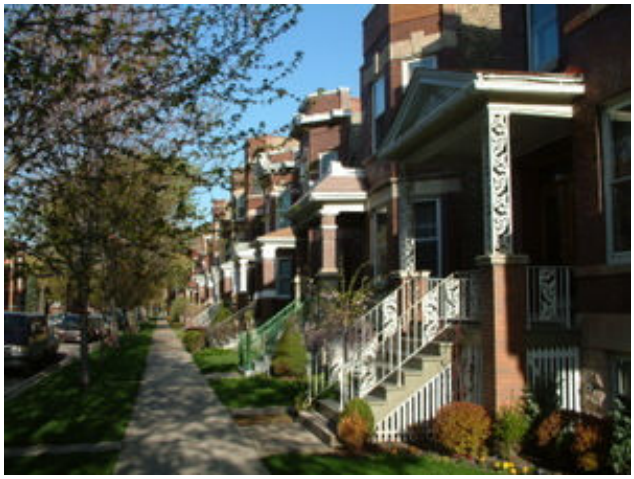
The environmental benefits of urban design are indirect, because they are linked to the transportation impacts of urban design, but very significant nonetheless. This link is demonstrated clearly in a recent report, which "provides evidence on and insights into how much transportation-related CO2 savings can be expected with compact development" (Ewing et al).

Other studies indicate that compact development can have environmental benefits. Compact development can reduce greenhouse gas emissions (Goldberg) and energy consumption (Allen) – but only if automobile traffic decreases. According to study in California, "TODs can help households reduce rates of greenhouse gas emissions by 2.5 to 3.7 tons per year." The study also states that "because of its location, design, and density, the Uptown District TOD in San Diego was estimated to have 20 percent less emissions per household compared with households in nearby developments" (Cervero). Similarly, every 1 percent shift of automobile mileage to a non-motorized mode has been shown to reduce energy consumption and emissions by 2 to 4 percent (Victoria Transport Policy Institute).

Good design can also benefit stormwater quality on the urban fringe by discouraging greenfield development – however this only translates to an overall improvement if drainage systems at the infill sites are properly equipped for greater densities, and stormwater-polluting automobile traffic is reduced (Natural Resources Defense Council). Compact development also simplifies and economizes drainage systems by concentrating them in a smaller area than sprawling development would require. Two studies in New Jersey claim that compact development can achieve a 30 percent reduction in runoff and an 83 percent reduction in water consumption compared with conventional suburban development (Urban Land Institute).

Quality of Life

At its core, good urban design is essentially a quality-of-life issue. Economic efficiency and environmental stewardship mean nothing unless they are represented in places where people actually want to live. From public health to community character to accessibility for the disabled, modern design principles deliver positive contributions to the overall livability of a neighborhood (Centers for Disease Control and Prevention).



As far as quality-of-life elements go, community character is arguably the most visible beneficiary of good design. For many reasons, compact, walkable neighborhoods make for friendly, unique, and beautiful communities. Examples of this have been seen in places like Arlington Heights and LaGrange, where heavy investment around transit stations led to a complete revitalization of the surrounding neighborhoods, complete with streetscape improvements and expanded greenspace (Basile Baumann Prost and Associates).

Often, strictly cosmetic improvements like increased street lighting can prompt dramatic effects. In a study of streetlights' effect on perceptions of safety and crime, 61 percent of respondents thought that crime reduced in the community that received more streetlights and 94 percent thought the lights made it easier to recognize others while also aesthetically enhancing the area (Painter). According to a study of Lodi, California, $4.5 million worth of streetscape and pedestrian improvements were "credited with attracting 60 new businesses, decreasing the vacancy rates from 18 percent to 6 percent and increasing downtown sales tax revenue by 30 percent (Ryan Synder Associates).

However, good urban design comprises more than new resources; it's also about embracing the old. Compact, mixed-use development (a common paradigm before the advent of the automobile) was popular at the origin of many older municipalities, so re-branding these aging downtowns as "New Urbanist" is a way of advocating historic preservation. In fact, the National Trust for Historic Preservation's "Main Street" Program facilitates preservation and downtown revitalization using many principles outlined in the latest planning literature.

If done right, urban design also contributes to public heath and safety. The appeal of well-designed streets attracts more pedestrians who unwittingly keep watch over one

another – while improved streetscapes and traffic calming devices provide buffers between pedestrians, bicyclists and automobile traffic (Cervero et. al.). These added incentives to walk or bike, instead of drive, promote exercise (Goldberg, Frank/Engelke) and social connections among neighbors (Jacobs). A number of studies have linked obesity to characteristics of the built environment, concluding that building more walkable communities contributes directly to public health (Ewing et al).

Even the simple fact that more pedestrians are on the street actually decreases the likelihood that one will be struck by a driver. According to various studies, as drivers become acclimated to driving around pedestrians, they unconsciously become more cautious and attentive overall (Transportation Alternatives).

Applications of "Good" Urban Design

Good urban design principles are often known by other names as well. In the remainder of this paper, three applications of urban design principles are described, including New developments in greenfield areas in which urban design principles are applied, referred to below as *Traditional Neighborhood Developments (TNDs).*
Transit-Oriented Development (TOD), which is essentially the application of urban design principles in a location with good transit access, with a particular focus on creating links between the transit service and the surrounding development.
Greyfield redevelopment, which is the redevelopment of older underused or abandoned shopping centers for new development, which is often mixed-use and more dense than the original use.

Traditional Neighborhood Development

Introduction

In today's development context, Traditional Neighborhood Development (TND) is somewhat of a misnomer. TNDs are "traditional" only as they revert to the designs more common in pre-automobile cities and neighborhoods. In fact, the compactness and versatility of TNDs often make them distinctly innovative when compared to many postwar suburbs. Though the criteria and specifications of a good TND can vary, they

tend to line up under four headings compact development, a mix of land uses, clear and convenient transportation alternatives, and a demonstrated appreciation of community character and context.[1]

Modern TNDs are often located in greenfields or occur as large infill projects. The Glen in Glenview was previously a naval air base. The Park Ridge Town Center used to be a large shopping mall. Prairie Crossing sprouted from a vast stretch of undeveloped land in Grayslake. Such projects require large sites to allow for the walkable street grid and multiple, mixed structures that define them. Greyfield sites (discussed below) are often ideal canvasses for these projects because of their size and potential for economic revitalization – all while discouraging greenfield development. On the other hand, greenfield TNDs skirt the costs and constraints of demolition and redevelopment, while bringing a compact, efficient development paradigm to the urban fringe where it is least represented.

Traditional Neighborhood Development Characteristics

Compact Development

A signature of TND is the compact placement of it structures and land uses. Residential, retail, office and civic spaces are often consolidated into a handful of buildings that are either contiguous (as is the case of many "main streets") or separate, but still in close proximity. Additionally, TNDs embrace streets that are platted in simple grid patterns that allow structures to sit flush against each other, maximizing their efficient use of space, promoting connectivity, and hastening navigability.

According to TND advocates, siting structures compactly does more than pose an efficient use of land and infrastructure. It reduces developments to the "human scale" (by encouraging street-side amenities such as signs and sidewalks while restricting building heights and walking distances), which makes them more inviting to pedestrians. This serves a social purpose by placing more people on the street and providing opportunities for plazas, courtyards and other public gathering places. These gathering places can create a cycle where more people mean a larger market, endearing the street to more businesses, which then attract more people. Additionally, compactness allows for different types of buildings (e.g. residential,

[1] These four components were provided as the basis for defining TND in: Ohm, Brian W., James A. LaGro, Jr., and Chuck Strawser. "A Model Ordinance for Traditional Neighborhood Development." Department of Urban and Regional Planning, University of Wisconsin – Madison, c. 2000

commercial and civic) to be in close proximity so that an afternoon of errands can be spent on the sidewalk, not the highway.

Mixed Land Uses

As an extension of compactness, TND also promotes a mix of land uses so residents can work, shop and be entertained within walking distance of their homes. Like other aspects of TND, mixed-use developments relate to a time before automobiles when proximate housing and services were a necessity, not a convenience. Ironically, modern examples of TND – though still defined by the characteristics of their predecessors – are often perceived as trendy, if sometimes artificial, when compared to the strip malls and subdivisions of the mid-to-late 20th Century.

Most planners encourage mixed-use developments for many reasons, not least is the premium they place on walking, bicycling and public transit. Additionally, they can broaden the tax base while providing a community focal point, forming a clear town center and tourist draw. Mixed-use also allows for a diversity of structures, services and incomes to accommodate many demographics, including single professionals, families with teenagers, and retired couples.

Multiple Transportation Modes

TNDs, by their compact nature, allow for transit alternatives. Though not all TNDs are on rail lines or bus routes (see transit-oriented development), they all encourage walking and bicycling while still including easily accessible roads and parking lots. Unlike winding cul-de-sacs and wide, high-speed boulevards, the well-connected grid pattern of most TND streets simultaneously facilitate pedestrian *and* automotive travel.

Community Character

An emphasis on community character gives many TNDs the "sense of place" and "public realm" that planners strive to create. Elements of community character can include natural attributes (e.g. wetlands, rivers, bluffs) or historic/cultural/architectural landmarks. According to a local TND expert, because compact, mixed-use development was popular at the origin of many older municipalities, re-branding these aging downtowns as "New Urbanist" is a way of advocating historic preservation.

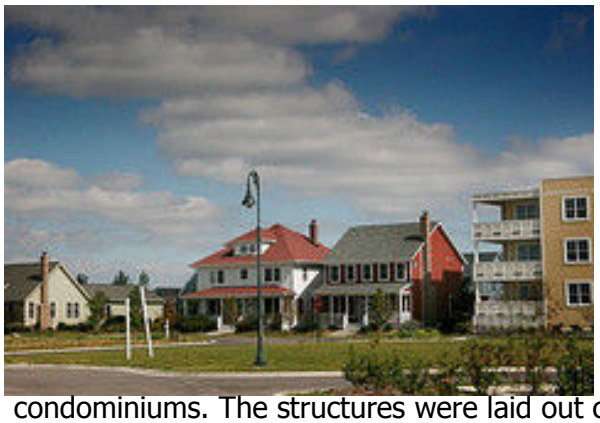
Region-Specific TND Development Strategies (w/Case Studies)

The Glen

Formerly a navel air station, Glenview's "The Glen" is now a 1.5-square-mile, mixed-use development not far from Metra's Milwaukee District North Line – lending it an element of transit-oriented development (TOD) as well. When the air base closed in 1995, the village coordinated the site's redevelopment with a mission to "create a lasting source of pride for the community by building quality public amenities, infrastructure, housing plus recreational and job opportunities." Today, the Glen includes of a variety of retail and residential options, as well as a new post office and the new home of the Kohl Children's Museum. Additional construction, including office and light industrial space, is pending. The distinct street grid and compact, versatile structures make the Glen easily walkable, while not discouraging automobile traffic (http//www.glenview.il.us/glen/).

Prairie Crossing

Prairie Crossing is located 40 miles northwest of Chicago in the Lake County suburb of Grayslake. It applies many elements of TND to a former greenfield site in an area where residential cul-de-sacs and isolated land uses are the norm. In fact, Prairie Crossing originated from a group of neighbors who opposed a conventional 2,400-unit subdivision for the site in the 1980s. Touting the need for conserved open space and agricultural land, these neighbors collectively acquired Prairie Crossing's 667 acres and broke ground on a less intrusive development of 359 single-family homes and 36 condominiums. The structures were laid out compactly, not far from two Metra commuter rail stops, and anchored by a mixed-use neighborhood center. The architectural styles were adapted from historic houses nearby to ensure the development was representative of its community. Prairie Crossing has been nationally recognized as the positive result of mixing environmental conservation with good urban design (http//www.prairiecrossing.com).



Transit-Oriented Development

Introduction

As the name suggests, transit-oriented development (TOD) is anchored by some form of public transportation, typically a train line. It has been widely accepted as an important planning paradigm to create attractive, livable and sustainable urban environments. The purpose of TOD is to concentrate housing and commercial development close to existing (or occasionally, extended) transit infrastructure, thereby providing an alternative to automobile trips. Most TOD development radiates roughly a half mile – or less than 10 minutes walking distance – from its anchoring rail station.

In the Chicago region, potential sites for TOD are plentiful. The CTA has 142 stations on its seven rapid transit lines along 100 miles of rail, while Metra's suburban service comprises 240 stations, with plans for 25 more, on 12 commuter rail lines along 505 miles of rail. TODs can also be anchored by bus stations or terminals, or near major stops along Bus Rapid Transit (BRT) systems.

The remainder of this section describes the general features of TOD and provides local examples of its applications. A systematic assessment of existing and potential TODs in the region is planned to be added to this section at a later date.

Design Characteristics of TOD

In most cases, TOD is made of the design features identified earlier in this paper as general characteristics of urban design and traditional neighborhood development (TND). This paper will focus on three specific design elements

- Mixed land uses
- Moderate-to-high residential densities
- High-quality walking environments to transit stations

Mixed Land Uses

TOD is associated with a mix of land uses that facilitate diverse activities in walkable distances around transit facilities. Compatible, but distinct, land uses located in close proximity decrease people's dependency on automobiles by allowing residents to work or shop near their homes. This also promotes exercise and social interaction on the street.

TOD visioning and planning, TOD zoning and design guidelines, and TOD overlay zones are major planning tools for implementation of this strategy.

Moderate-to-High Residential Densities

In TOD areas, most structures are designed at medium-to-high unit density. Residential density thresholds are often necessary to guarantee a certain population in the area to support local businesses. This is measured by the number of housing units per acre. It can be as low as seven units per acre for bus-based TODs, and ash high as 50 units per acre in larger TODs near a light-rail station. For non-residential uses such as offices, planning guidelines such as Floor Area Ratio (FAR), lot coverage, and building massing are used to control and maintain the density. For instance, Calthorpe (2004) suggests a minimum FAR of 0.35 for nonresidential land uses.

High-Quality Walking Environments

Being pedestrian-friendly is the most significant characteristic of TODs. High-quality walking environments are vital for promoting the use of transit facilities. Easy and nearby access and walking routes, comfortable and enjoyable streetscapes and vibrant and interactive public spaces encourage people to take mass transit instead of relying on private automobiles. Those features of TOD are achieved through good urban design and landscape design. Design elements include sidewalk, building façade, street frontage, etc. Bicycling and parking are also significant in TOD development.

Region-Specific TOD Redevelopment Strategies (w/Case Studies)

In Palatine, the village recently brought 1,000 units of new housing and 200,000 square feet of office and commercial space around its newly renovated Metra station as part of a five-year project. Previously, the station was surrounded by parking lots (Barry and Finkel).

In La Grange, the village's 1986 Master Plan introduced a "transitionary" zoning district to parcels around its rail station to allow for higher uses and greater densities. Additionally, the village established a Tax Increment Financing District (TIF) and renovated its Metra station to help usher in its recent boom of infill development and spiking land values (Cervero).

Blue Island

A Blue Island TOD project is encouraging development along two Metra rail stops in this aging industrial center, just beyond Chicago's southwest border. The project has been praised – both for its well-informed and inclusive planning process, as well as its rare integration of cargo-oriented development (COD). According to a planner with the Center for Neighborhood Technology (CNT), which lent technical support to the project, it was preceded by an Urban Land Institute (ULI) study that helped convey the importance of TOD to local stakeholders. The study identified locations in Blue Island that would be optimal for both a COD and a TOD development – increasing retail as well as industry and freight rail. The results have reinvigorated an aging downtown and illustrated TOD's potent community development potential.

Evanston

As part of a greater national trend, the City of Evanston experienced a significant population decline by the 1980s, as middle-class residents moved to more outlying suburbs. To counter this, the city planned for higher residential densities along four of its commuter rail stations and, by 1989, had amended the zoning code to accommodate the density changes and mix of uses. To promote interest in Evanston – and leverage public funds to assist in the new development – the city proposed a library and transportation center, and then a research and technology center for a 22-acre site near a transit station at the north edge of downtown. Tax Increment Finance (TIF) districts were also established along the four transit centers to help fund the redevelopment. The transportation center represented the only regional transfer point outside of Chicago to have commuter and heavy rail service in addition to urban and suburban bus service. The technology center site, which failed to attract many research companies, instead became an entertainment center with a Hilton hotel, an 18-screen movie theater and retail and restaurant options. The entertainment complex set a high-density precedent that the city hoped would spark new development along its 10 rail stations (three Metra

stations and seven Chicago Transit Authority stations). By 2005, roughly 2,500 housing units had been added to these transit zones, increasing Metra and CTA ridership by 6% (The population of Evanston increased by 1% over the same period of time). Depending on the station, Metra ridership alone increased by between 60% and 155%, as 32% of Evanston's residents commuted by non-automotive modes. This doubled the 16% non-automotive-commuter average seen in other regional suburbs. Between 1986 and 2004, Evanston's Equalized Assessed Value increased by 191%, allowing for its lowest tax rate since 1971 (Makarewicz and Benedict).

The Bethel Center, Chicago

For more than 10 years, the elevated train stop at Lake Street and Pulaski Road was surrounded by vacant, crime-ridden properties that deterred ridership and development. By 1992, the Chicago Transit Authority threatened to close the stop – and its greater line – outright. In a disinvested community where roughly 35 percent of the residents owned a car, the "El" provided a vital portal to jobs throughout the city. Recognizing the need for a train line in their community, Bethel New Life, a local faith-based organization, teamed up with other community groups to form the Lake Street El Coalition. After a year of lobbying on behalf of the West Side branch, the coalition succeeded, and the CTA announced that instead of closing the Green Line, it would rebuild it. Yet, Bethel New Life was not finished. The group sought funding from various public and private sources and set about developing the property directly adjacent to the Lake/Pulaski stop. The result is a LEED-certified, mixed-use building that comprises new housing and jobs in a neighborhood that sorely needed both. In a recent report of national best practices, former Bethel New Life President Mary Nelson, who was instrumental in developing the Bethel Center, is as quoted as saying, "We turned a dark, dank corner into a thriving place. This is really an anchor for more redevelopment in the area" (Grady and Leroy, 2006).

Greyfield / Suburban Retrofit

Introduction

Today, the same low-density housing tastes that first spilled middle-class residents from "the cit y" in the 1920s are now shifting markets between suburbs. This creates a cycle of obsolescence in many older suburbs, told by the shuttered malls and crumbling parking lots left behind. According to a study by the Congress for the New Urbanism, these greyfields – so called for their expanses of faded blacktop – composed 19 percent of the nation's 2,000 regional shopping malls in 2001. Often vast and centrally located, such sites leave conspicuous voids in a community's economy and architecture. While once emblems of growth, these malls are now fiscal millstones swinging heavily from the necks of municipal administrators and business owners.

Although greyfields signify economic decay, they also provide redevelopment opportunities at a scale that enables dramatic change and a clean slate for the greater community. The wrongs of former mall design (large commercial islands in a sea of parking lots) may be erased, so more versatile, pedestrian-and-transit-focused developments can take their place. Often, greyfields are already sited near major streets and transit routes, making them ideal for innovative town centers and mixed-use developments.

In this report, the term *greyfield* is defined as a failing retail center that offers an opportunity for redevelopment. Unlike brownfields which are contaminated, greyfields are not. Greyfields are often declining malls or big-box power centers, but the term has been used to describe smaller retail strip centers.

Greyfield Redevelopment Strategies

In 2005, the Congress for the New Urbanism (CNU) published a report on greyfields[5] that sorted redevelopments into five main categories. The first of these, "mixed use town center or urban district," takes the most advantage of urban design principles and so is described in most detail below.

Mixed-use town center or urban district

The "town center" redevelopment model brings more than consolidated retail interests to a greyfield site, often mimicking the structural diversity and interconnectedness of an urban area. Such projects typically demolish much of the former mall to break up the built environment, and enable a street grid instead of vast and isolated parking lots. According to CNU, common characteristics of this model include "an emphasis on public spaces, a high percentage of lot coverage, buildings with entrances directly on public streets, small, walkable blocks, and a high degree of connectivity within and to the outside of the site." Town-center redevelopments are most common in inner-ring suburbs where the population is already dense enough to support them. They are widely considered the most effective, though most challenging and high-risk way to retrofit a greyfield site. This is also the redevelopment style that uses urban design principles at their highest intensity.

[5] Congress for the New Urbanism. " Malls Into Mainstreets: an in-depth guide to transforming dead malls into communities." 2005. pp. 10-12.

These town centers often incorporate the compact, walkable elements attributed to TOD and TND, making them an effective way to renovate an underutilized property. The novelty of a completely new type of development could breathe further life into the redeveloped site and provide more suburban exposure to these traditionally "urban" design principles. Additionally, public-private partnerships are often a key to successful greyfield redevelopments.

Single-use redevelopment

A simpler, less innovative alternative to the town-center model is the single-use redevelopment. Here, a developer replaces the vacant mall with a single enterprise, usually a "big-box" store or large entertainment venue.

Adaptive reuse

This model uses the existing structure for a different, though often comparable, purpose. From a design perspective, this method is usually not optimal because it prevents substantive changes to the former mall design.

Mall Plus

Mall Plus either alters the original mall structure, or incorporates other structures and uses (often connected through pedestrian routes and networks of open space) along the periphery.

Reinvested Mall

This – the simplest retrofit option – is barely a retrofit at all, but rather an overhaul of the original structure, grounds or tenant mix. It is widely considered the least effective at creating an authentic sense of "place" and often charged with being a simplistic, short-sighted response to the complex problems that caused the mall's decline in the first place.

Regional Examples

The following examples show the many ways that greyfield sites have been redeveloped or rebranded across the region

Park Forest

In Park Forest, the outdated Park Forest Plaza was replaced in the late 90s with a 48-acre town center, complete with a village hall, mixed-use corridors, and a live theater.

The former open-air mall, built in 1953 with an ominous 4,000 parking spaces, fell on hard times throughout the 70s the 80s. After a series of property transfers and renovations, it became clear that this development could not stand on retail alone. The village took ownership in 1995 (for $100,000), and two years later broke ground on the pedestrian-friendly downtown it never had. All but one of the anchoring structures and a few peripheral buildings were cleared while a street grid checkered across the plaza's former parking lot. The original 750,000 square feet of retail reduced by two thirds and 75,000 square feet of offices emerged beside 555 new residential units (335 – rental, 65 – for sale, 155 – senior housing/assisted living). Park Forest's Village Hall and the Illinois Theater Center also occupied space in the new development, which provides bus service to the nearby Metra station (Congress for the New Urbanism). The site that once held the same number of automobiles built nationwide in 1900 no longer requires owning a car at all.

Waukegan

In Waukegan, the troubled Lakehurst Mall site was also reborn as a mixed-use development. At more than 1 million square feet, Lakehurst was among the largest malls in the region when it opened in 1971. It remained one of Lake County's most vibrant commercial centers until Gurnee Mills – the 1.8 million-square-foot outlet mall that opened 6 miles to the northwest in 1991 – spelled the beginning of the end. After a decade of staggered closings, most of Lakehurst was shuttered in 2001. The Carson Pirie Scott anchor operated independently until 2004, when it closed to allow for the mall's demolition (Deadmalls.com). Lakehurst's decline was no secret in the years preceding its demise, and redevelopment proposals bounced around the newspapers well before Carson's closed its doors. Among them was a four-year university center to be served by an extension of the nearby Metra commuter line; and a casino to ease Waukegan's growing fiscal woes. In the end, a private developer purchased the site and broke ground on the mixed-use Fountain Square development in 2004. While not closely adhering to the compact/mixed-use/grid paradigm most attributed to TND, Fountain Square has the potential to better integrate housing and retail than its predecessor – all while spurring new interest in a forgotten commercial center.

Joliet

Joliet's Jefferson Square Mall opened in 1975 with four anchors, three of which (Wieboldts, Woolworths, and Montgomery Ward) filed for bankruptcy or shifted markets between 1987 and 2001. Wieboldts left first, marking a steady decline at Jefferson Square that ended with its demolition in 2004. In 1991, a Menards home improvement store adopted Wieboldts' former space with hopes of reigniting business throughout the rest of the mall. When this appeared futile, Menards closed its entrance to the greater mall, embracing the self-contained business model more common to the chain. Today, it sits beside a free-standing Wal-Mart Supercenter on the former site of Jefferson Square's 60 stores (Labelscar.com).

Schaumburg

One Schaumburg Place opened as a two-story discount mall across from the larger Woodfield Mall in 1991. By the decade's end, many of One Schaumburg Place's major tenants had fallen into financial trouble, due to local competition and corporate cutbacks, and eventually closed. In 1997, a new developer purchased the site and began converting the indoor mall into more of a strip-mall/town-center design – with street-side entrances and individual facades for each store (Deadmalls.com). Now called "The Streets of Woodfield," this revamped retail center includes "numerous pedestrian-scale elements including historic street lights, decorative street furniture, fountains, bollards and chains, ponds, arbors, decorative paving, banners, and 'street signs,'" according to the developer(thestreetsofwoodfield.com).

Conclusion

Urban design is where a city's form and function converge. By implementing well-conceived design principles, communities are not only beautifying their streets, they are encouraging their neighborhoods to operate better, safer and more efficiently. As the Chicago Region anticipates its nearly 3 million new residents, urban design will be increasingly important. The sooner our public, private and non-profit sectors start working together to this end – under a single community vision – the better our region will be in 2040 and beyond.

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