# Transit-Oriented Development Best Practices Guide

August 29, 2019



**Port Authority**

**CONNECT**

# CONTENTS

Port Authority

CONNECT
CONGRESS OF NEIGHBORING COMMUNITIES

DOVER, KOHL & PARTNERS
town planning

gai consultants

UDA
URBAN DESIGN ASSOCIATES

Earlier this decade, at the same time that the City of Pittsburgh and its neighboring municipalities were increasingly gaining recognition as desirable communities to both live, work and visit, the Port Authority of Allegheny County (PAAC) received new state funding and began to reinvest in its system. With development patterns trending more urban nationally, PAAC recognized that transit-oriented development (T.O.D.) was invaluable to the success of a twenty-first century transit agency. In 2016, PAAC published the region's first Transit-Oriented Development Guidelines, which provide best practice standards for planning and designing high-quality T.O.D. PAAC, along with its municipal partners, seeks to support the creation of more walkable, mixed-use places that encourage transit use among existing and future residents.

In 2017, with funding from the Richard King Mellon Foundation, PAAC and the Congress of Neighboring Communities (CONNECT) at the University of Pittsburgh partnered to bring T.O.D. expertise to 10 municipalities that host the greatest opportunities for T.O.D.: Baldwin Township, Bethel Park, Carnegie, Castle Shannon, Crafton, Dormont, Ingram, Mt. Lebanon, Swissvale, and Wilkinsburg. The consultant team of Dover, Kohl & Partners; GAI Consultants; and Urban Design Associates joined Port Authority and CONNECT to provide expertise on tools and implementation methods.

The consultant team began their work by visiting transit stations in each municipality alongside municipal representatives to discuss challenges and opportunities unique to each location. A kick-off meeting established broad goals, first steps and set the foundation for the first round of workshops, held in July of 2018.

This report summarizes tools of T.O.D., existing demographic trends and highlights specific examples of local efforts and lessons learned to inform the implementation of T.O.D. friendly conditions in each municipality.

.

Typical sprawling suburban development

Suburban development reimagined as walkable, transit-oriented development

## What *is* T.O.D.?

Historically, towns and cities were oriented around different types of transit. downtowns were built around train stations. First ring suburbs developed around trolley stops. However, dependence on the car created a pattern of development that was spread out and hurt traditional town centers. T.O.D. is a method of development that brings the focus back to transit stations and embraces elements of more concentrated forms of development. PAAC's *Transit-Oriented Development Guidelines* defines T.O.D. as "deliberately planned higher-density, mixed-use development within walking distance of a transit station."

Integral elements of T.O.D. are:

- **Transit Stop/Station:** As the name suggests, a T.O.D. derives its energy from the mass transit stop or station within a 5- to 10-minute walking distance of development.

- **Density:** Dense development can accommodate more people within walking distance from transit. This increases ridership and provides more customers to local businesses, increasing the likelihood of financial success for those businesses, and providing more mobility options to residents.

- **Mix of Uses:** Mixing uses makes it possible to walk from home or work to entertainment, shopping, recreation, and other needs. Placing these destinations near a transit station encourages people to make use of transit, reducing traffic, encouraging healthy lifestyles, and opening up a larger portion of the community to those not in cars.

- **Walkable:** One of the most important aspects of T.O.D. is that is it walkable. Placing a transit station, density, and a mix of uses near each other helps, but if someone does not feel comfortable walking to these destinations, then it still encourages a car-dependent lifestyle. Wide sidewalks, slower traffic, street trees, street lights, and buildings facing the street are all elements of making a place walkable.

These will be discussed in more depth later in this report.



A view of Newbury Street in Boston — a popular, walkable street, one block away from subway stations.

# Benefits of T.O.D.

Transit-oriented development that is implemented well provides numerous benefits to the community. These include:

- **Improved Health and Wellbeing:** Effective T.O.D. encourages walking from place to place, providing health benefits to the community. These benefits are both physical and psychological. An increasing number of studies have reported on the relationship of development patterns that are car-dependent and encourage social isolation, and substance abuse. A walkable place that makes it easy to maintain social connections may be a part of the solution to addressing and preventing drug and alcohol abuse. The Surgeon General of the United States has outlined a stance in a policy called *Step Up! The Surgeon General's Call to Action to Promote Walking and Walkable Communities*.

- **Stronger Local Economy:** Providing a place where many people can live within walking distance from work, shopping, and entertainment enables residents to easily patronize these businesses either during the workday, or after returning home. Creating a destination for people in the region to visit also brings a larger clientele to local businesses. Walkable places have the added benefit of being more resilient; during the Great Recession of 2008, property owners experienced fewer vacancies in dense, mixed-use, walkable locations than in car-oriented, single-use areas.

- **Less Expensive to Maintain per Acre:** Infrastructure for streets, such as water supply, sewer, gas, data, and electrical conduit can be more efficient if it is providing services to more people in less area. This reduces installation and maintenance costs.

- **Economic Freedom from Car Ownership:** Decreasing dependence on a car enables residents to reduce the number of cars they own, or even eliminate car ownership altogether. According to the American Automobile Association (AAA), the average cost of owning a car in the United States is around $8,100 a year in 2017. Reducing the need for a car gives residents the ability to make use of more of their income.

- **Improved Pedestrian Safety:** Successful T.O.D. improves public safety by reducing traffic speeds and increasing natural surveillance on the street. Criminology studies have shown that when people can look out of their homes, offices, restaurants, and shops and easily see the neighborhood around them, crime rates are reduced which encourages more walking. Slower car speeds gives drivers more time to react to the environment around them and should an incident occur, the likelihood of a pedestrian being fatally injured is dramatically reduced. A study conducted by Rutgers University titled *Measuring the Benefits of Transit-Oriented Development* (2013) shows that pedestrian incidents are significantly reduced around T.O.D. stations.

- **Congestion Relief:** As more people move to areas with effective transportation it mitigates the number of cars on the road. Rather than every new resident driving to work and shop, the transit network helps to absorb these new residents and increases ridership.

- **Improved Commute Times:** Effectively managed T.O.D. incorporates efficient transportation headways (the time between trains/rapid bus transit) during peak hours. This reduces the amount of time spent in traffic getting to and from work, because the commuter on the train or rapid bus line gets to work faster, avoiding long waits in car traffic.

- **Environmental Sustainability:** Reduction in car use reduces carbon emissions. Well-implemented T.O.D. incorporates park space and street trees which reduces the heat island effect, cleans the air, and absorbs water runoff.

- **Community Sustainability:** Successful T.O.D. is accessible to residents of all ages which encourages young professionals, families, and the elderly to locate near the station, or in neighborhoods nearby. This helps the community to continue to grow and maintain its vibrancy.







T.*O.D. in Arlington, Virginia*

Port Authority of Allegheny County's (PAAC's) *Transit-Oriented Development Guidelines* are a valuable resource available to municipalities in the region. The document identifies different T.O.D. typologies that are context sensitive to the Allegheny region and their elements. Guidelines for each typology show how T.O.D. elements can be incorporated in each municipality. This section will highlight certain aspects of the guidelines such as T.O.D. Type Distribution, Multimodal Connectivity, and Development. It is recommended that each municipality becomes familiar with the Transit-Oriented Development Guidelines.

## T.O.D. TYPE DISTRIBUTION

The *Transit-Oriented Development Guidelines* identify six T.O.D. Typologies in Allegheny County and classify each station area according to its type. Some of the elements of T.O.D. are applied differently in each station typology. These are identified in a map within the guidelines and are (from most to least dense):

- **Downtown:** Identified as Downtown Pittsburgh and the perimeter, has a high employment factor of more than 2 jobs for every resident.

- **Urban Mixed-Use:** Identified as having an urban feel, high density, and highly mixed-use.

- **Urban Neighborhood:** Has a neighborhood feel, but is high density, and mostly residential in use.

- **Transit Neighborhood:** Has a neighborhood feel that is neither distinctly urban nor suburban, is medium density, and mostly residential in use.

- **Suburban Neighborhood:** Identified as having a suburban feel, a low density, and mostly residential in use.

- **Suburban Employment:** Identified as having a suburban or industrial feel, is low to medium density, and has a high employment use.
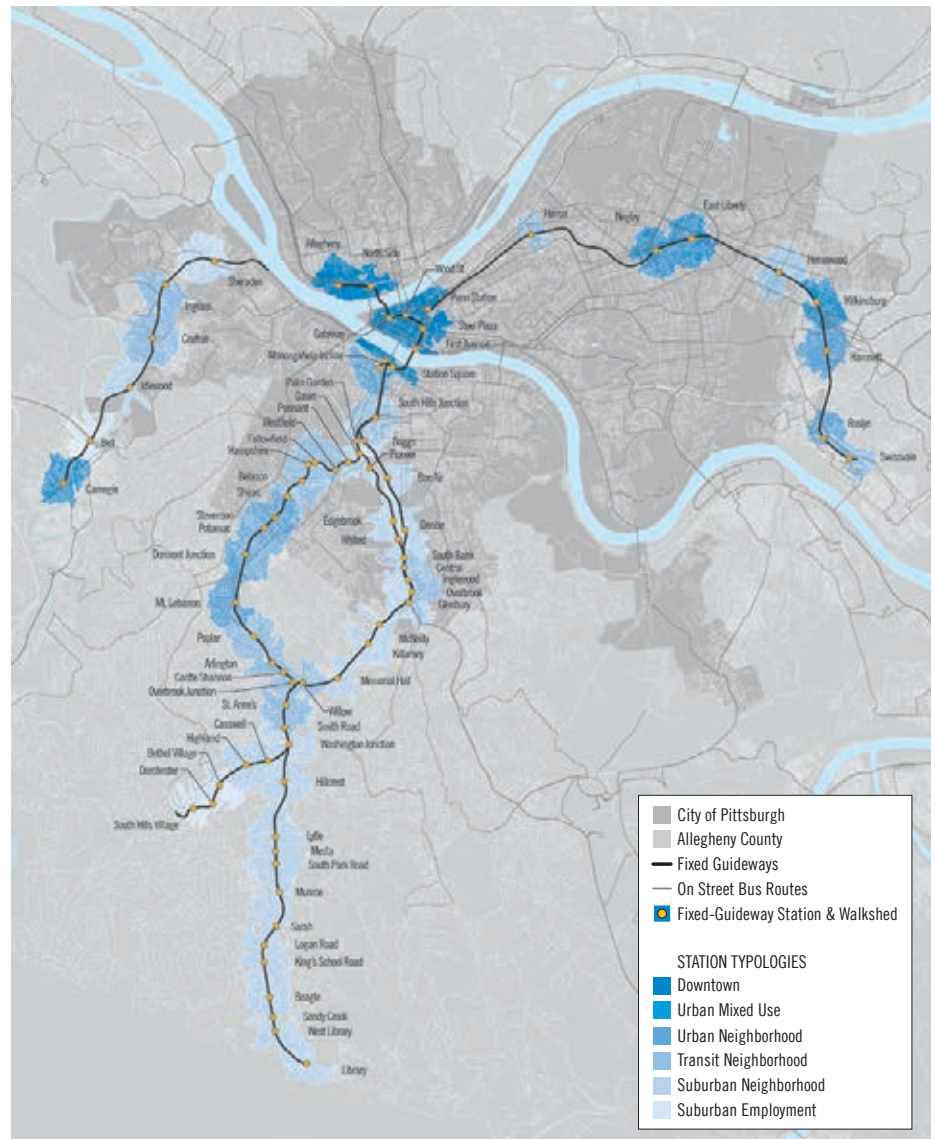


Above: The *Transit-Oriented Development Guidelines* TOD Type Distribution Map

# MULTIMODAL CONNECTIVITY

In the *Transit-Oriented Development Guidelines*, PAAC highlights the importance of approaching T.O.D. implementation with a holistic approach to modes of movement including walking, bicycling, transit, and car. A station and the area around it must address each of these modes in order to achieve success. However, PAAC has also highlighted the importance of the pedestrian by providing a Mode Priority chart which places walking at the top of the priority list for a T.O.D. In short, this means that if there is a conflict between walking infrastructure and car infrastructure, the preference should be given to pedestrian infrastructure in nearly every instance.

Other topics for consideration include:

**Pedestrian Infrastructure such as:** a well-connected sidewalk network with appropriately-sized sidewalks; street trees; providing crosswalks at intersections; and providing pedestrian-scale street lighting.

**Bicycle Infrastructure such as:** implementing a bike network; integrating with neighboring and regional bike networks; providing bicycle parking stations; and accommodating bike share stations.

**Transit Infrastructure such as:** integrating with existing transit networks; optimizing pedestrian access to transit or providing access to other types of transit such local circulars, and other transit modes designed to help with the "last mile" of a transit ride.

**Car Infrastructure such as:** connecting to existing street networks; providing places for pick-up and drop-off locations for modes such as, "kiss-and-rides," ride share service, and private shuttles.

**Mode Priority**

| | |
|---|---|
| 1st | Walking |
| 2nd | Cycling |
| 3rd | Transit Connections |
| 4th | Drop-off |
| 5th | Park and Ride |

Above: *Transit-Oriented Development Guidelines* Mode Priority chart
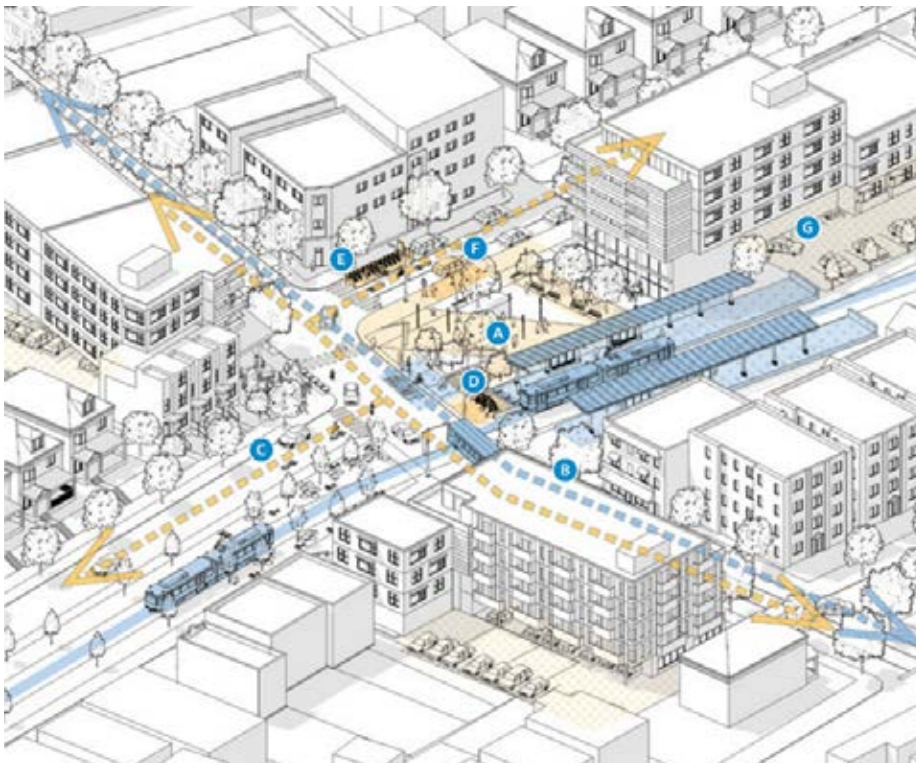


Source: *Transit-Oriented Development Guidelines* Multimodal Connectivity General Principles diagram. Arrows indicate transit & resident connectivity to the neighborhood.

General Principles
- Ⓐ Optimize Pedestrian Connections to Transit
- Ⓑ Connect to the Transit Network
- Ⓒ Connect to the Bicycle Network
- Ⓓ Provide Bicycle Parking
- Ⓔ Accommodate Bicycle Share Stations
- Ⓕ Provide Space for Drop-off
- Ⓖ Balance Parking with T.O.D.

## PARKING

PAAC provides a diagram in the guidelines that outlines where certain types of parking facilities should be considered. This is done with a context-sensitive approach as to what would be appropriate in each T.O.D. typology to encourage walkable, vibrant stations. PAAC has made an adjustment to policy that is reflected in this diagram; depending on T.O.D. type, it may not be necessary to replace all parking that has been removed as a result of construction.

## DEVELOPMENT

## Density and Uses

The *Transit-Oriented Development Guidelines* provide an outline to frame the typical zoning requirements that should be considered for each different T.O.D. typology. These zoning requirements guide appropriate density and intensity of development through building size, location on the site, parking requirements, and a mix of uses. These are also visualized to get a sense for what each T.O.D. type may look like.

Primarily Residential Example Types



Suburban Neighborhood        Transit Neighborhood        Urban Neighborhood

Mixed Use Example Types



Suburban Employment        Urban Mixed Use        Downtown / Special Event District
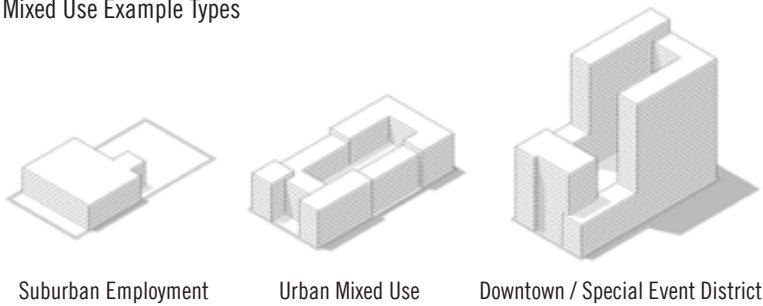
Source: *Transit-Oriented Development Guidelines* building types diagrams

# Building Design

Every building has an impact on the environment around it. As a result, the building design in a T.O.D. is very important. Buildings should be considered part of a whole experience for the visitor, worker, and resident. The guidelines provide points to encourage a stimulating and comfortable transit station area. These include:

**Maintaining a good relationship to the street and public spaces:** Buildings should be placed close to the property line, frame the outdoor space, and have windows facing streets and public spaces. This increases safety for the area and helps businesses to advertise through window-shopping. Tall retail levels are also important; retail tends to perform better and the interior feels more spacious to shoppers when natural light can get deep into the shop.

**Buildings should be visually interesting**: New construction should avoid a monolithic, whole-block appearance. People enjoy variety in all aspects of life, including walking down the street. A block should have multiple facades that vary in height, materials, roof shapes, and architectural detail and ornament. Facades tend to be more successful if they appear to be more vertical than horizontal. However, the variations in the block frontage should appear natural and as if they were separate buildings, not a caricature of different frontages.

**Keeping fronts of buildings facing streets and public spaces:** Locating building fronts toward the street creates an appealing pedestrian experience. Sides can function sometimes such as in corner lot. However, all buildings have a back – dumpsters and other functional aspects of a building need to go somewhere. These "back-of-house" features cannot be hidden and should be placed away from the main streets and public spaces.
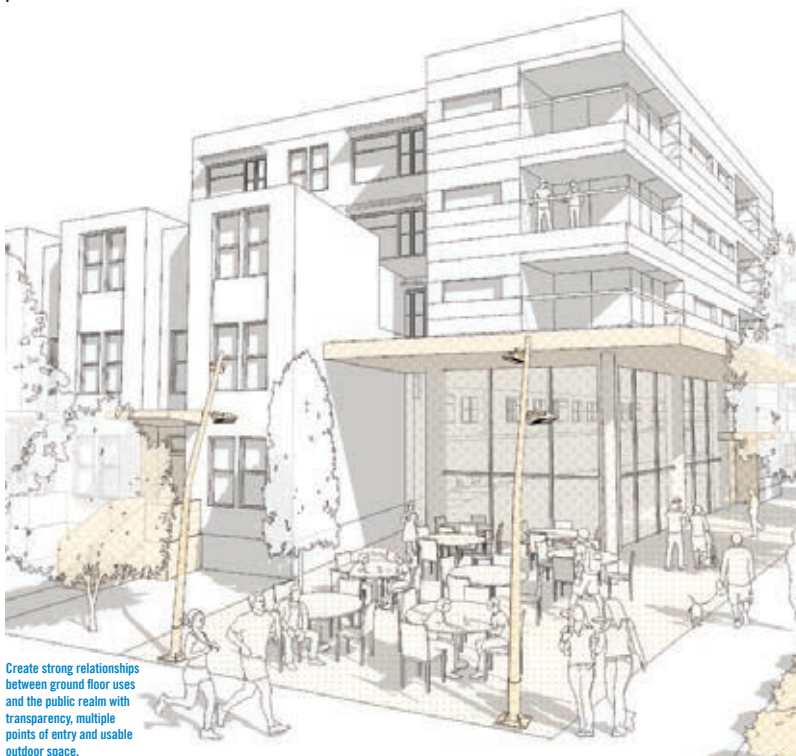


Create strong relationships between ground floor uses and the public realm with transparency, multiple points of entry and usable outdoor space.

Source: *Transit-Oriented Development Guidelines* building design diagrams

# IMPORTANCE OF DESIGN

Assembling the different elements of T.O.D. does not necessarily create a successful T.O.D. The successful implementation of each T.O.D. element requires attention to design both individually and as an assembly. Poorly designed T.O.D. can lead to a lack of success for a municipality and its residents. This section will compare successful and unsuccessful design of T.O.D. elements.

## TRANSIT STATION AREA

The location of the transit station and the design of the area around it has a large impact on the success of a T.O.D. A station that is attractive encourages people to use transit, and to visit the area. The images below show two locations – one in Forrest Hills Gardens, New York and one in Phoenix, Arizona. Both have a transit station, however the Forrest Hills Gardens station is more attractive and has a higher percentage of ridership. The comparison between these two stations highlights four main components of design.

### COMPONENTS OF DESIGN
**A** Definition of Public Space

**B** Building Orientation, Location, and Scale

**C** Landscape Design

**D** Material Palette
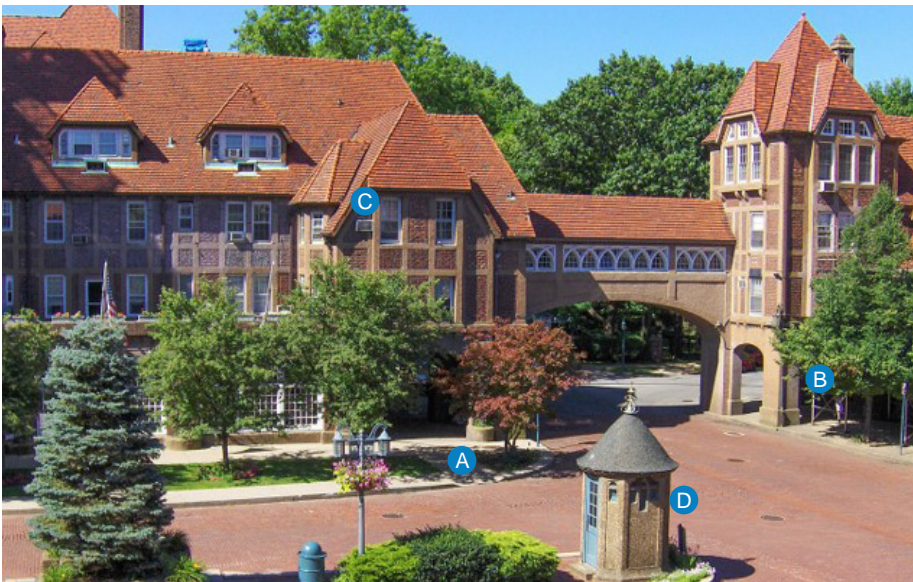


Successful Station Area design
Forrest Hills Gardens, New York

**A** Buildings define the shape of the public space.

**B** Buildings are incorporated around the station, are human-scaled, and front the space

**C** Landscape is varied in height and color, and provides shade to sidewalks

**D** Material palette is warm and varied, and includes high-quality materials



Unsuccessful Station Area design
Phoenix, Arizona

**A** Open space is not framed by buildings or shelters

**B** Buildings are disconnected from the station

**C** Landscape provides little shade and is monotone in color

**D** Material palette is uniform and does not convey a sense of place

# COMPACT DEVELOPMENT

Compact development can increase the efficiency of local services and bring destinations within close proximity to each other. Poorly designed compact development however, can actually discourage walking, and become confusing and monotonous. The images below compare a neighborhood in Columbus, Ohio and a neighborhood in Las Vegas, Nevada. Both achieve a similar density, but one feels like a more interesting place that creates a sense of community. These examples highlight the importance of four main components of design when considering compact development.

**COMPONENTS OF DESIGN**

Ⓐ Building and Lot Type Variety Within the Block

Ⓑ Connected Street Pattern

Ⓒ Incorporation of well-designed Public Space

Ⓓ Pedestrian-Friendly Street Design



Successful Compact Development
Columbus, Ohio

Ⓐ Variety of building and lot types creates variety and interest

Ⓑ Interconnected streets create a walkable grid

Ⓒ Incorporates public space into block structure

Ⓓ Good street design with sidewalks, buffered by trees and parking. Buildings face the street
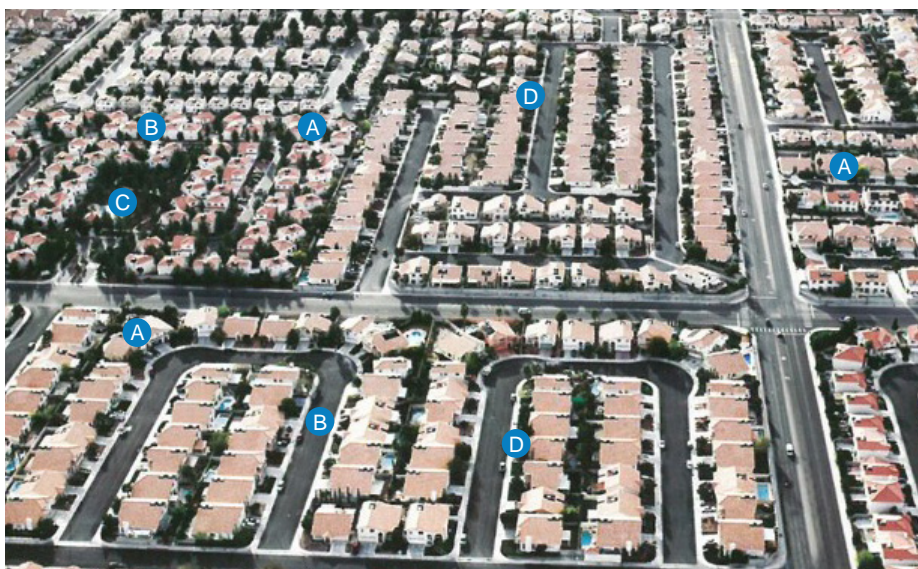


Unsuccessful Compact Development
Las Vegas, Nevada

Ⓐ Single building type in large areas

Ⓑ Street grid lacks connectivity for all users

Ⓒ Minimal public space

Ⓓ Sidewalks placed next to the street. Garages facing the street reduce natural surveillance, decreasing safety

# WALKABILITY

It is important to make a distinction between being able to walk to a destination and having a place that encourages walking. Simply being nearby does not guarantee that people will walk there. There are a number of factors that influence how walkable a destination is perceived to be by residents such as: large blank walls or tall fences; the feeling that the area is unsafe; a lack of sidewalks; lack if crosswalks; and a lack of shade. The two locations below illustrate this difference. The image in Boston is on Newbury Street and a block away from a subway station, and the image is Miami is taken less than a 5-minute walk from a transit station. Comparing the two images it is possible to see which is the more lively of the two locations, highlighting the components of design that create truly walkable places.

**COMPONENTS OF DESIGN**

**A** Fronts the Sidewalk with Multiple Entries and Windows

**B** Wide Sidewalks

**C** Trees Along Sidewalk Edges

**D** Variety of Building Facades



Successful Walkable design
Newbury Street, Boston

**A** Frequent business entry engage the pedestrian & enhance safety through natural surveillance

**B** Wide sidewalk allows for outdoor dining

**C** Trees shade pedestrians and are located at the street edge, providing a buffer from traffic

**D** Occupied storefronts and fine-grain buildings create visual interest
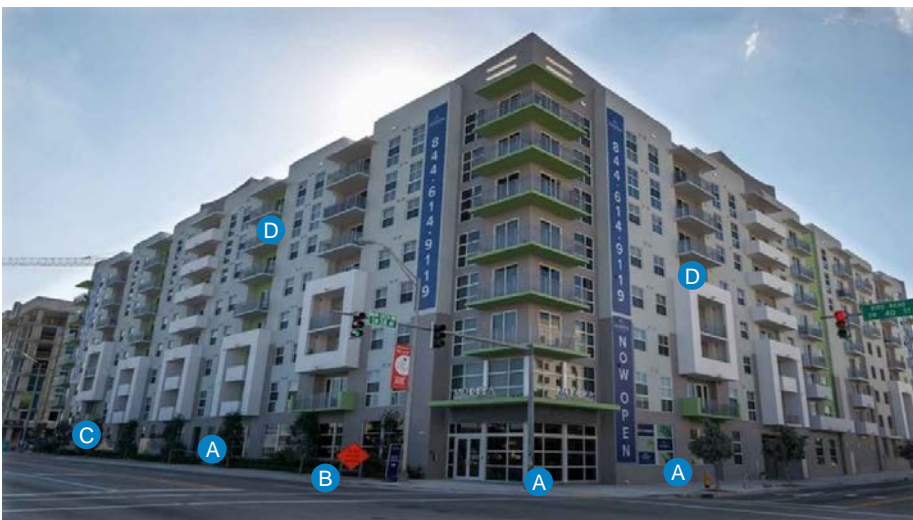


Unsuccessful Walkable design
Bird Road, Miami

**A** Windows are facing the street, but nothing engaging the pedestrian at the ground level

**B** Sidewalks have room to walk, but not for any other uses, like outdoor dining, or coffee windows

**C** Trees hug the building on one side, rather than being located at the street edge

**D** Large building mass lacks variety within its large block

# MIX OF USES

Having a variety of uses within a T.O.D. is a crucial element, however the concept can be misunderstood leading to less successful results. Oftentimes, a mix of uses is interpreted to mean that multiple uses occupy an area of land owned by one person but are still separated from each other. A true mix of uses embraces dense development by working to stack these uses on top of each other as well as next to each other rather than just being adjacent single use buildings. The comparison below shows two subway stations in the Boston area that are next to each other. One routinely draws more people and is more vibrant than the other. Part of the reason has to do with how the uses are mixed together. These images illustrate important aspects of a mix of uses outlined in the components of design.

**COMPONENTS OF DESIGN**
- Ⓐ Vertical Stacking of Uses
- Ⓑ Building Location and Orientation
- Ⓒ Location of Parking
- Ⓓ Street Design



Successful Mixed Use design
Harvard Square, Boston

- Ⓐ Ground floor restaurants and retail with offices and residences above
- Ⓑ Buildings create define the public space
- Ⓒ On-street parking provides a pedestrian buffer. Parking garages are hidden behind buildings and located off secondary streets
- Ⓓ Narrower lanes and parallel parking calm traffic, creating safer speeds and street lights improve pedestrian safety



Unsuccessful Mixed Use design
Porter Square, Boston

- Ⓐ Upper floor is unoccupied
- Ⓑ Buildings set back from the street and buildings face parking lots
- Ⓒ Parking located in parking lots that are not hidden
- Ⓓ High visibility crosswalks are effective, but wide lanes and no parallel parking encourages higher speeds

# KID-FRIENDLY PLACES: A MEASURING STICK

It is important to remember that our cities and towns are created for people to live, grow, and form social connections. A good way to measure success is to ask how kid-friendly a place is. Studies have shown that extracurricular activity and the ability to have impromptu interactions has physical and psychological benefits, specifically for children as their minds and bodies grow and they learn to participate in society. Making sure that there is adequate space allocated that enables varying degrees of independence makes these benefits possible. This is achieved by creating interesting destinations and providing safe ways of accessing these destinations that don't depend on a car. Public spaces, parks, playgrounds, and play fields are a few examples of interesting places for children. A well-connected street network with street trees and wide sidewalks, as well as bike and walking trails that have natural surveillance provide safe connections from homes to these destinations.

Creating places that are kid-friendly also has benefits to other members of society. Places where children like to gather and play creates a place for parents to gather and relax as they catch up with friends or play with their children. Creating kid-friendly places works doubly by making it possible for older adult citizens (who may not drive as they get older) to keep active and healthier for longer. As a result, a place that is kid-friendly is a strong indicator that it is also a place that produces a high quality of life for all of its residents.

> **The amount of *time* children spend playing *outdoors*, their ability to *get around independently*, and their level of *contact with nature* are strong indicators of how a city is performing, and not just for children, but for all city dwellers.**
>
> **- Cities Alive, ARUP**



Easily accessible places for recreation improves the quality of life for all residents.



Interesting places encourage kits to go outdoors and be active.
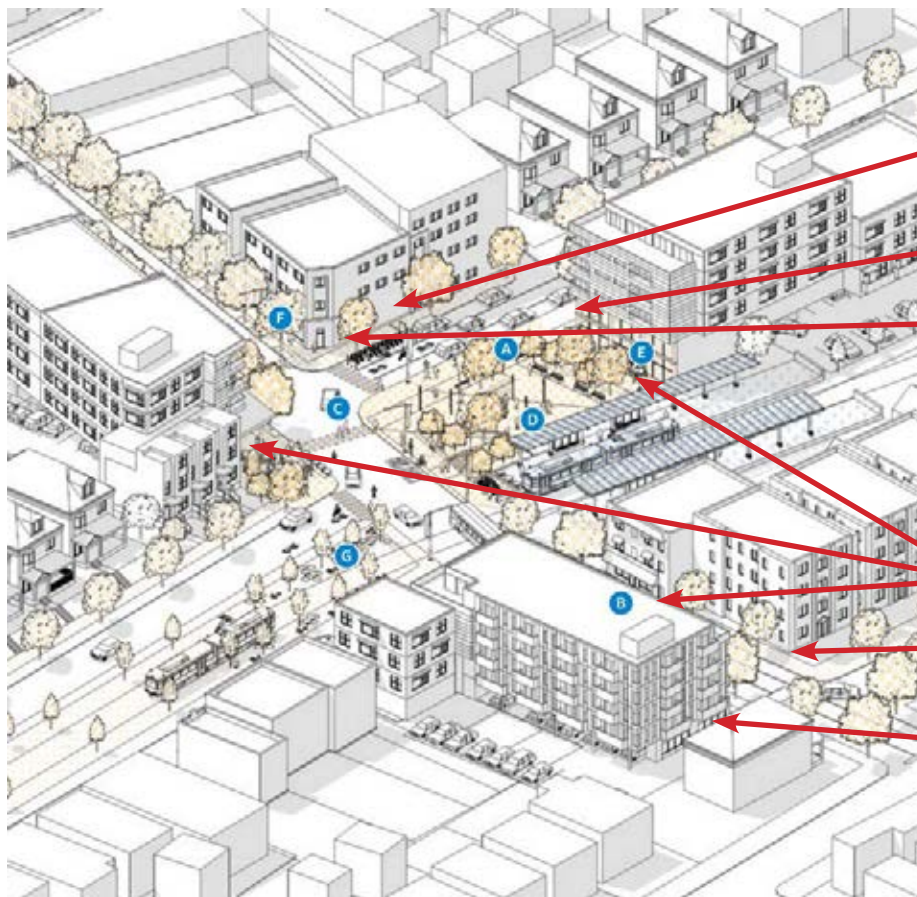
Successful T.O.D. creates places that people want to be. It makes use of certain design tools that work in harmony with transit stations to capitalize on the energy created by transit. This section discusses the tools of successful T.O.D. design including neighborhood design, street design, public space design, and frontage analysis.

## ZONE FOR EXPERIENCES

The existing T.O.D. guidelines discuss the urban form and prioritizing pedestrian amenities around transit station areas. The next step is to consider the mix of uses that will keep people in the area. The types of retail that are lacking within a 10-minute walk from many transit stations are the uses that these areas should be providing. They are experiences: dining experiences; spa experiences; meeting up with friends for a drink experiences; an evening bowling experiences; buying the latest gadget experiences; picking out a new lamp experiences. All of these experiences engage people and allow them to connect to one another and the city around them.

> **" Pittsburgh now gets mentioned alongside Brooklyn and Portland as an urban hotspot for millenials. "**
> New York Times 7.22.18



Electronics & Appliance Stores

Sporting Goods, Hobby, Book, and Music Stores

Clothing and Clothing Accessories Stores

Food Services & Drinking Places

Health & Personal Care Stores

Furniture & Home Furnishing Stores

T.O.D. General Principles
- Ⓐ Organize development to expand the station walkshed through new construction when possible
- Ⓑ Maximize pedestrian connectivity with short blocks and frequent intersections
- Ⓒ Provide safe, accessible sidewalks and crosswalks
- Ⓓ Create a station identity with public open space related to the station entry
- Ⓔ Activate public space with surrounding uses and pedestrian amenities
- Ⓕ Create a tree canopy along pedestrian corridors
- Ⓖ Utilize green strategies and technologies

Source: T.O.D. Guidelines

# THE NEIGHBORHOOD UNIT

An integral component of every city is the neighborhood. A genuine neighborhood is not the disconnected, single-use development that characterizes sprawl. Complete neighborhoods - unlike the stand-alone apartment complex or the subdivision tract - provide housing, workplaces, shopping, civic functions, and more. Pedestrian-friendly and mixed-use, these communities are designed to be compact, complete, connected, and ultimately more sustainable —although the parameters of an ideal neighborhood vary in terms of size, density, and mix of dwelling types. There are five basic design conventions that provide a common thread linking great neighborhoods. The diagram of a complete neighborhood will be used to illustrate the five basic principles of a neighborhood.

## 1. IDENTIFIABLE CENTER & EDGE

One should be able to tell when one has arrived in the neighborhood and when one has reached its center. A proper center has places where the public feels welcome and encouraged to congregate. Typically, at least one outdoor public environment exists at the center that spatially acts as the most well-defined outdoor room in the neighborhood. While it most often takes the form of a square or plaza, it is also possible to give shape to the neighborhood center with just a special "four corners" intersection of important streets that include shade and other protection from the elements. A transit station is an ideal center for a neighborhood. Alternatively, the transit station can be located at the edge where neighborhoods meet.

The best centers are within walking distance of surrounding residential areas, possess a mix of uses, and include higher-density buildings at a pedestrian scale. Discernible centers are important because they provide some of residents' daily needs and foster social connections.

## 2. WALKABLE SIZE

The overall size of the neighborhood, which typically ranges from 40 to 200 acres, should be suitable for walking. Most people will walk approximately one-quarter mile before turning back or opting to drive or ride a bike. Most neighborhoods built before World War II were approximately one-quarter mile from center to edge.

Neighborhoods of many shapes and sizes can satisfy the quarter-mile radius test. Civic spaces requiring a great deal of acreage such as schools with play fields can be situated where they are shared by more than one neighborhood, or fields can be shared as park space with the community. Larger planned communities can satisfy the quarter mile radius test by establishing several distinct neighborhoods within the community, being sure to place different neighborhood centers one-half mile apart or less.



Diagram of a complete neighborhood



Identifiable center and edge
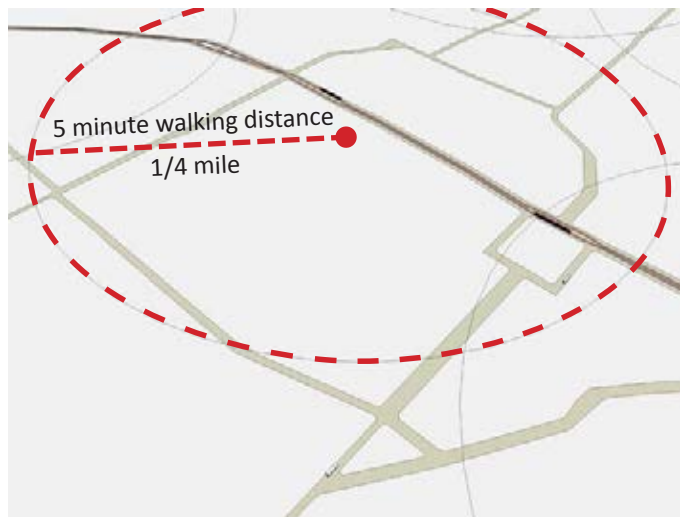


Walkable neighborhood size

## 3.  MIX USES & HOUSING TYPES

Great neighborhoods have a fine-grained mix of land uses and housing types. This condition enables residents to dwell, work, socialize, exercise, shop, and find some daily needs and services within walking distance. Variety-rich neighborhoods, in comparison with the single-use, single "pod" developments, have multiple benefits.

A mix of housing is better socially, allowing people with diverse lifestyles and incomes to live in the same neighborhood. Residents have the choice to move elsewhere within their community as their housing needs change over time, while families of modest means are no longer forced into segregated concentrations. In addition, households with varied schedules and interests will activate the neighborhood at different times of day, adding both to the vibrancy and security of a place.
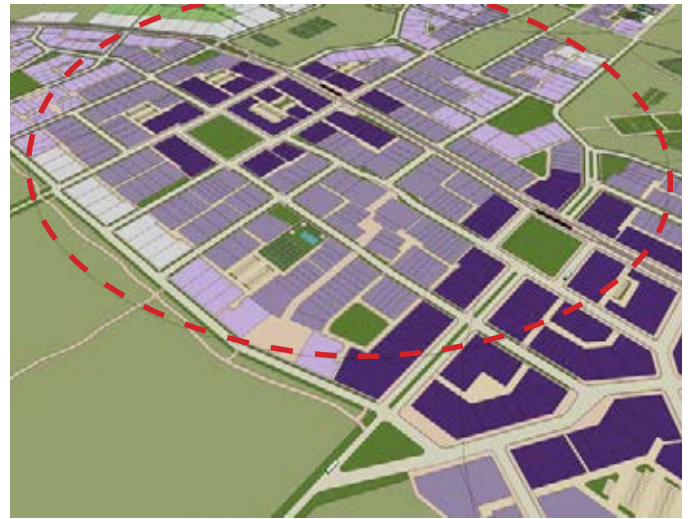
## 4.  INTEGRATED NETWORK OF WALKABLE STREETS

A network of streets allows pedestrians, cyclists, and motorists to move safely and comfortably through a neighborhood. A street network forms blocks that set up logical sites for private development, provides routes for multiple modes of transportation, and provides non-motorized alternatives to those under the driving age as well as for senior citizens. The maximum average block perimeter to achieve an integrated network is 1,500 feet with a maximum uninterrupted block face of, ideally, 450 feet, with streets at intervals no greater than 600 feet apart along any one single stretch.

Streets should be designed to be walkable first while also serving cars and emergency vehicles. Slow traffic speeds encouraged using features such as narrow curb-to-curb cross sections, street trees, on-street parking, architecture close to the street edge, and tight radii at the street corners, work together to create highly walkable environments. A connected web of streets then allows for numerous driving patterns and the orderly management of traffic.

## 5.  SPECIAL SITES RESERVED FOR CIVIC USES

In complete neighborhoods, some of the best real estate is set aside for community purposes. These locations are made significant by the geometry of the town plan. Unique settings such as terminated views or locations with greater activity should be reserved for landmark buildings that will act as permanent anchors for community pride. Similarly, special sites should be set aside for parks, greens, squares, plazas, and playgrounds (each of which has its own distinct character). Each neighborhood should have one special gathering place at its center, such as a village green.



Transects provide opportunity for a mix of land uses and housing types



Network of walkable streets



Special sites are reserved for civic purposes

# THE ESSENTIAL ART OF STREET DESIGN

The public realm we create is the inheritance we leave to our children. We need to restore our destinations and confidence that the future can be better than the present and the past. Streets are the main public realm in which we inhabit. Good streets can determine if a place is one people want to be in, walk through, or avoid. It is important to have well designed streets in T.O.D. areas.

## FIVE BASICS CHARACTERISTICS YOU CAN DEMAND
### SHAPED | COMFORTABLE | CONNECTED | SAFE | MEMORABLE

### SHAPED

A street should function as an outdoor room, surrounding its occupants in a space that is welcoming and usable. A 1:3 ratio for building height to street width is often cited as a minimum section for a sense of enclosure. Creating this sense of enclosure involves more than just narrow street width, however. There are well-defined eight-lane roads just as there are two-lane roads that seem to be impassable. Streets must be sized properly for their use and should be defined with appropriate building sizes. Street trees and furniture such as lighting also play a critical role in defining the space of the street.



Great Barrington, MA

## PROPORTIONS OF STREET SPACE

The height-to-width ratio of the space generates spatial enclosure, which is related to the physiology of the human eye. If the width of a public space is such that the cone of vision encompasses less street wall than sky opening, the degree of spatial enclosure is slight. The ratio of 1 increment of height to 6 of width is the absolute minimum, with 1 to 3 being an effective minimum if a sense of enclosure is to result. As a general rule, the tighter the ratio, the stronger the sense of place and, often, the higher the real estate value. Spatial enclosure is particularly important for shopping streets that must compete with shopping malls, which provide very effective spatial definition. In the absence of spatial definition by facades, disciplined tree planting is an alternative. Trees aligned for spatial enclosure are necessary on thoroughfares that have substantial front yards.
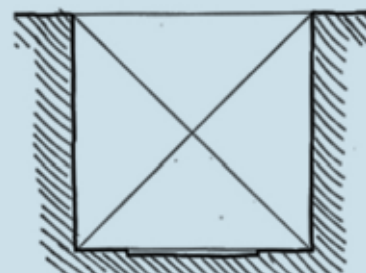
   - Excerpted from AIA Graphic Standards
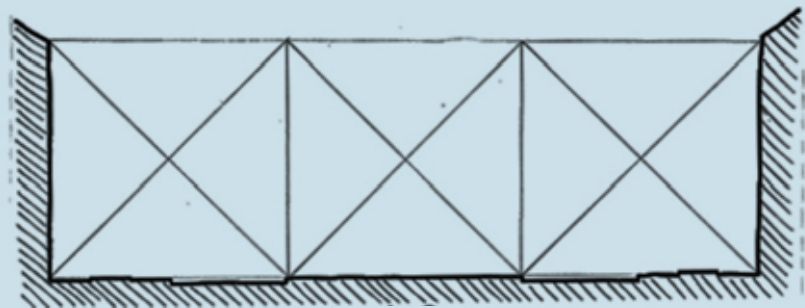


**1:3**
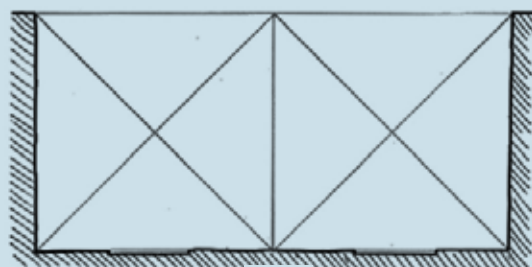
**1:2**

**1:1**

## COMFORTABLE

Motorists, pedestrians, and cyclists typically prefer shady streets. Shade provides protection from heat and sun and contributes to the spatial definition of a street. Shade can be provided with canopy trees or architectural encroachments over the sidewalk. Canopy trees should be planted in a planting strip between the sidewalk and the street in order to provide continuous definition and shade for both the street and the sidewalk. Architectural encroachments over the sidewalk such as awnings, arcades, and cantilevered balconies are another way to protect pedestrians from the elements and meanwhile shield storefronts from glare.

Great streets are typically planted with rows of regularly-spaced trees, using consistent species. This formal tree alignment has a powerful effect; it at once shapes the space and reflects conscious design. More importantly, the shade produced by the trees will be continuous enough to make walking viable. Furthermore, the spatial impression of aligned trees also has a traffic calming effect.



Street trees improve the safety and appeal of streets, making them more comfortable to walk down.
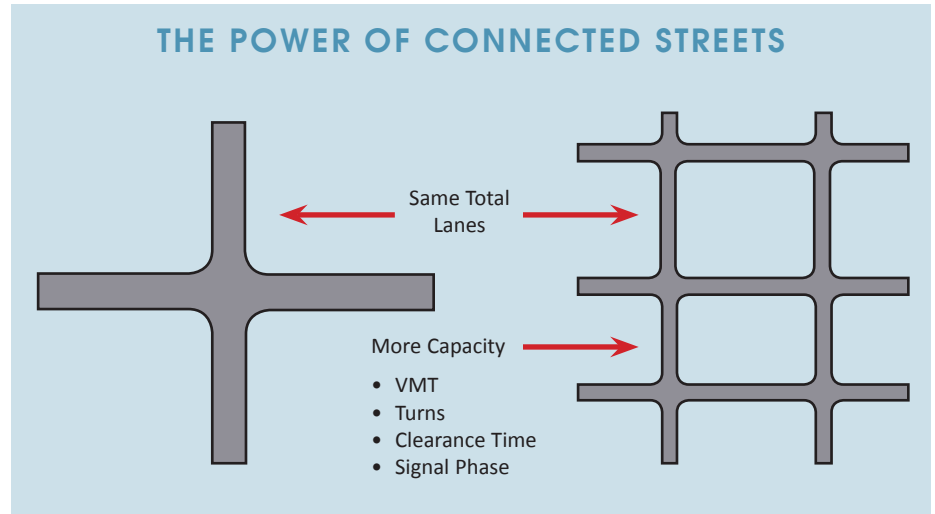
## CONNECTED

Strong communities are well-connected in many ways. Having an interconnected web of streets is the most basic and effective form of bringing a neighborhood together. An interconnected network of streets helps to alleviate traffic by providing many options to get from point A to point B.

A well-connected street network encourages better development. Smaller blocks discourager suburban sprawl development and promote walking by placing needs near residents with a variety of options to reach their destination.



### THE POWER OF CONNECTED STREETS

Same Total Lanes

More Capacity
- VMT
- Turns
- Clearance Time
- Signal Phase

A grid of smaller streets accommodate more vehicle or people than a single set of wider streets.



An 8x8 grid yields 12,870 possible routes from the origin to the destination



Woodlands, Texas - 36 Intersections per Square Mile - Low connectivity, not very walkable



Celebration, Florida - 377.8 Intersections per Square Mile - High connectivity, very walkable
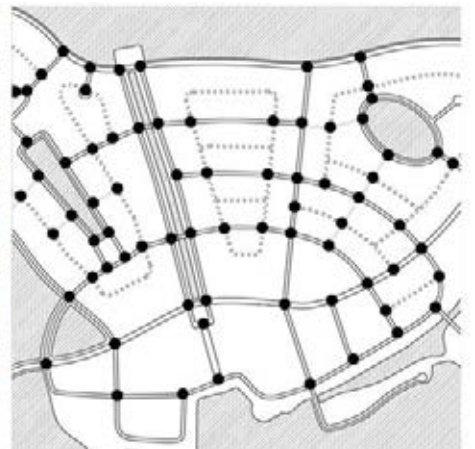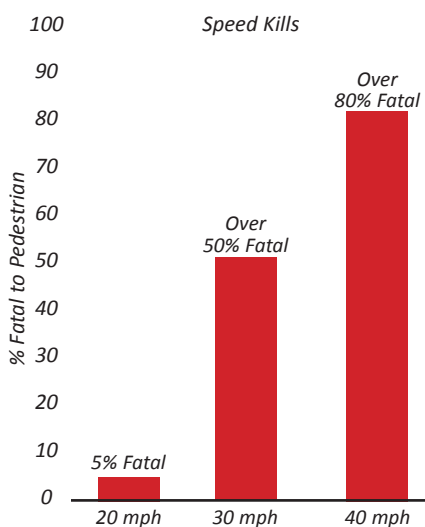
## SAFE

Slowing traffic increases safety for the pedestrian, or put another way, speed kills. An increase of just 10 miles per hour from 20 MPH to 30 MPH sees a significant jump in the chances of a pedestrian fatality if an incident occurs. There a several strategies to reduce car speeds. Reducing the lane width can have a dramatic effect. Many streets conform to a highway standard of 12 feet wide, encouraging highway speeds. Reducing the lane width to 10 feet still allows for traffic flow, while also prompting the motorist to slow down. On some residentially-oriented streets, lane widths could be as narrow as 9 feet wide. These widths include gutters as part of their calculation. Including parallel parking along a street also reduces traffic speed by forcing the motorist to drive more cautiously to avoid an open car door. In addition, reducing curb radii reduces speed and increases safety by making it necessary to turn at a slower speed.

> **Walking and biking are NOT alternative modes.**
> **Rick Hall, P.E.**
> **- Hall Planning & Engineering**


Fast, Car-oriented Street


Slow, People-oriented Street


Speed Kills

- 20 mph: 5% Fatal
- 30 mph: Over 50% Fatal
- 40 mph: Over 80% Fatal

% Fatal to Pedestrian

Coral Gables, Complete Street


Coral Gables, Complete Street  designate centers

# MEMORABLE

Perhaps one of the toughest elements of street design is making a memorable experience. This is difficult, because there are many layers of nuance that respond to the local culture and history. Oftentimes a memorable experience emphasizes the "local-ness" of a place by embracing unique factors such as notable local shops or restaurants, unique quirky historical features, and highlighting local historic architecture. Sometimes a memorable experience is created using a temporary installation that draws attention to existing local features. These can be particularly effective today with a thriving social media culture. In Coral Gables, Florida, a temporary colorful umbrella installation has created a place to see and be seen with visitors taking pictures and posting them online. This has created enough of a draw that some businesses have seen a threefold increase in revenues. This is a result of a pedestrian public space that emphasizes its local features and highlighted them using this attractive art installation.

Temporary installations and emphasizing local features and businesses attribute to memorable experiences on streets.

# FUNDAMENTAL STREET TYPES

## CURRENTLY A LIMITED MENU OF STREET TYPES

In many road design guidelines, streets are categorized into three types:

- **Arterials**
- **Collectors**
- **Locals**

This limits the array of options that streets could take and ignores the variety of the types of places where people live. There should be a wider array of street types to accommodate all modes of transport in numerous settings. Although not necessarily prescribed in transportation handbooks, there are at least eleven fundamental street types that should be considered based on location in a community and its main function.

> **Trying to cure traffic congestion with more capacity is like trying to cure obesity by loosening your belt.**
> **- Glen Heimstra, Futurist**

## ELEVEN FUNDAMENTAL STREET TYPES

- **Parkway**
- **Multiway Boulevard & Avenue**
- **Boulevard & Avenue**
- **Promenade & Rambla**
- **Main Street**
- **Downtown Street**
- **Neighborhood Street**
- **Yield Street**
- **Garden Street**
- **Pedestrian Street**
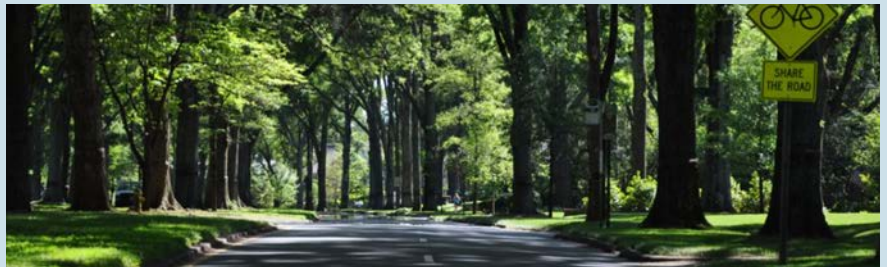
# PUBLIC SPACE: DESIGN MATTERS

Public spaces play a vital role in the public life of a community. They provide places to gather, to celebrate, to meet, to play, and to participate in civic life. While poorly designed public spaces tend to be skipped over by the public and feel more like "left over space", well-designed public spaces are livelier with people of different backgrounds and lifestyles. This section describes the elements of good public space design that can be implemented in a variety of ways in all public spaces.
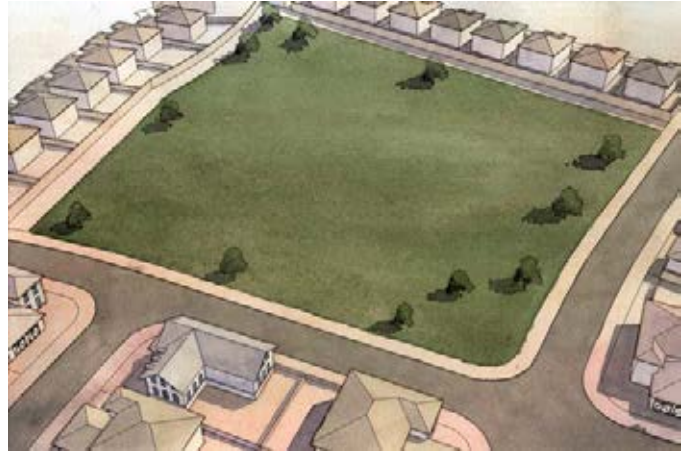


Public space or Left Over Space?



Well-designed Public Space.

## 1. SIZE & PROPORTION

As a public space is planned and designed, one of the first things to consider will be the size and proportion. This is measured from building façade to building façade. Public spaces can be formal with a strong geometric shape, or they can be more informal in nature with a less uniform shape. It is important to keep the building height and width ratio in mind. Spaces that are too wide relative to the buildings that shape them lose a sense of definition and become uncomfortable. A good rule of thumb is to think about the public space as similar to a grand room in a building. Good proportions between building height to width of the space vary between 1:1 and 1:3. There are variations and exceptions, so these should be thought of as rules of thumb.
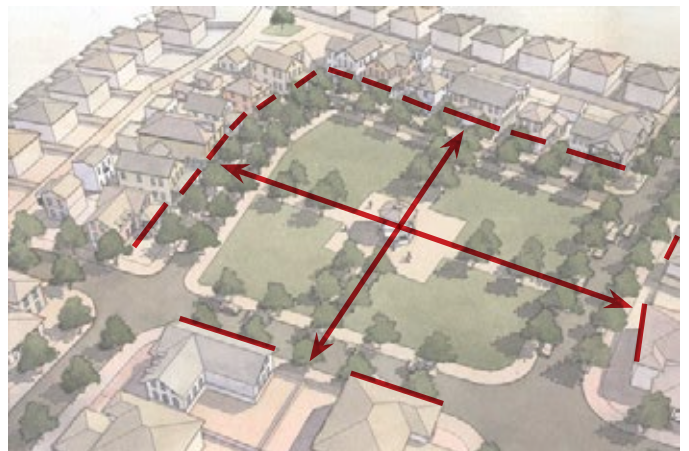


Size and Proportion of Open Space.

## 2. BUILDING ORIENTATION

Similar to good street design, buildings should front the public space. This has the effect of making the public feel welcome and safe. People tend to avoid unpleasant experiences and placing the rear of a building or a blank wall at the edge, defining the public space makes it an unpleasant experience and can discourage its use or encourage unsavory actions. Having buildings front the public space also creates "eyes on the public space" and improves safety.
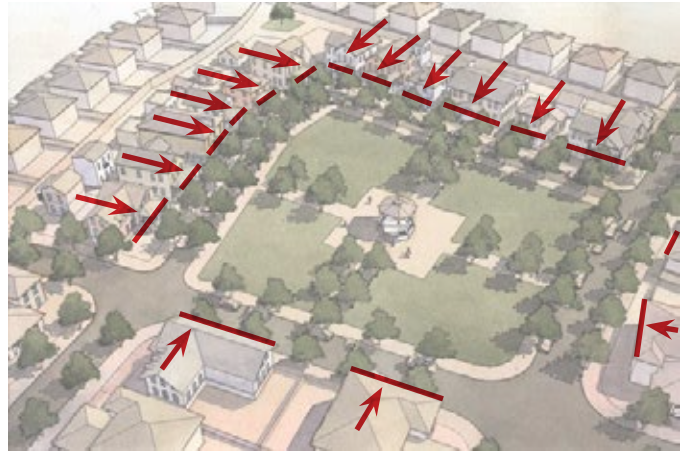
Buildings should face toward the public space.

## 3. CONCEAL PARKING AND SERVICES

When buildings face the public space, it creates an opportunity to conceal the elements that create a negative experience of the public area. The more functional, less appealing aspects of a building (parts that are typically located at the building's "back end") can be placed behind buildings. These include: parking lots, garbage and recycling collection, and utility connections.

Rear Alleys Conceal Parking & Services

## 4. SEMI-PUBLIC TRANSITIONS

The space between the private realm and public space can serve as a transition between the two places. These transitions often take the form of front porches and stoops that face the street or public space. Residents can relax on the front porch and interact with people walking by from a semi-public/semi-private space. On the porch or stoop, they are slightly removed, but also partially engaged in public life, encouraging impromptu discussions and an active neighborhood.

Semi-Public Transition

## 5. PEDESTRIAN-FRIENDLY CONNECTIONS

It is important to make it easy, safe, and comfortable to access public spaces. People will tend not to visit the public space if these aspects are not addressed. Enhanced safety results in proper building frontage. Ensuring that there is an extensive network of streets, sidewalks, and trails makes it easy to access public space. Incorporating street trees adds comfort by adding shade during hot sunny months and shape the space in winter months. Trees are typically spaced approximately thirty feet apart, though this may vary based on the tree species. Sidewalks may vary in size but should not be less than five to six feet. Eight feet is a comfortable sidewalk width, allowing people two pairs of people to walk in opposite directions.


Connections with Shaded Sidewalks

## 6. APPROPRIATE LANDSCAPING

A public space can accommodate a variety of activities – from formal gatherings, to concerts, to informal recreation. Each of these uses requires a different series of design considerations. These include: hardscaping with patterns, grassy spaces, trees, benches, monuments, and pavilions. Sometimes the focus should be at the center, sometimes at the edge, sometimes both. Appropriate landscaping elements should be included for a specific intended use to help ensure a successful public space.


Landscape Appropriately for Activities

## 7. MIX OF USES & BUILDING TYPES

An interesting public space typically includes a combination of mixed-use, residential, and civic buildings. Incorporating these uses as well as a variety of building types of each group adds interest to the frontages of the public space and draws people to visit. It also makes it possible to accommodate a range of backgrounds and lifestyles to live near, or right at the public area, increasing the vibrancy of the space.



Offices  Café  Rowhouses  Single Family Detached  Live-Work Units  Flats  Corner Market
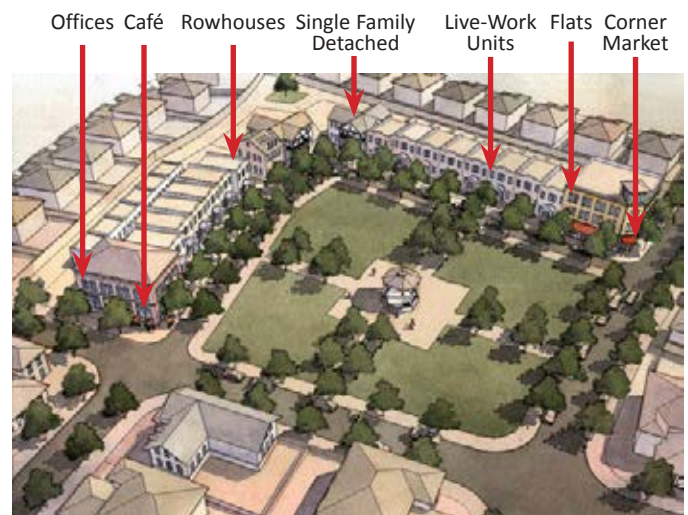
Mix of Residential Building Types

# ANATOMY OF A STOREFRONT

A unique, vibrant, and pedestrian-oriented T.O.D. center is difficult to achieve without the support of street-oriented buildings. Buildings with street-oriented architecture shape the public space of the street and create comfortable, engaging places. This is in sharp contrast to the conventional commercial strip method of fronting the street with blank walls and parking lots. Street-oriented architecture has the added benefit of improving safety by providing natural surveillance through doors and windows facing the street, better known as "eyes on the street"— a concept that has been confirmed by criminologists.

In order to create a continuous and comfortable pedestrian realm, buildings should be multi-story and built close to the street. Parking should be located on-street and in mid-block parking lots or parking garages that are lined with buildings. Buildings should front the street with primary building entrances and generous shopfronts or windows, which serve to engage the pedestrian and promote street activity.

Once the correct placement and orientation of a building is achieved, materials and architectural details can enhance and support street life. Windows should be abundant and generously sized, and relate to the human scale. Brick or stonework, window and door surrounds, and intricate cornices can be used to express local architectural styles and to contribute to the liveliness of the public streetscape. Awnings, balconies, porches, and colonnades can serve to provide shelter from the sun and rain in a manner that contributes to the aesthetic of the street.
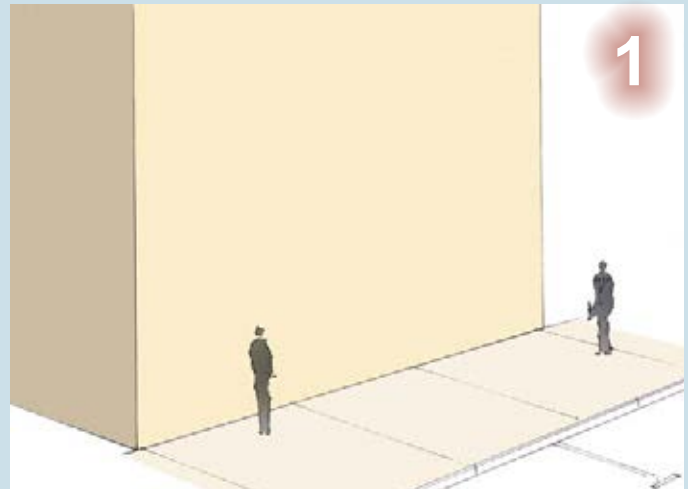


The basic building mass - placed close to the street
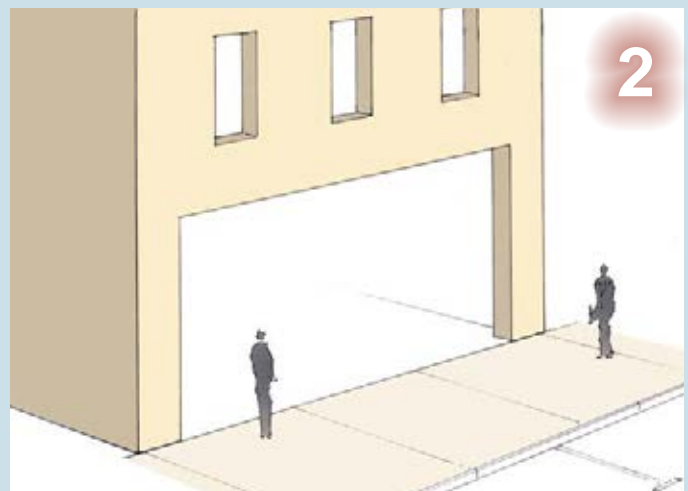


Generous shopfront with vertically-oriented windows above
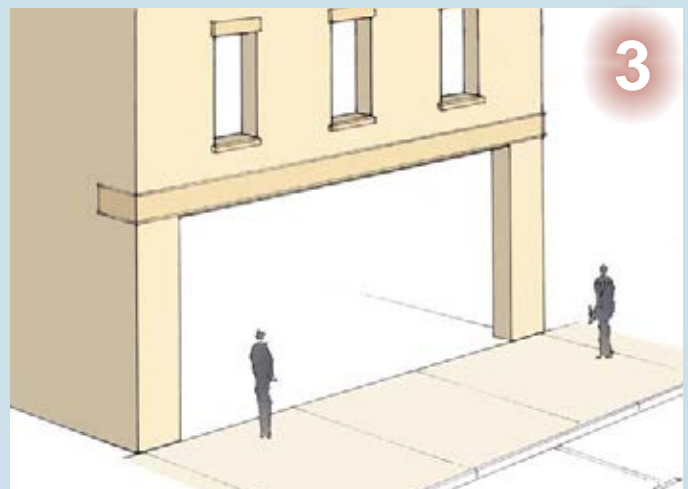


Lintels and window sills provide a sense of structure

**4**
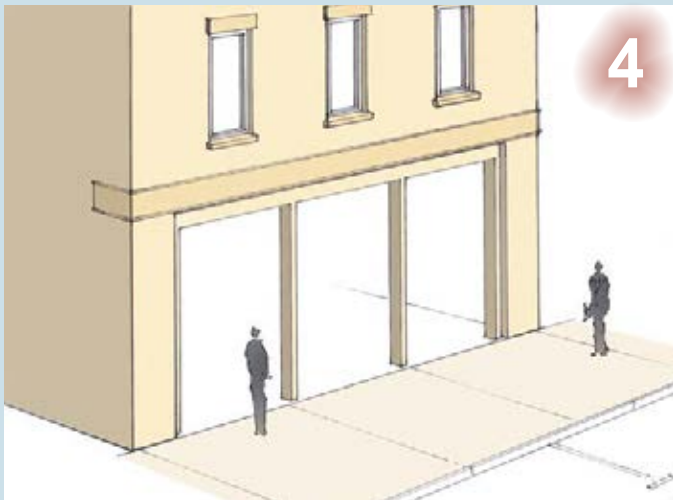
Columns sub-divide the shopfront opening



**7**

Pedestrian-oriented entrance, signage and lighting



**5**

Transoms help achieve well-proportioned shopfront windows



**8**

Awnings provide shade and rain protection



**6**

Cased windows sit atop knee-height bulkheads



**9**

A gallery provides a second floor terrace

# ANATOMY OF A WALKABLE RETAIL ENVIRONMENT

## A SUCCESSFUL RETAIL ENVIRONMENT

Illustrated in the images on the right are a series of shopfront elements, many of which can be added incrementally to commercial streets. The sequence demonstrates how each component can positively contribute to the overall function and composition of the street.

Street lighting and trees are vertical elements that help to define the public realm while also making the pedestrian feel safer and more comfortable. Trees, even in winter, add a sculptural quality and interest to the streetscape.

On-street parking allows easy vehicular access to storefronts also acts as a buffer from traffic that is moving within the roadway. Adding benches, trash/recycling bins and planters is a simple way to transform a street into a place; these components combine to prompt the pedestrian to linger next to the retail shops. Providing space on the sidewalk for restaurant dining is another method for activating the public space. Extending sidewalk dining into the on-street parking zone, also known as a "parklet", quickly and affordably maximizes retail opportunities.



Street-oriented architecture, wide sidewalks and on-street parking are essential "building blocks"



Canopy street trees provide shade and visually define the public space



Street furniture helps to transform a sidewalk into a place

Awnings protect pedestrians from the weather



Adding an outside display zone close to the street will increase retail visibility



Appropriately-scaled signage and adequate lighting contribute to the street composition



Parklets that extend into the on-street parking area are an easy way to gain more dining



Sidewalk dining activates the public space



Street lamps allow social and commercial activity to continue into the night. In addition, the spill lighting from shop windows adds to the warmth and safety of the pedestrian zone.

# FRONTAGE ANALYSIS

A frontage analysis studies the existing conditions of the buildings facing the street. Pedestrians are willing to walk if there is a pleasant experience. A major factor in determining what is interesting is the quality of the experience walking down the street. A series of interesting shopfronts or pleasant homes is more interesting than a parking lot, or a windowless wall. A frontage analysis breaks down the experience walking by each parcel of land into three categories: enjoyable, tolerable, and unpleasant. This exercise can be conducted on any street and can help to identify priority areas for improvements in and around a T.O.D. This section examines several locations to act as an example for other locations and guide future frontage analysis.

> **By 2010, Pittsburgh had reinvented itself as a tech hub… with phenomenal potential.**
>
> New York Times 7.18.18

## Homewood Station (Purple Line, East Busway)

Homewood Station has a relatively even mix of enjoyable and tolerable frontages with only a few small unpleasant areas. Having numerous segments that are enjoyable to walk make it possible to tolerate the other areas.













**UNPLEASANT**  **TOLERABLE**  **ENJOYABLE**

# Mount Lebanon Station (Red Line)

Washington Toad connecting to the Mount Lebanon Station are is mostly considered an enjoyable place to walk with a few places of lower quality, although those are still considered tolerable.



# Carnegie Station Area (Green Line, West Busway)

The Carnegie Station area is more disconnected from the community around it. This leads to more areas that are unpleasant to walk along. Large parking lots to a street that feels unbalanced with buildings opposite parking.









| UNPLEASANT | TOLERABLE | ENJOYABLE |

# TRANSIT-ORIENTED DEVELOPMENT CASE STUDY

## SOUTH MIAMI, FLORIDA



The Amster Building is a new three-story, mixed-use infill project located directly across US1 from the South Miami Metrorail station. Its design was made possible by the shared parking and transit proximity parking reduction provisions in the Hometown Plan District Overlay Code.



The Starbucks Building is an example of urban infill along Sunset Drive that retains the historic character. The two-story mixed-use building is backdrop to a historic plaza, with storefronts facing the street. New buildings along Sunset Drive are required to be a minimum of two stories to better define the streetspace.

In the late 1980s Sunset Drive in Downtown South Miami was underperforming. Few people would visit outside of necessary errands. Starting in 1992, South Miami became the subject of intensive public involvement to address the need for revitalizing the main street district along Sunset Drive in the heart of the City of South Miami. The City focused on promoting redevelopment of the area, preparing a work program, conducting a charrette to design a detailed master plan, and rewriting the land development regulations. The Master Plan includes transit-oriented development, protection for historic structures, and pedestrian improvements to the streets and commercial buildings.

The City of South Miami adopted and continues to implement the Hometown Plan and Hometown District Overlay Code. The initial "100% Model" project, the renovation of Dorn Avenue brought new life to one end of the downtown and precipitated numerous other building renovations and infill development throughout the district. Substantial streetscape improvements along Sunset Drive included wider sidewalks, reducing the number of travel lanes, and introducing traffic calming features; all of which have resulted in greater pedestrian activity. An innovation for the "Hometown Plan" was to reduce parking requirements for buildings located within walking distance from the Metro Rail transit station. This resulted in development on previously vacant and underutilized panels, improving the walkability of the area.

As a complement to the newly revitalized commercial activity along the City's main street, the City formed a Community Redevelopment Agency (CRA) in 1998 to assist in revitalizing the area using the Hometown Plan as the underlying framework of the official CRA plan. In 2008 a new municipal garage lined with restaurants opened, enhancing the district-wide, park-once plan for the main street district.



Dorn Avenue has become a destination for driving in South Miami.



73rd Street Municipal Parking Garage is a 4 story parking garage with a commercial and retail liner on the ground floor. Public parking is a needed resource, opening up redevelopment options in the district; the ground floor liner creates a pedestrian-friendly environment at the sidewalk level.

The Dorn Avenue 100% model transformation was an early success in South Miami.



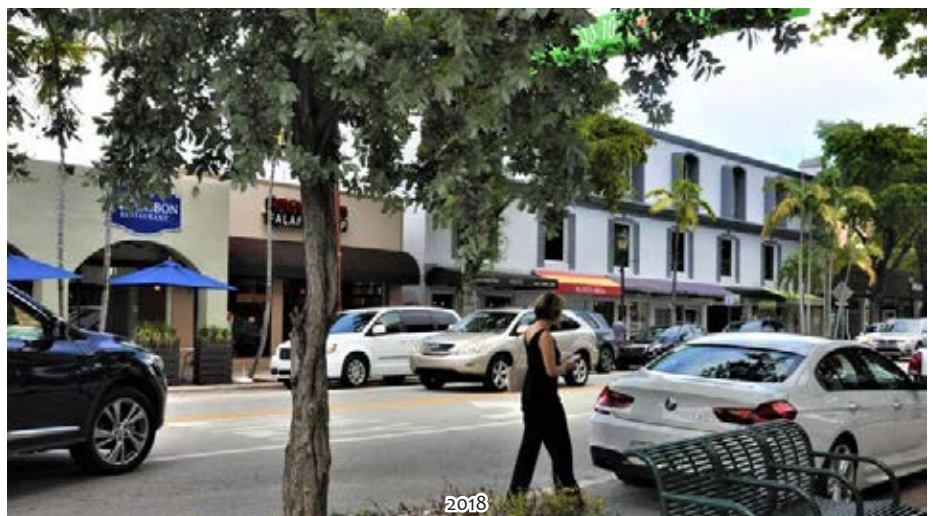Sunset Drive was a five lane road. The street was narrowed to one lane in each direction with occasional turn lanes and on-street parking.



Street trees and benches were added. Travel time down Sunset Drive increased by one minute.
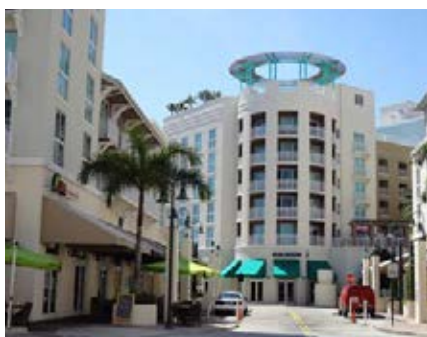
# TRANSIT-ORIENTED DEVELOPMENT CASE STUDY

## DOWNTOWN KENDALL, MIAMI-DADE COUNTY, FLORIDA



This aerial rendering of Downtown Kendall showed transit-oriented development that utilizes the Snapper Creek Canal as a focal point and allows for taller buildings closest to the train station



Above and below: New buildings built in Downtown Kendall since the 1998 Master Plan have active ground floor uses, with residential condominiums above.

The Master Plan and Overlay Code for Downtown Kendall is the product of a June 1998 charrette to plan a high density transit-oriented development in Miami-Dade County. The area contains a virtually ideal convergence of the Metrorail transit corridor and four heavily traveled regional roadways that crisscross a high intensity of retail, office, hotels, and nearby residential neighborhoods. The area known as Downtown Kendall had experienced remarkably fast growth, but poor pedestrian accessibility and visual blight were prominent, as in most such auto-oriented suburbs. Downtown Kendall is now a dense, vibrant, mixed-use and transit-oriented urban center for the region.

The design team conducted a seven day charrette soliciting input from community members, business owners, elected officials, and technical experts. The resulting plan allows any number of developers to realize projects within the patchwork of individual properties, with each property contributing to a unified whole. A form-based code implements the Master Plan to ensure that new projects are consistent with the vision for Downtown Kendall, which is for it to be a model for transit-oriented development. At the forefront is an architecturally varied cityscape designed around the pedestrian rather than the automobile.

The Master Plan was approved by the Miami-Dade Board of County Commissioners in 1998 and the code was adopted in December of 1999. Downtown Kendall has been featured in *Florida Trend*, on NBC 6 and WPBT reports, and in a special issue of Business Week, "21 Ideas for the 21st Century."

The Form-Based Code for Downtown Kendall was written to ensure that the vision was realized during implementation. The intent of the ordinance is to:

1. Coordinate the development intensity within the district by the proximity to mass transit;

2. Organize an interconnected network of colonnaded or tree-lined streets to improve pedestrian access; and

3. Identify and locate quality public open space by identifying specific square and plaza locations that fulfill open space requirements (rather than left-over buffer areas) and by shaping the way buildings front onto the open space and streets.

The Street Frontage Regulating Plan shown over an aerial of new development in the Downtown Kendall area. The code is actively shaping new development as buildings define new streets in what was once large parking areas.
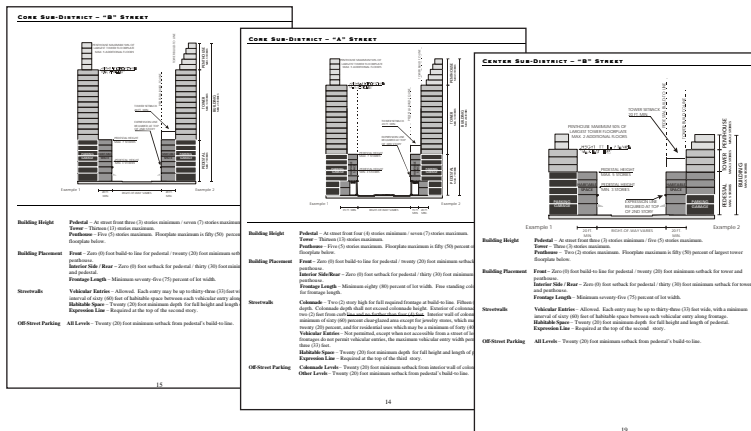


The controlling factors of the code are:

1. Regulating Plans which establish different sub-districts, street frontage types, and designated open spaces.

2. The three Sub-Districts, identified as the Core, the Center, and the Edge, control land use and intensity of development.

   Within each sub-district, five Street Frontage types are defined. The street types determine allowable building heights, as well as the designated setbacks, building frontages, habitable spaces, and driveway access. These street types, placed within each the three sub-districts, create a total of 13 different zone and frontage type situations, all of which are illustrated in the code.

   The Designated Open Space Plan establishes essential open spaces to be provided in all future development and construction. These spaces are controlled by anchor points that are shown on a larger map on file at the Miami-Dade County Department of Planning and Zoning.



Sub-District Regulating Plan



Street Frontage Plan



Designated Open Space Plan

# LESSONS LEARNED

Each time a new T.O.D. plan is created, implemented and built, new lessons emerge about how to troubleshoot difficulties or ensure implementation of important design features. Here is a top four lessons learned from Downtown Kendall:

## 1. LACK OF CODING FOR ARCHITECTURE & STREETS

Architectural code, coordinated with the street atlas creates better built results. Sometimes buildings are designed without an understanding of the parts of a particular aesthetic. Architectural codes can be a powerful tool to help the community's vision and historic architectural heritage. These are often graphics and show important aspects of a design aesthetic.

## 2. GROUND FLOOR TRANSPARENCY REQUIREMENTS TOO LOW

Minimum 30% glazing required allows too much blank wall for pedestrians. Ideally this is around 60% - 70% of glazing required for retail purposes. Too much blank wall makes a walk feel less interesting due to lack of window shopping and less safe due to decreased surveillance.

## 3. NO PROVISION FOR NEW STREETS

There were instances where new streets types were added after the master plan was adopted. Since the master plan did not anticipated these, the detailing was not included and led to less than ideal situations. Even if certain street types are not anticipated, it is worth the time to detail these in the event that a future need arises. This means the community can have a say in the way the area may change.

## 4. NOT ENOUGH PEDESTRIAN PROTECTIONS

The code requires 60 inches of space for pedestrians, however as development happened at an unanticipated pace, utilities and landscaping features were placed in the pedestrian path. It is important to anticipate utility placement and landscaping.



While establishing a code, it is important to keep the public realm clear of obstructions. Sometimes inexperienced developers and designers will place landscaping or functional elements in the right-of-way — typical practice in sprawling development.

While T.O.D. has many benefits, there may be unintended consequences related to development and property value increases. In many locations, rising values and loss of affordability in walking proximity to stations are some of the most concerning. Oftentimes the people that would benefit the most from a reduced dependence on a car are forced to move away from the transit resource due to rising housing costs and a lack of affordable options. This can lead to long-time residents being displaced. Because of this, there has been growing attention on equitable approaches to T.O.D., or "e-T.O.D." This section discusses its goals, resources, neighborhood development concerns, areas of focus, key takeaways, and an affordable housing toolkit.

## Goals of e-T.O.D. include:

### 1. Affordable Housing



### 2. Community Health



### 3. Workforce & Small Business Development



### 4. Environmental Justice & Clean-up

# RESOURCES

A number of resources are available that explore the tools and best practices for embedding equity into transit-oriented development. The following section summarizes reports produced by PolicyLink (2016), The Center for Transit Oriented Development (2009), and Hennepin County (2016) and includes lessons learned, strategies and tools, overlapping benefits, and examples of e-T.O.D.

## POLICYLINK - ADVANCING EQUITABLE T.O.D.

PolicyLink is a national nonprofit research and action institute dedicated to advancing economic and social equity. It focuses on policies affecting low-income communities and communities of color. A report published by PolicyLink, named *Advancing Equitable Transit Oriented Development through Community Partnerships and Public Sector Leadership* (published 2016). PolicyLink examines the experiences of e-T.O.D. in four regions; Minneapolis, Denver, Los Angeles, and Seattle. It identifies lessons learned and highlights common strategies and tools that led to success.

**Lessons Learned:**
- Transit agencies (or municipalities) can set the bar for equitable T.O.D.
- Publicly-held land assets are important leverage
- Make racial equity an explicit goal
- Measure impact to tell your story
- History and culture matter
- Collaboration and patience pay off

**Strategies and Tools:**
- Inclusive planning process
- Regulatory incentives
- Community education sessions to explain the difference between public housing, Section 8, and attainable housing
- Equitable T.O.D development fund/loan program
- Funders Collaborative (to fund affordable housing, small business retention and growth, community arts, and public health)
- Inclusionary affordable housing requirement set by the transit authority
- Technical assistance for businesses (program to help commercial developments to attract diverse businesses)
- Partnerships with foundations, national non-profits (LISC, Enterprise) or banks



A strong, inclusive planning process helps to ensure the concerns of residents are heard and accommodated in anticipation of development.
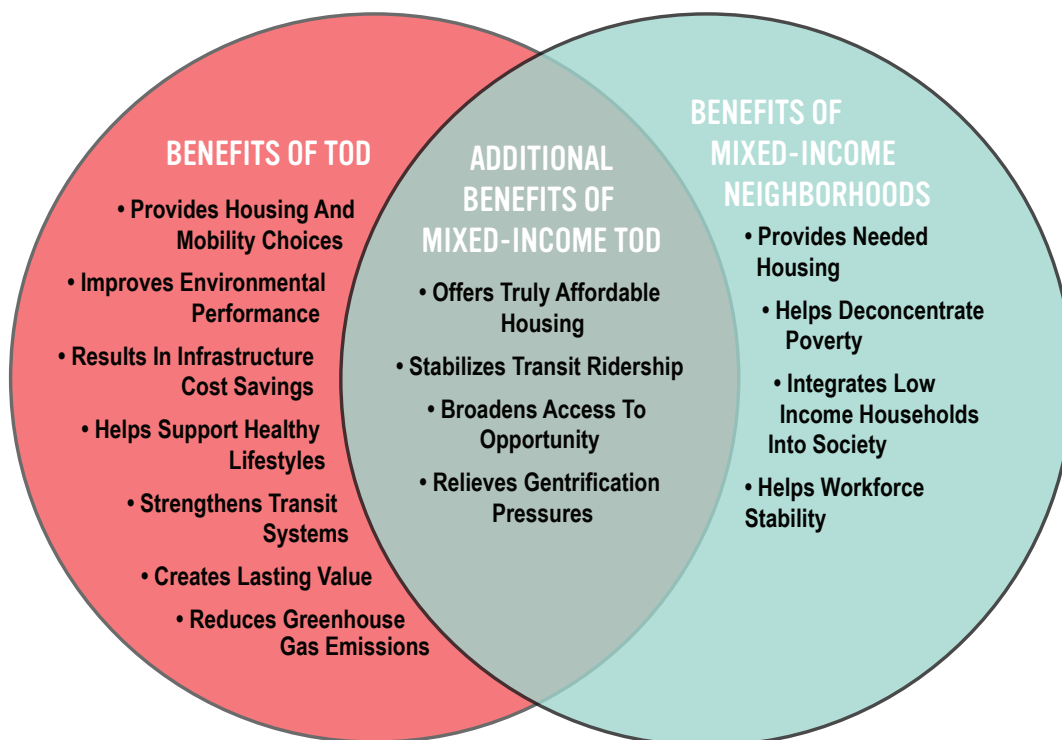
## CENTER FOR TRANSIT ORIENTED DEVELOPMENT

The Center for Transit Oriented Development produced studies to measure the successes and benefits of T.O.D. to promote and instruct the implementation of good neighborhoods. The section below describes how mixed-income neighborhoods and T.O.D. can work together to achieve diverse and interesting neighborhoods, along with strategies and tools available to achieve e-T.O.D. Further information can be found in their report entitled *Mixed-Income Housing Near Transit* (published 2009).

**Strategies to encourage the development of Mixed-Income T.O.D. Housing:**

- Inclusive, community-based station area vision/plan
- Public private partnerships
- Transitioning Naturally Occurring Affordable Housing units (NOAHs) to permanent affordable housing
- Inclusionary housing requirements
- Priority ranking for T.O.D. projects Low Income Housing Tax Credits (LIHTC)
- T.O.D. incentives for projects within 1/2 mile of stations
- Financial tools (TRIDs, TIF, bonds) dedicated to fund affordable units
- Land acquisition/bank
- Incentive-based zoning and density bonuses
- Reduced parking requirements (to decrease cost)



**BENEFITS OF TOD**

- Provides Housing And Mobility Choices
- Improves Environmental Performance
- Results In Infrastructure Cost Savings
- Helps Support Healthy Lifestyles
- Strengthens Transit Systems
- Creates Lasting Value
- Reduces Greenhouse Gas Emissions

**ADDITIONAL BENEFITS OF MIXED-INCOME TOD**

- Offers Truly Affordable Housing
- Stabilizes Transit Ridership
- Broadens Access To Opportunity
- Relieves Gentrification Pressures

**BENEFITS OF MIXED-INCOME NEIGHBORHOODS**

- Provides Needed Housing
- Helps Deconcentrate Poverty
- Integrates Low Income Households Into Society
- Helps Workforce Stability

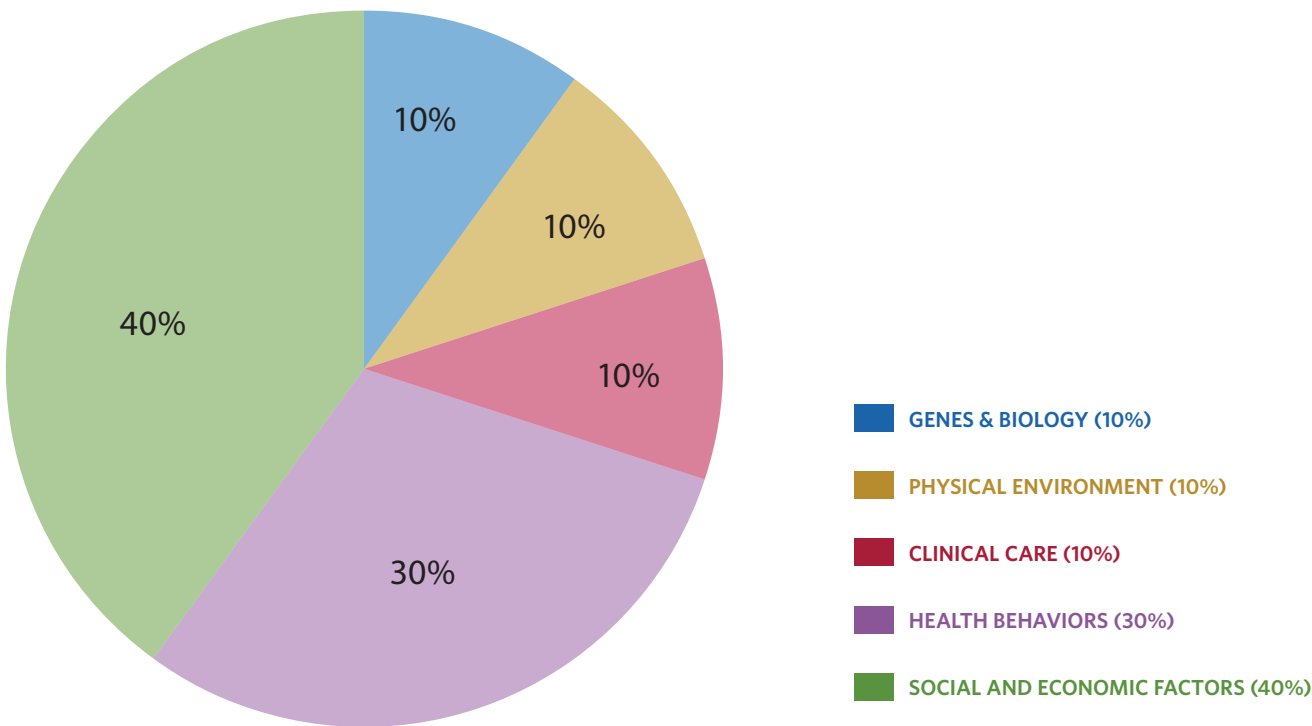The benefits of T.O.D. and the benefits of mixed-income neighborhoods overlap to create vibrant communities.

# HENNEPIN COUNTY - HEALTH, EQUITY & ENGAGEMENT

Hennepin County (Minneapolis) has a high percentage of immigrants and refugees. During the Blue Line (Bottineau) extension of the light rail in 2016, additional funding was secured to address the linkages between T.O.D., equity, and health. Expanded outreach and engagement were key to ensuring that all residents and populations were able to participate in the process in a meaningful way. Methods of expanding the outreach methods and engaging the community include: meetings being translated into multiple languages, and ethnic dinners being served. Additional outreach was conducted through community spokespersons to reach deeper into communities and populations who would not attend traditional meetings.

The Health Impact Assessment (HIA) found that chronic disease, life expectancy, employment, income, and access to healthy food were at less desirable levels where the light rail corridor expansion had not yet occurred than Minneapolis as a whole. The study revealed that the factors most responsible for health are impacted by the types of development patterns. Creating walkable, safe and interesting places enables healthier habits and psychological benefits for residents.

**Strategies and Tools:**
- Grant funding for a dedicated cohort to deepen engagement
- Focus on tracking outcomes and progress



**GENES & BIOLOGY (10%)**

**PHYSICAL ENVIRONMENT (10%)**

**CLINICAL CARE (10%)**

**HEALTH BEHAVIORS (30%)**

**SOCIAL AND ECONOMIC FACTORS (40%)**

The Hennepin County Health, Equity and Engagement study revealed that the built environment is an aspect of life that we can improve to have the biggest positive impact on the health of a community.

# NEIGHBORHOOD DEVELOPMENT

As neighborhoods revitalize, they follow Jacob's Curve of economic development. This curve illustrates the range of development possible with varying degrees of wealth and diversity, with the ideal being in the middle displaying optimum wealth and diversity. Jacob's Curve shows how affordability and equity can be achieved by employing the appropriate tool set for each point in a neighborhood's development. *It is important to note that the tools that neighborhoods use while pursuing economic development and stabilization are different from those needed in market-viable neighborhoods trying to preserve affordability.*

The challenges facing neighborhoods at different stages of wealth and diversity vary depending on what side of the curve they are on. In both instances, affordability is a challenge for different reasons. Neighborhoods that are going through stabilization efforts experience affordability challenges because of suppressed incomes and lack of opportunity. As development is encouraged and increases, policies should be in place to help minimize displacement. Neighborhoods that have tipped past the point of optimum equity experience affordability challenges because of a lack of housing, constrained inventory and rising prices. Once a neighborhood begins to slide to the right in the diagram, policies should be enacted to help resist self-destruction due to unchecked, and sometimes, runaway development speculation.

Oftentimes reactions to existing conditions are implemented well after a change is already under way. This means that by the time a neighborhood begins to experience self-destruction, it is likely that an even greater effort will be required to control the momentum and then redirect it back to the middle of the curve. Because of this, it is important to start thinking about the tools that will preserve affordability before getting to the point where they are critical and to have that tool kit ready to employ early. If a neighborhood has waited until affordability becomes a problem, it is likely too late.

## JACOB'S CURVE OF ECONOMIC DEVELOPMENT
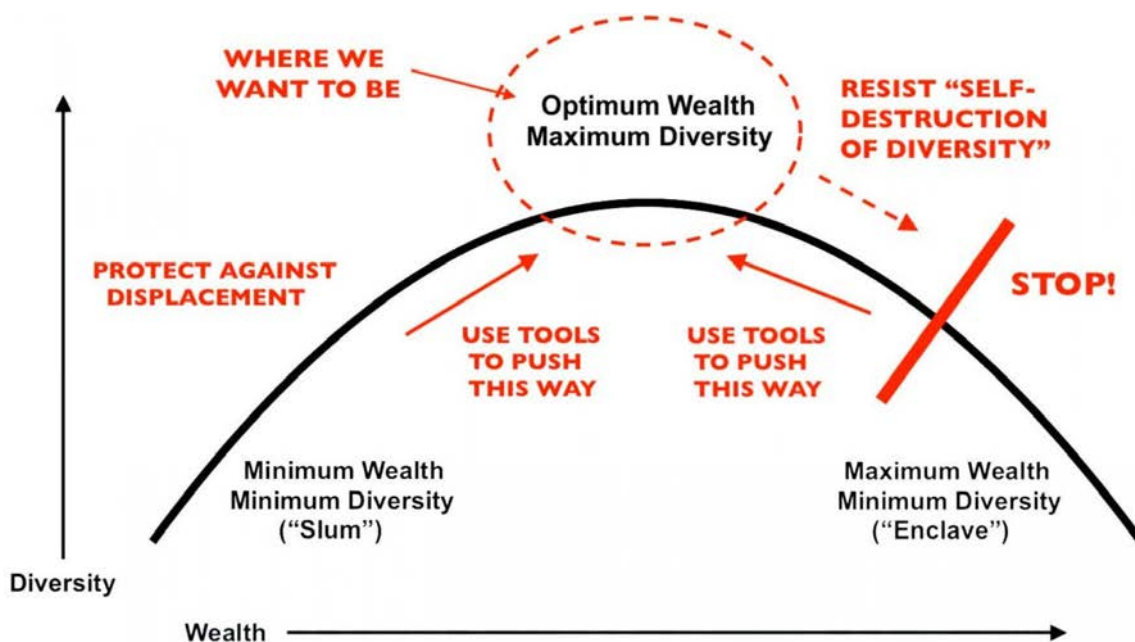
# 4 FOCUS AREAS FOR STABILIZATION & EQUITY

Strategies for equitable and affordable housing require a focus on a multi-faceted housing approach. Some of these strategies can also be applied to local business ownership. Tools and strategies for supporting existing owners, first time buyers, existing renters, and new renters are listed below:

## 1. Support Existing Owners

- Ensure homeowners remain homeowners
  *(Rehab grants, home ownership counseling)*
- Expand rehab grants and emergency repair funding
  (*Flexible funding sources that are not income-restricted*)
- Address tax increases for long-term owners



## 2. Support First Time Buyers

- Provide good education to prepare people to become home owners
  *(Credit counseling, budgeting, home maintenance)*
- Connect first time buyers to financial assistance
- Support non-profits building affordable home ownership



## 3. Support Existing Renters

- Incentivize good landlords - support those who provide high-quality affordable housing with best practices and resources
- Preserve existing affordable housing
  *(Naturally Occurring Affordable Housing and subsidized)*
- Make sure tenants have access to emergency support services, and one-time rental assistance
- Connect tenants at risk of eviction with pro-bono legal services, and harassment protections



## 4. Create New Attainable & Mixed-Income Housing

- Inclusionary requirement for affordable housing for T.O.D. projects
- Jobs-housing linkage fees
- Change zoning or permit accessory dwelling units
- Housing accelerator funds/bonds
- New mixed-income housing with high-quality management
- Education about affordable and mixed-income housing
  *(Ensure that the public understands the different categories of housing.)*

## KEY TAKEAWAYS

Affordable housing and T.O.D. are mutually beneficial, making it even more important to prioritize equity and affordability in development projects near T.O.D. For instance, housing near transit lowers household transportation costs, and improving affordability. Furthermore, low- and moderate-income families are more likely to use transit, supporting ridership for transit providers. There are tools that can be implemented depending on where a neighborhood falls on Jacob's Curve and must be tailored based on the resources available, and the context of the community and the station.

## AFFORDABLE HOUSING GUIDE

**A robust kit of tools for equitable development can be sorted into five categories:**

1. Zoning & Planning
2. Financing & Funding
3. Partnerships
4. Tenant Support
5. Shared Equity

The neighborhood characteristics and context and the resources available will determine the policy package (combination of tools) that are appropriate for a given community. State enabling legislation may be needed to make certain tools possible versus others. In the end, the right mix will preserve and create new affordable housing, while making T.O.D. neighborhoods more equitable.

# AFFORDABLE HOUSING GUIDE

The charts below by Urban Design Associates outline the different tools available to municipalities to help achieve affordable housing. These are organized based on categories of: zoning and planning, financing and funding, partnerships, tenant support, and shared equity. Different tools can be useful while striving to address the 4 areas for stabilization and equity depending on what is being achieved.

## AFFORDABLE HOUSING TOOLKIT

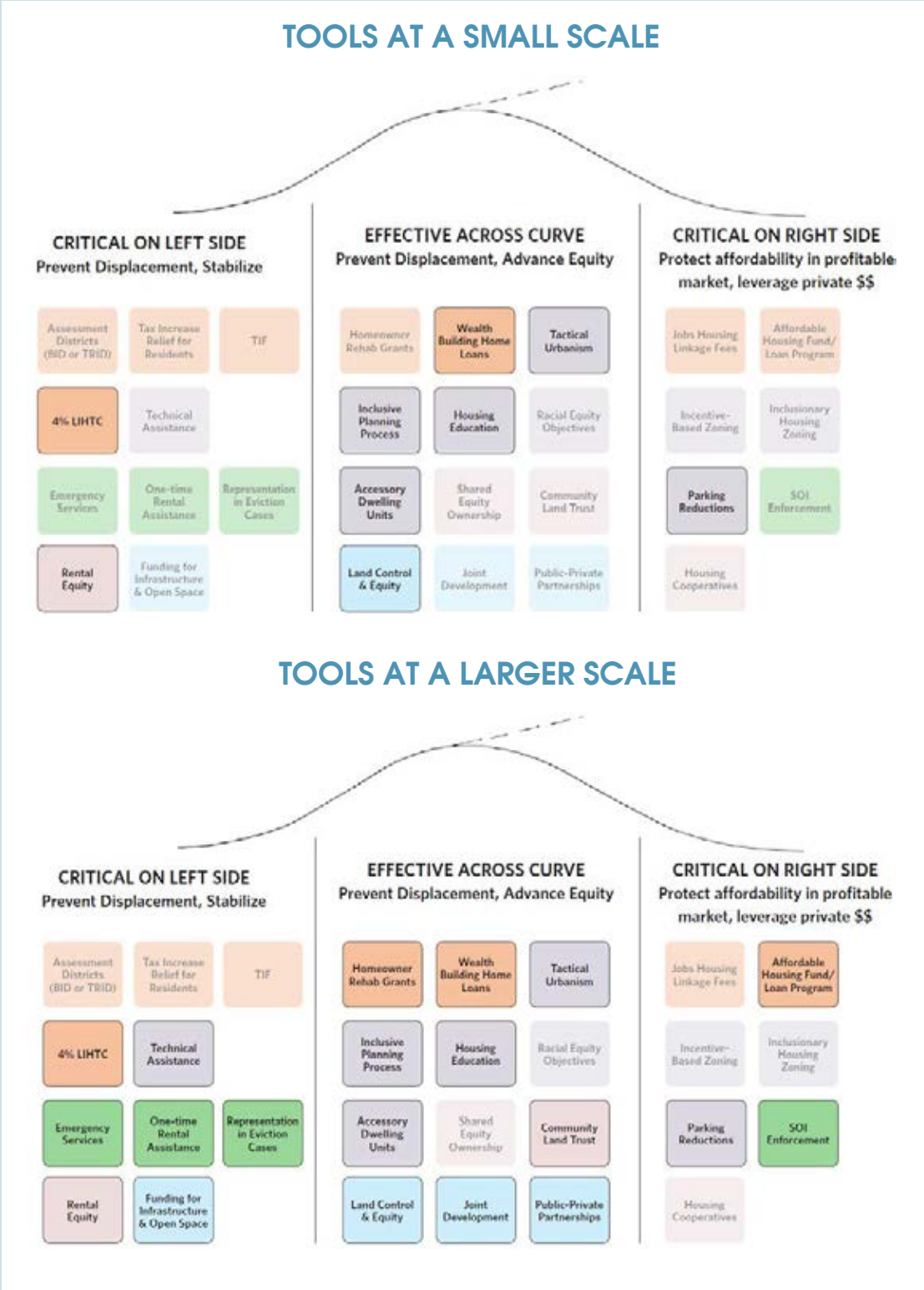| ZONING & PLANNING | | FINANCING/FUNDING | | PARTNERSHIPS | TENANT SUPPORT | SHARED EQUITY |
|---|---|---|---|---|---|---|
| TOD & Incentive-Based Zoning | Inclusive Planning Process | LIHTC | Affordable Housing Fund/ Loan Program | Joint Development | Representation in Eviction Cases | Shared Equity Ownership |
| Inclusionary Housing Zoning | Housing Education | Assessment Districts (BID or TRID) | Jobs Housing Linkage Fees | Public-Private Partnerships | Emergency Services | Community Land Trust |
| Parking Reductions | Technical Assistance | TIF | Wealth Building Home Loans | Funding for Infrastructure & Open Space | One-time Rental Assistance | Housing Cooperatives |
| Accessory Dwelling Units | Racial Equity Objectives | Homeowner Rehab Grants | Tax Increase Relief for Residents | Land Control & Equity | | Rental Equity |

## AFFORDABLE HOUSING TOOLKIT MATRIX

| | PRESERVE & SUPPORT | | BOTH | | | INCREASE ACCESS | | |
|---|---|---|---|---|---|---|---|---|
| **OWNERSHIP** | Housing Education | | | | | Housing Cooperatives | Shared Equity Ownership | Community Land Trust |
| | Tax Increase Relief for Residents | Homeowner Rehab Grants | | | | Wealth Building Home Loans | | |
| **BOTH** | Technical Assistance | | Inclusive Planning Process | Racial Equity Objectives | Funding for Infrastructure & Open Space | Joint Development | Land Control & Equity | |
| | | | Tactical Urbanism | Affordable Housing Fund/ Loan Program | Public-Private Partnerships | Assessment Districts (BID or TRID) | | |
| **RENTAL** | SOI Laws & Enforcement | Representation in Eviction Cases | Rental Equity | | | Inclusionary Housing Zoning | Incentive-Based Zoning | Parking Reductions |
| | One-time Rental Assistance | Emergency Services | LIHTC* | | | Accessory Dwelling Units | Jobs Housing Linkage Fees | TIF |

# AFFORDABLE HOUSING AT DIFFERENT SCALES

The charts below by Urban Design Associates overlay the Affordable Housing Guide with the Jacob's Curve of Economic Development. The tools are organized for use based on where a community may be during stages of development. Different tools are applicable for different scales of development and each chart reflects this.



## TOOLS AT A SMALL SCALE

**CRITICAL ON LEFT SIDE**
Prevent Displacement, Stabilize

**EFFECTIVE ACROSS CURVE**
Prevent Displacement, Advance Equity

**CRITICAL ON RIGHT SIDE**
Protect affordability in profitable market, leverage private $$

## TOOLS AT A LARGER SCALE

**CRITICAL ON LEFT SIDE**
Prevent Displacement, Stabilize

**EFFECTIVE ACROSS CURVE**
Prevent Displacement, Advance Equity

**CRITICAL ON RIGHT SIDE**
Protect affordability in profitable market, leverage private $$

Two important parties in the evolution of transit-oriented development are the developers who build the environment and the municipalities where the development occurs. Understanding the development process, the risks involved, and the potential sources of funding enables municipalities to have more realistic expectations of developers and how to work with them throughout the process. T.O.D projects can have complex goals and face unique challenges. As a result, the developer may require incentives, gap funds, or a combination of both to complete a project. It is critical that municipalities understand funding and financing options in order to facilitate projects that meet their goals. This chapter discusses the development process, the developer discussion, and reviews the available levers municipalities have to help develop transit-oriented locations.

## THE DEVELOPMENT PROCESS

Throughout the process of a project, a developer is juggling issues related to securing a site, a design, permitting, and funding for a project. This section discusses these issues including: the development process overview, the four main risks of development, cash flows, the back of the envelope analysis, and the typical financial sources for developers.

## Real Estate Development Process Overview

While each process has various nuances and specific details, the process generally follows an eight-step progression from beginning to completion.

1. **Idea Inception:** A site needing a use, or a use needing a site is discovered and an initial concept is developed, sometimes with the assistance of an architect. Initial review of existing building code and zoning regulations occurs. A "Back of the Envelope" analysis is performed to estimate if the project is financially viable within the constraints of the site. This is the very beginning of the process, but this also acts as the point at which a project moves forward or not – a large number of ideas do not make it past this point in the process.

2. **Refinement:** If a concept is initially determined to be financially viable, the idea is further refined. An architect begins the process of preliminary design and further investigates the building codes and zoning regulations to get a better idea of how the land can be used and a building developed. A developer may contract the land and begin the process of acquiring the site.

3. **Feasibility**: During this step, a developer will conduct a formal market study to confirm initial assumptions of market potential made during the "Back of the Envelope" analysis. These may be done in-house, or with the help of a consultant. If the design and market study still show the desired return on investment (ROI), then the developer moves forward with the final steps for permitting and construction.

4. **Contract Negotiation**: Once the project proves feasible, a developer will negotiate a contract for the sale of the property. The architects complete the construction documents, and developers work to secure financing for construction of the project.

5. **Formal Commitments:** As construction documents are completed, the developer finalizes the sale of the property and the construction loan and submits for construction permits.

6. **Construction**: Construction begins, whether renovation or new construction, and the developer initiates pre-sales or rentals to generate an inflow of cash to pay down the construction loan. Sometimes developers will begin the process of selling the property to a management company to take over operations at completion of the project.

7. **Completion and Opening**: Construction is completed and a certificate of occupancy is acquired. The developer continues to market the development until all available spaces have been rented or sold.

8. **Management or Sale:** Once the units have all been sold or rented, a developer may choose to maintain ownership of the building and manage the property or sell the project to a management company. Sometimes the project was sold as a fee simple and there is no need for management, at which point the developer will also no longer be involved in the life of the building.

## Four Risks

In developing a project, there are four main risks that are undertaken. These are:

1. **ENTITLEMENT RISK:** The risk associated with securing approvals from public officials, including any zoning revisions, variances, or similar procedures, and permits for construction. Zoning regulations that allow T.O.D. by right and streamline permitting ease this risk.

2. **CONSTRUCTION RISK:** The risk associated with the effective management of construction including managing cost, change orders, revisions, unanticipated delays, and obtaining the certificate of occupancy.

3. **FINANCIAL RISK:** The risk associated with securing funding for the project from both private investors, such as private equity firms and insurance companies, and financial institutions such as private banks, as well as public sources. A developer takes on the risk of negotiating and securing favorable terms for financing. As construction loans and a mortgage are taken out on the property, compounding interest rates are a cost for a developer to manage and keep as low as possible.

4. **MARKET RISK:** The risk associated with marketing the development to secure sales and leases within the projected timeframe. This risk is most prevalent during the "Back of the Envelope" and market studies as assumptions are made on what the market is demanding and how much can be charged in sales or rentals for the development.

## Cash Flows

Throughout the development process, cash flows are being closely monitored. This is because of the large up-front cost to development which is typically covered by some combination of the developer's private money and private investors. These investors may be hedge funds, insurance companies, wealthy individuals, or some other entity. This is also why so many projects do not move past the Back of the Envelope analysis. A developer needs to feel fairly certain that a project can pencil out before private money is invested.

A typical cash flow may look like:

- **INVESTMENT EQUITY:** This consists of private funding spent during the beginning stages of the process and typically after Idea Inception. These initial investors typically provide funding for the development process with the interest of sharing in the profits as a partner of the project with the developer. This initial investment makes it possible for a developer to pay market consultants, architects, engineers, lawyers, and other professionals.

- **LAND ACQUISITION:** More money from the investment equity is spent on purchasing the land. Sometimes this is also financed through a loan from a bank.

- **FINANCE NEGOTIATIONS:** As the designs for the project near completion and the closing on the property nears, a developer continues to negotiate loan terms with banks, financial institutions, and public entities for both the cost of construction as well as the eventual mortgage on the property. This typically includes fees paid to the bank, lawyers, and other involved parties.

- **FINANCING CONSTRUCTION:** A construction loan is different from a mortgage. In order to pay for all of the construction work, a developer will finance construction to pay off bills from contractors to avoid open liens which make financing a mortgage more difficult. The construction loan typically accrues interest that needs to be managed by the developer.

- **PRE-SALES / PRE-LEASES:** As construction takes place, the developer begins to market the product to generate income which can be put towards paying down interest, the principle on the loan and equity partners if possible.

- **PAYING DOWN CONSTRUCTION:** Once construction is completed the remainder of the construction loan is used to close out any liens.

- **FINALIZING MORTGAGE:** Once the construction is completed, the developer can take out a mortgage to pay down the loan taken out for construction and any gap financing that was also used. Interest rates for most large projects are renegotiated in a standard timeframe – often every five years.

- **SALES OR LEASES:** Throughout the process, the developer is working to close sales or leases on the property to generate income, pay down the mortgage, and buy out equity partners.

- **DISPOSITION:** After all loans have been paid, and equity partners have been bought out, then the remaining income from sales and leases is called disposition that the developer has made on the equity investment and loans. The goal is for this to be a profit for the developer.

**GAP (VALUE-ADD) FINANCING:** Sometimes additional funding is required for unanticipated construction costs, or projects with higher risk. Gap, or Value-Add, Financing is then used by the developer to cover costs between paying down construction and finalizing the mortgage. This loan also typically has accruing interest which needs management. Sometimes publicly sourced grant funding can be used as gap financing. It is important to note that this financing source has its own management needs.

## CASH FLOW DIAGRAM

The chart below outlines a general progression of cash flow for a developer over time. The chart illustrates how a developer begins with a large outflow of funding as a part of their investment. The numbers at the bottom of the chart represent years as an examples, however the exact timing of each project will differ. As pre-sales and leases begin, cash generates a net profit that the developer will begin to use to pay down interest, loan principle, and equity partners. In this example, the cost of acquisition, construction, and operating is achieved by the sixth year. This chart shows how assistance from a municipality early in the process can help encourage transit-oriented development.
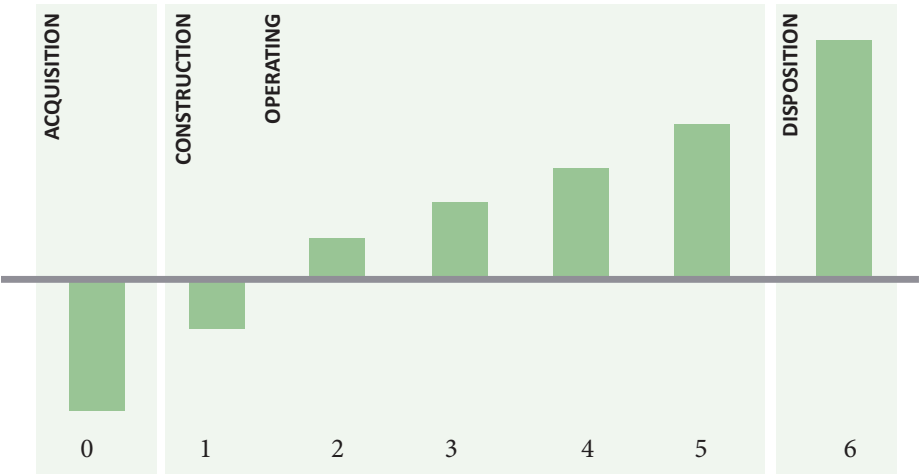


## CASH DESIGNATION DIAGRAM

This diagram shows how the funds for a development are designated during the process. It shows how pre-sales and -leases can help to reduce the amount of debt accrued from loans and interest on those loans. It is also possible to see the importance of equity partners at the beginning of a development process. If assistance from public entities is possible at this point in time, it enables a developer to reach disposition sooner than a traditional development time line.

| Financing Sources | | | |
|---|---|---|---|
| Equity | $ | 47,577,697 | 19% |
| Deposits From Buyers | $ | 84,195,308 | 34% |
| Debt | $ | 118,987,223 | 47% |
| Total | $ | 250,760,228 | 100% |



MONTHS
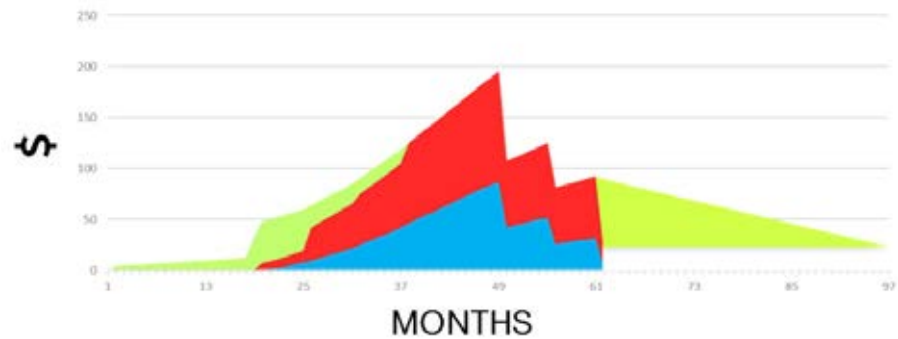
# FINANCIAL RESOURCES

Financing for the process of development comes from several sources including commercial mortgage-backed securities (CMBS), financial institutions, insurance companies, large and regional banks, and other private sources such as private equity firms. Government agencies also provide funding through a variety of programs. Between 2012 and 2016, the percentage of financing from government agencies was an average of 20% of the funding utilized. This shows the importance that governments can play in the success of development.

This becomes more apparent when observing where government funding is put to use. In 2017, banks overwhelmingly financed construction while the largest percentage used for "Core" financing (the mortgage) is with government resources at 27%.

## FINANCIAL RESOURCES

This chart shows a trend in the types of lenders that are used to help finance development in the United States from 2012 through 2016. While 2012 saw the largest designation for Government Agencies, the average of around 20% shows the impact that public resources have on development.

### The Changing Composition of Lenders

| | CMBS | Financial | Gov't Agency | Insurance | Int'l Bank | Nat'l Bank | Reg'l/Local Bank | Pvt/Other |
|---|---|---|---|---|---|---|---|---|
| 2016 | 13% | | 22% | 12% | | 17% | 20% | |
| 2015 | 20% | | 19% | 12% | | 16% | 16% | |
| 2014 | 28% | | 19% | 10% | | 13% | 12% | |
| 2013 | 25% | | 17% | 12% | 10% | 17% | 11% | |
| 2012 | 23% | | 26% | 14% | | 14% | | |
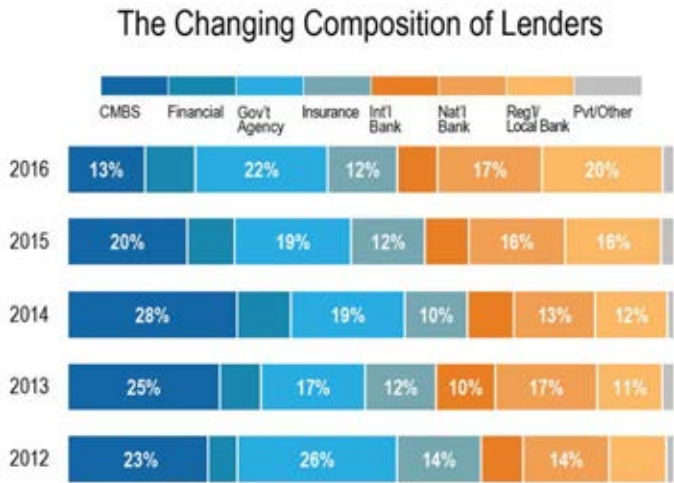
Source: Real Capital Analytics

## LENDER BY INVESTMENT STYLE

This series of graphs illustrates how the composition of lenders for 2017 is broken down by the style of investment. By taking a proactive role in early investment through assistance, a municipality can help encourage development.

### 2017 US Lender Composition by Investment Style

| | CMBS | Financial | Pvt/Other | Gov't Agency | Insurance | Int'l Bank | Nat'l Bank | Reg'l/Local Bank |
|---|---|---|---|---|---|---|---|---|
| Core | 19% | | | 27% | 10% | | 13% | 18% |
| Value-Add | 19% | 19% | | 19% | | | 13% | 12% |
| Construction | 15% | | | 26% | | | 37% | |
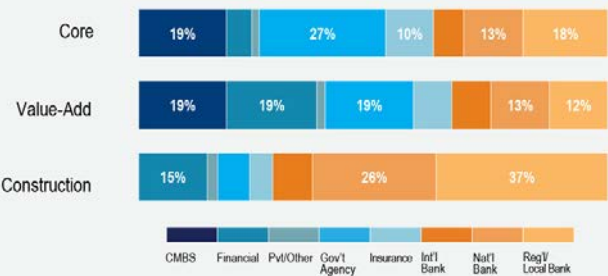
Source: Real Capital Analytics

## Financing to Construction

A simple ideal cash flow chart shows how a large sum of money is spent by the developer before any income is generated. Financing a project before construction begins can be quite expensive. Over the course of 16 months, a theoretical project may spend nearly one million dollars before breaking ground. During this time there may already be interest accruing on any debt taken out that the developer has to manage carefully.

| Activity | Month | Cost |
|---|---|---|
| Land deposit and preliminary concepts | 1 | $100,000 |
| Land closing (just equity) Architecture, studies, etc. | 4 | $400,000 |
| Loan fees Engineering, raising equity | 9 | $200,000 |
| Bond costs Design approvals | 12 | $100,000 |
| Regulatory costs | 14 | $100,000 |
| Final approvals | 16 | $50,000 |
| **Construction Can Begin** | | **$950,000** |

## Timeline to Construction

Since interest rates on financing play an important role, timelines are carefully thought out prior to a project. The number and type of regulations that are involved can be a big factor in how appealing a location is for development. While regulations do provide opportunities to ensure that the proposed project is in the best public interest, they can also serve as a detractor to development, especially if variances are required to build a building that would contribute to a walkable T.O.D. Allowing T.O.D.-friendly development by right can alleviate some of the time pressure on developers and encourage the creation of walkable places.

| Activity | Few Regs months | Many Regs months |
|---|---|---|
| Land contract | 0 | 0 |
| Land committed | 1 | 1 |
| Market study | 2 | 2 |
| Preliminary design | 3 | 3 |
| Engineering studies | 5 | 6 |
| Approvals | 6 | 24 |
| Finance commitment | 7 | 26 |
| Working drawings/permit | 9 | 36 |
| Land and loan closed | 9 | 36 |

## KEY TAKEAWAYS

The four main risks that a developer takes are:

1. Entitlement Risk
2. Construction Risk
3. Financial Risk
4. Market Risk

Ways that a municipality can be very helpful at the beginning of the process are:

1. Streamline the effort for permitting, approvals and variances.
2. Allow T.O.D. development by right, reducing time required for construction to begin and, as a result, easing financial stress.

# BACK OF THE ENVELOPE

At the initial stages of a potential project, a developer will perform what is called the "Back of the Envelope" analysis. This is a preliminary exercise to test the general feasibility of a development. This section gives a quick example of a Back of the Envelope analysis.

## PROCESS

The main goal of the "Back of the Envelope" analysis is to measure the projects costs with the projected profit for a development. This section will look at this analysis using a square foot basis.

1. Determine total costs by adding hard and soft costs, and the cost of the land.

    • Hard costs are the cost of construction (physical material).

    • Soft costs are almost anything else that is not a physical product such as fees for architecture, engineering, legal, permitting, approvals, etc.

    • *Be sure to convert each cost to square feet each time they are determined!*

2. Multiply total costs by the desired return rate to determine a "must get" minimum profit per square feet. We will use this to test feasibility.

3. Estimate the income and subtract operating expenses.

4. Compare the number from step 3 with the number from step 2 to determine if the minimum return rate is achieved.

## EXAMPLE

A developer is considering developing a 150,000 gross square foot office building with 100,000 net square feet of leasable space. Buildings have a net square foot for leasable area, because public areas such as common area stairs, lobbies, elevators, public restrooms, as well as construction elements such as walls take up some of the gross square feet of a building.

Assumptions:

1. Costs:

    • Hard Costs = $120 per gross square foot

    • Soft Costs = 20% of hard costs

    • $6,098,400 for 3.5 acres (152,460 square feet)

2. Desired Return on Investment: 8%

3. Projected Rent: $36.00 per square foot
   Projected Operating Expenses: $12.50 per square foot

*Does it Pencil Out?* Calculations

1. Costs:

    • Hard costs: $120 per square foot x 150,000 square feet = $18,000,000

        i. Divide this by the leasable square feet, because this is what you can rent out.

            $18,000,000 / 100,000 =              $180.00 per square foot

    • Soft Costs: $180 per square foot x 20% =              $36.00 per square foot

    • Land Costs: $6,098,400 / 100,000 square feet =              $60.98 per square foot

    • Total Projected Costs:              $276.98 per square foot

2. Desired Return on Investment: 8% x $276.98 per square foot= $22.16 per square foot

3. Determine Net Income: $36.00 - $12.50 = $23.50 Net Income

4. Net Income $23.50 vs $22.16 . . . . . *project pencils out!*

## T.O.D. ZONING DEVELOPER DISCUSSION

On October 22, 2018, a Developer Discussion was held to talk about the priorities and concerns of developers, how development can contribute to a good T.O.D., and how RFP's and RFQ's factor into development decisions. Victor Dover moderated a panel of 4 individuals with experience in the private and public sectors participated representing from large- and incremental-scale developers, an economic consultant and developer, and a city senior planner. Members of the panel were:

- **James Murray-Coleman:** Senior Vice President, Trammel Crow Company

- **Chris Hawley:** Senior Planner for the City of Buffalo

- **Benice Radle:** Owner and Operator, Buffalove Development LLC and Little Wheel Restoration Co.

- **Joe Minicozzi, AICP:** Principal, Urban3

Discussions were held on a variety of topics including the importance of a consistent vision, predictability, effective incentives, what an attractive RFP/RFQ process looks like, and the future of parking. After the discussion, municipalities had the opportunity to talk one-on-one with the panelists to discussion additional questions, get feedback on existing conditions, and help determine what logical next steps might be. The following pages include key takeaways and feedback from the panel on where a community can start to generate interest and attract development.







### WHERE TO START??

- Download the Buffalo Green Code as a reference

#### Basic Tools

- make a comprehensive plan
- make sure zoning matches comprehensive plan
- enable historic preservation credits
- streetscape improvements

#### Basic Needs

- coffee shop
- tactical urbanism
- restaurants

# DEVELOPER DISCUSSION: KEY TAKEAWAYS

During the Developer Discussion, several different topics were discussed, either through questions from the moderator or from the participants. The points below outline the key takeaways from the discussion to guide municipalities as they start thinking about how to attract the right developer for their community.

- *Do RFQ's <u>not</u> RFP's.*

- *Do a Form-Based Code*

- *Know what you are looking for* (big or boutique).

- *Get rid of minimum parking requirements.* At least "put parking at the bottom of the list" *AFTER* you determine what place you want to be. One panelist suggested that a municipality could "let the market decide how much parking they need." The need for traditional parking standards is dropping. Keep in mind that parking is expensive, so solve based on the context of what you want rather than the parking requirements.

- *Project has to pencil out*. What's the assessment of the development going to be at the end of the project? This question is always at play for a developer.

- *"Local Economic Revitalization Tax Assistance"*

- *Fine grain, small scale development* creates a sense of neighborhood pride and reinvestment.

- *Plan it. Plan it. THEN sell it.* Make sure that you have a consistent vision and that your regulations make your vision possible. Give developers certainty about what you want and how you can help.

- *This is a long-term investment:* a municipality should be thinking with a timeframe of 10-20-30 years.

## METHODS FOR MUNICIPALITIES

Understanding the development process sheds light on areas where municipalities can incentivize development by providing assistance earlier on in the process. This section builds from the Development Process section and insight from the Developer Discussion to discuss policy levers and other resources available to help municipalities capture the value of the public investment.

## Certainty vs. Uncertainty

During the Developer Discussion event, a key takeaway was the importance of certainty in how attractive an area is to developers. This takes the form of vision, regulations, and ensuring that the regulations support progress toward the vision. A vision is most effective when it is an illustrated graphic. These graphics can help a developer understand what a community wants to see out of a development. When guesswork and uncertainty is part of the projections that a developer has to take into account, a property becomes less attractive.

*When development that meets the vision is allowed by right rather than through variances and zoning changes, it leads to a more predictable path and outcome for both the community and the developer.*

## Public Outreach

An important ingredient to the success of a vision is to have public buy-in to the idea. When residents and stakeholders can give their input and express their vision for the future of their community, it decreases push-back when new development that matches the vision is proposed. To achieve a consensus, there should be a public outreach process that is comprised of the following approaches:

- **CHARRETTE:** A series of meetings that is organized around three feedback loops. Often times initial designs do not quite capture the initial feedback, while a second concept may overcompensate. The third iteration tends to be on the best track to address the public concerns. To gather public input a charrette typically contains: public ideas and input meetings, public feedback meetings, technical meetings, and public studios or working spaces.

- **WORKSHOPS:** Workshops are very similar to a charrette, however they include one or two feedback loops. As with a charrette, workshops may include: public ideas and input meetings, public feedback meetings, technical meetings, and public studios or working spaces.

- **SPEAKING ENGAGEMENTS:** These can be very helpful if the community has a question about a particular subject, or if more education is needed in a concept. An expert in a certain field presents the subject matter to explain why or how an initiative is being undertaken in a community









Public outreach methods can include speaking engagements, or charrettes and workshops that include opportunities to gather public feedback and input, create master plans, and renderings to illustrate the community vision.

# Available Levers

Ways that a municipality can provide incentives are by addressing the costs to a developer and finding ways to alleviate them while also ensuring that good development takes place. The two main costs are hard and soft costs and municipalities can provide incentives and assistance in the following ways:

## HARD COSTS

- **Make Infrastructure Improvements** – New streets, sidewalks, trees in public spaces, water, sewer, gas and other elements public infrastructure can be a large expense to developers. Assisting or paying for these infrastructure improvements reduces the amount that a developer must take out for financing and makes achieving the desired return on investment (ROI) easier.

- **Help with construction funding** – A part of the calculus in financing a project is how to pay for the construction and keep the accruing interest in check. Providing funding for a portion of the construction reduces the amount to finance, improving the financial performance toward the ROI.

## SOFT COSTS

- **Provide a Consistent Vision** – Increasing the certainty for a developer helps to reduce the amount of up-front time which amounts to costs. A consistent vision is made up of a vision agreed upon by a community and regulations that make achieving this vision by right. When regulations stand in the way of the vision, it increases the time by requiring variances and zoning changes. It also decreases certainty, because it is done project by project and makes the process feel up-in-the-air which could detract development.

- **Simplify Land Acquisition** – Making land acquisition easier for both large-scale and incremental development reduces the fees and time involved in moving ahead with a project. This can take different forms, from assembling many lots for a large intervention, to assuming ownership of vacant or dilapidated buildings for incremental development.

- **Simplify Approvals / Permitting / Variances** – Similarly to providing a consistent vision, making buildings that achieve the community vision by right incentivize developers who want to build T.O.D.

- **Help Close the Gap** – This can be particularly helpful when working to maintain equity in housing. Sometimes financial assistance through funding, tax rebates, low interest loans, or other sources enables a developer to close the gap between the projected performance and the desired ROI.

# Available Resources

Helping provide incentives and assistance for desired development can be difficult for a municipality when trying to determine where the money can come from. The following charts show possible resources from the regional, state, and federal level as of 2019. Regional resources are shown in yellow, state resources are colored blue, and red indicates federal resources. The Commonwealth of Pennsylvania has indicated their willingness to help communities determine what resources best match the need of each municipality through open conversations prior to applying.

| INFRASTRUCTURE IMPROVEMENTS | CONSTRUCTION FUNDING | CONSISTENT VISION |
|---|---|---|
| Community Development Block Grant (CDBG) | Community Development Block Grant (CDBG) | Community Development Block Grant (CDBG) |
| Authority for Improvements in Municipalities (AIM) | Action Housing Inc. Accessibility Program | Community Infrastructure and Tourism Fund (CITF) |
| Community Infrastructure and Tourism Fund (CITF) | Allegheny Housing Development Fund | Active Allegheny Grant Program (AAGP) |
| Tax Increment Financing (TIF) | Tax Increment Financing (TIF) | Multimodal Transportation Fund |
| Transit Revitalization Investment District | Transit Revitalization Investment District | Business in Our Sites |
| Multimodal Transportation Fund | Multimodal Transportation Fund | Keystone Communities |
| Infrastructure and Facilities Improvement | Infrastructure and Facilities Improvement | Municipal Assistance Program |
| Keystone Communities | Keystone Communities | Greenways, Trails, and Recreation Program |
| Greenways, Trails, and Recreation Program | Greenways, Trails, and Recreation Program | Transit Revitalization Investment District |
| PA Small Water and Sewer | HOME Program | |

| **LAND ACQUISITION** | **SIMPLIFY APPROVALS** | **CLOSE THE GAP** |
|---|---|---|
| Community Development Block Grant (CDBG) | Community Development Block Grant (CDBG) | Community Development Block Grant (CDBG) |
| Community Infrastructure and Tourism Fund (CITF) | Community Infrastructure and Tourism Fund (CITF) | Contractor Working Capital Loan Program (M/W/DBE) |
| Vacant Property Recovery Program | Active Allegheny Grant Program (AAGP) | Tax Increment Financing (TIF) |
| Transit Revitalization Investment District | Municipal Assistance Program | Local Economic Revitalization Tax Assistance (LERTA) |
| HOME Program | Transit Revitalization Investment District | Allegheny Together |
| | Keystone Communities | Infrastructure and Facilities Improvement |
| | | Keystone Communities |
| | | HOME Program |
| | | Transit Revitalization Investment District |

# Lean Urbanism

Lean Urbanism is a concept that was created to examine local regulations to determine what might be standing in the way of local, small- and medium-scale development and find ways to alleviate these burdens while maintain the community vision and safety. Many of the strategies that have emerged help to reduce the soft costs and costs associated with the beginning of the development process. Some strategies are:

- **ESTABLISH PRE-APPROVED BUILDING TYPES** – Incorporating these as a tool can incentivize development that achieves the community vision. A pre-approved building type would reduce design time, approvals time, and guess-work for developers. It can also help local, small- and medium-scale developers by getting them started in the right direction. Types of pre-approved buildings could be:

    - Accessory Dwelling Units that can be used as rental units.

    - Du-, Tri-, and Fourplexes

    - Courtyard Apartments

    - Row Houses

- **EXPEDITED REVIEWS** – A municipality can encourage certain buildings and uses by reducing the amount of time for review to make them attractive to developers while achieving needs of the community. These may include:

    - Workforce / Affordable / Equitable Housing

    - Mixed-use buildings

- **RELIEF FROM PARKING MINIMUMS** – Parking can be an expensive aspect of a development. If parking requirements that assume an unwalkable environment are required, a parking garage may be required. A basic, efficient parking garage can have a cost of around $30,000 per parking spot. This cost then gets transferred to leases and sales, increasing the price and decreasing the affordability of residential units. In their February 2019 magazine, the Institute of Transportation Engineers President recommended eliminating minimum parking requirements to improve affordability and improve communities.

An example of Lean Urbanism can be found in Chicago. In 2018, the city was experiencing areas of blight in former commercial streets. To combat this, the city enacted a different type of business permit that would be tied to the entrepreneur, not the physical location. The intent was to bring more life to these dilapidating storefronts while also reducing the barrier to entry for entrepreneurs by eliminating on-site inspections and allowing the permit to exist from 5 days to a year. By thinking outside of the typical permitting box, Chicago's experiment is a test for a solution of both urban design and economics.

# Capturing the Value

It is important to keep in mind that offering incentives and providing assistance to developers is an investment made by the community. As with all investments, research should be conducted to ensure the best return. The following items should be considered when evaluating who to partner with and how to invest the public funds.

- **IMPROVED LAND VALUES FOR RESIDENTS** – Developments that contribute to the community also improve the value of property for residents and land owners. This tends to be particularly true for pedestrian-friendly T.O.D.

- **IMPROVE LIVABILITY** – The result of new developments should improve the quality of life of a community. Providing everyday missing services such as grocery stores, corner stores, dry cleaners, daycares, and schools within walkable distances improves mental and physical health and the quality of life for residents.

- **INCREASE MUNICIPAL REVENUE** – Increasing land values also has the benefit of increasing municipal coffers beyond the initial development. Providing a mix of uses such as commercial and office enables a municipality to lean on these uses for revenue rather than residential taxes.

- **ATTRACT JOBS AND BUSINESSES** – New developments in T.O.D. areas can attract business and create places for offices to be established.

- **GENERATE REVENUE ON PUBLICLY-OWNED LAND** – Sometimes a municipality can enter into partnerships or agreements with developers. This can be by selling land, leasing property, or having other type of agreements.

- **INCREASE TRANSIT RIDERSHIP** – Well designed T.O.D. can increase transit ridership by placing residents, shops, restaurants, entertainment, and jobs in an easily walkable distance from the transit station or stop.

- **REDUCE COST OF PARKING MAINTENANCE & CONSTRUCTION** – This can be accomplished in two different ways. Parking can be constructed and maintained by private ownership which reduces the burden on municipalities. This can also lead to a loss of revenue from parking fees. Well designed T.O.D. can also reduce the need of a car for residents which leads to a reduce in the demand for parking. Car and ride sharing services make this easier for community members to achieve.

# Food for Thought

While determining the types of incentives and assistance to provide to potential developers there are a few options to keep in mind.

**PERFORMANCE-BASED SUBSIDIES** – Sometimes a developer will agree to a subsidy that may change depending on the performance of the finished project. In Arlington Heights, Chicago the community and developer agreed to reduce a subsidy if the resulting project outperformed the established projections. The project did and Arlington Heights was able to recoup some of their investment.

**GROUND LEASES** – Sometimes a municipality will lease out the land for development. This can help generate revenue for the community, but it may discourage redevelopment. This is because banks tend to avoid lending for a mortgage when the lifespan of the mortgage exceeds the life of the lease which makes it harder for a developer to finance a project. If the developer and municipality enter into a lease that has a lifespan longer than a mortgage, a bank sees this as very favorable.

**STIPULATIONS** – Often times a municipality will sell property that carries a particular requirement with the sale. This can be building a certain percentage of workforce housing, installing certain public infrastructures, ensuring mixed use is part of the development, etcetera.

**EQUITY PARTICIPATION** – Sometimes a municipality will become an equity partner with a developer, meaning that they are one of the early investors providing cash at the beginning of the development process. This carries a benefit of benefitting from the profits of a project. Lenders like to see these types of agreements, because it shows that the community has put their interest and weight behind a project.

**TAXING CERTAIN USES/SALES/LEASES ON PUBLICLY OWNED LAND** – As development take place on publicly owned land, a part of the agreement with the developer is to place a tax on particular uses, and on any sales or leases that take place.

# Good Investments

A useful metric on how to judge the value of public investment in the form of incentives or other assistance is to consider the tax revenue per acre of a proposed development. While each development is likely to increase tax revenue for a community, a better investment will bring in more revenue per acre (a limited resource). Projects that bring in more tax revenue than is required for their maintenance tend to be compact, walkable, and have a mix of uses. An example of this is in I'On just north of Charleton, South Carolina. A graphic by Urban3 that compares public revenue with expenditures shows how I'On (a newer development) performs as compared to the Historic Downtown and beachfront property. High spikes indicate net profit for the city while grey and light pink spikes indicate that it costs the municipality more to maintain services to the property than taxes on that property generate.

Historic Charleston clearly outperforms any area nearby. Next is the ocean front property, the Old Village, and I'On. Ocean front property continues to bring in high values and the Old Village is also a historic settlement of Charleston. I'On is an inland development with some water views, however the majority of the land value is derived from the man-made environment. A compact, mixed-use, walkable design has created land value and, as a result, provided greater revenue for the local government.
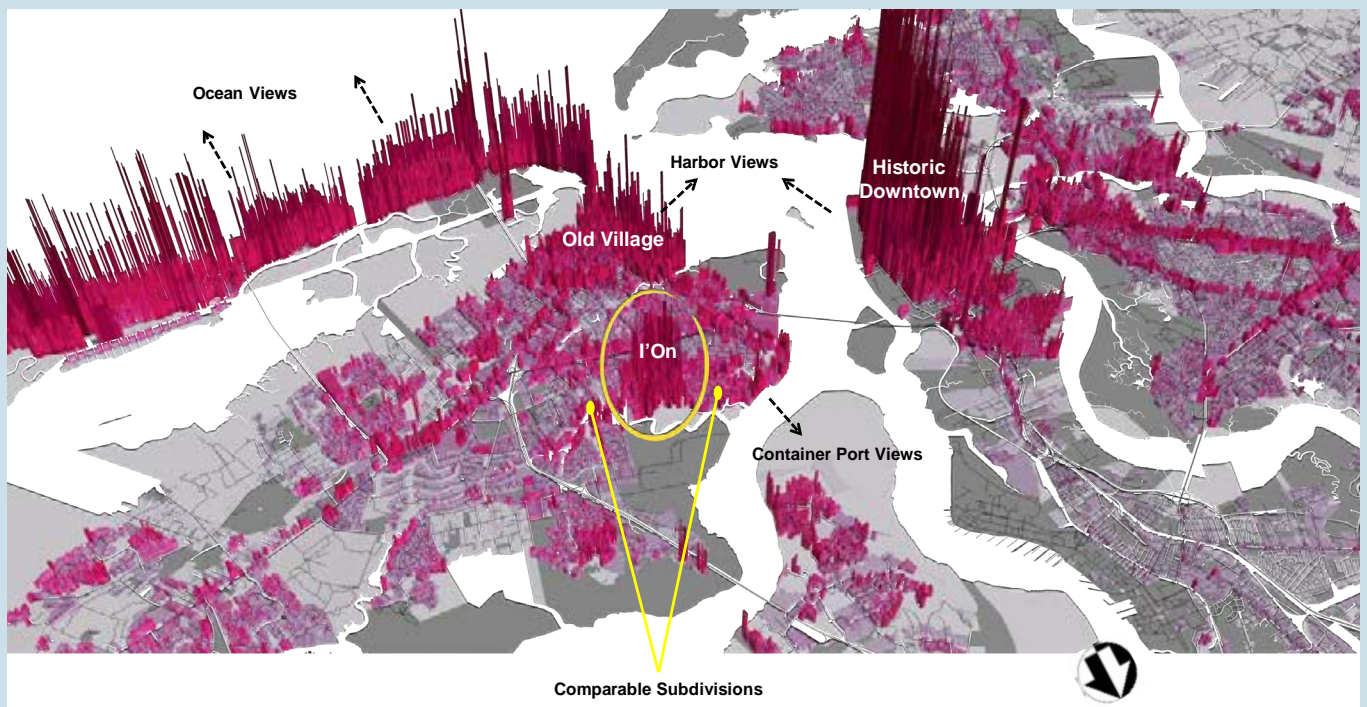


The image above, by Urban3, illustrates the tax revenue generated by property in and around the Charleston, South Carolina area. While Historic Downtown and Old Village have had centuries to develop their land values, and the properties with ocean views benefit from being on the coast, I'On is a newer and inland neighborhood. The value of the land and income for the area is created through the design of a denser, walkable community.

There are a variety of policy tools that can be used to make zoning regulation changes in an effort to enable T.O.D. Each approach has its own benefits depending on the different regulation situations in each municipality; some regulations have been recently rethought and relatively new, while others have been in existence for decades. This section discusses the range of tools for zoning regulation changes and the different ways that they can be used to make T.O.D. easier within a municipality. It begins with a recap of what a good T.O.D. looks like, a toolkit for implementation, how to calibrate the tools, types of ownership context, and how to pair the right tool with the right context.

## DEFINE YOUR VISION

Successful implementation of any transit-oriented development begins with a clear vision. No matter the scale of the intervention (whether substantial changes are required, or more surgical change is sufficient), transit-oriented environments share the following common goals that should be part of the vision:

- Consider walking, biking, and transit as equally as the automobile
- Encourage land uses that generate transit trips and pedestrians
- Create mixed-use environments
- Concentrate employment and residential uses within 1/2 mile of stations
- Preserve historical frontage
- Create parking that is accessible but not excessive

### SUCCESSFUL T.O.D. ENVIRONMENTS

Successful transit-oriented environments have the following characteristics:

- **Walkable:** Streets are pedestrian friendly.
- **Mixed-Use:** Daily needs can be met on foot.
- **Appropriately Dense:** The density makes transit & retail viable
- **Humanly Scaled:** Storefronts, signage, streets are scaled and oriented to the pedestrian
- **Multi-modal:** Bicyclists, pedestrians, and drivers can use easily use the same space
- **Coordinated:** Easy transfer between different forms of transportation
- **Diverse:** Building types support a large range of price points, scales, and areas of the market

# METHODS FOR IMPLEMENTING A T.O.D. VISION

The following are methods and regulatory tools a municipality can use to implement their vision for transit-oriented development. They are generally listed from least intensive (in terms of the time, resources, and energy required to use them) to most intensive. Although the latter tools can represent a more substantial up-front investment of time and resources from the municipality and community, they can also be more effective and predictable in achieving a specific built result.

1. **CONDITIONAL USE PERMIT**

2. **AMENDMENTS TO ZONING ORDINANCE**

3. **CHANGES TO A ZONING MAP**

4. **OVERLAY ZONING DISTRICT**

5. **FORM-BASED CODE**

6. **REGULATING PLAN**

7. **STATION AREA MASTER PLAN**

These methods, including the pros and cons of each, are described on the pages that follow.

Below (clockwise from top left): Zoning Map; Form-Based Code page; Regulating Plan; Station Area Illustrative Master Plan examples
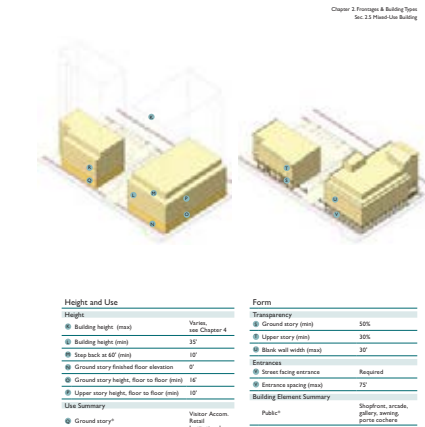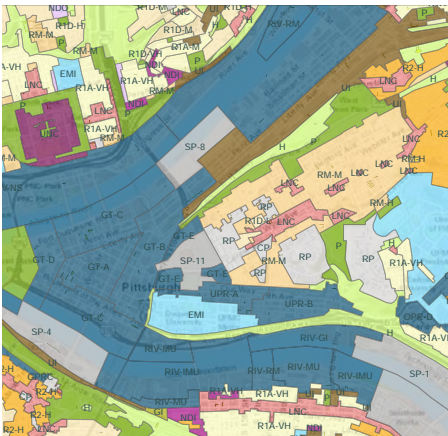
## 1. CONDITIONAL USE PERMIT

A conditional use permit allows an applicant to develop a site in a way that is not compliant with the current zoning ordinance. A municipality should clearly state which thresholds or criteria are required in order to activate such a provision. These could be related to minimum parcel size, specific uses, or even the distance from an existing or proposed transit stop. This text-heavy solution is enabled in many jurisdictions already. This process should be used between today and when another, long-term, solution is in place.

**PROS:**
- Minimal alteration to current zoning ordinance
- Already enabled in many jurisdictions

**CONS:**
- Time consuming: Can't do approvals administratively
- Every submittal is a one-off

## 2. AMENDMENTS TO ZONING ORDINANCE

Amendments to an existing zoning ordinance should focus on parking, setbacks, and building form to promote walkable places that encourage transit use. Revisions concerning parking should include reduced parking ratios, count on-street spaces, include shared ratios, emphasise landscaping on the street rather than parking lot, and encourage parking in the rear. Side setbacks should be as minimal as permitted by building code in order to create a continuous street facade. Setbacks from frontage for commercial uses should be small in order to bring pedestrians close to the shopfront. Zoning ordinances should allow for a mix of uses, smaller building footprints, and increased building height.

**PROS:**
- Moderate alteration to current zoning can be relatively quick
- Text revision or amendment as opposed to a full rewrite of the zoning ordinance
- The process is familiar to the public, developers, and builders

**CONS:**
- Amendments can lead to a patchwork of regulations and can be tedious to understand
- Text-oriented not graphically-oriented

## 3. CHANGES TO A ZONING MAP

Changes to a zoning map involve altering current parcel designations. This is a tool that should be used when current zoning may simply not permit the development desired. If the changes to the text become drastic enough, altering the map may be simpler than amending current zoning. If a jurisdiction has multiple transit stops the new parcel designation can be used at in the area encompassing every stop. This replication is efficient and may even be used across multiple jurisdictions.

**PROS:**
- Easy to replicate from one area to another
- Could be a tool used across jurisdictions
- If the market is strong, it is easier to change a boundary than to alter several surrounding districts

**CONS:**
- Process of changing the zoning map may be time intensive
- Be wary of spot zoning as changes must be made comprehensively

## 4. OVERLAY ZONING DISTRICT

An overlay zoning district is a more specific type of zoning map. This type of alteration is less susceptible to spot zoning. These regulations, in a particular area, are in addition to and supersede the requirements of the underlying zoning district. The underlay zoning remains in place. The purpose is to address issues in an area that requires special attention. The overlay can take many forms, such as a form-based code.

**PROS:**
- Easy to replicate from one area to another
- Underlay zoning acts as a backstop, and can be reverted to later

**CONS:**
- Referencing two different sets of standards may be confusing
- Process of writing and adopting the overlay is time-intensive

## 5. FORM-BASED CODE

Conventional zoning primarily relies upon use, but form-based codes place greater emphasis on the form of the building and its location on a particular lot. (See following pages for more detailed information about form-based codes.)

**PROS:**
- Produces most walkable urban environment
- Pairs best within immediate station adjacency

**CONS:**
- Can be time-intensive to create and implement
- Learning curve for developers, owners, and builders first working with a form-based code
- Outreach and education for developers and the public are necessary

## 6. REGULATING PLAN

A map, or set of maps, that shows how elements of a form-based code are applied to a particular area. In the simplest form, it is most concerned about the quality of frontage. The intention is to tightly control what the final development will look like and is therefore a time-intensive tool. It is often conceived as a master plan and then reduced to the most critical elements that will produce a walkable environment.

**PROS:**
- Can be utilized at many scales
- Excellent for a single street or block
- Clearly articulates the expectations of the developers

**CONS:**
- Can be very specific and if too strict may discourage development
- May require frequent alteration

## 7. STATION AREA MASTER PLAN

A station area master plan is a specific design solution for a particular site and can range in size. This is the most design-intensive way to implement a vision and therefore it provides very little flexibility. The vision is extremely clear and is easy to show to the public. A master plan is often paired with a form-based code or other regulatory mechanism in order to be implemented.

**PROS:**
- Provides a very predictable result
- Easy to share with the public
- Leaves little to no interpretation of what will be built

**CONS:**
- Time intensive
- May be expensive
- Changes in the market may translate to changes in the master plan

## THREE ELEMENTS TO CALIBRATE

Regardless of what tool from the toolkit is used to implement the vision in the code, all tools used by a municipality to make these changes should be calibrated to the local existing built conditions and the existing regulations. It is important to understand how each of these elements have an impact on regulation tools, and how regulations are enforced. Each time a tool is used, the following three elements should be considered.

### 1. CODE STRENGTH

Code strength refers to how restrictive the regulations are for a given area. Finding the right strength can be a bit like finding the "sweet spot" on a bat. "Looser" codes may not produce a desired vision, while more stringent codes may discourage development entirely. A strong code provides a relatively narrow range of results. It can be time intensive, and therefore potentially costly, to write a code of this type

A "weak" code can be development friendly. There are fewer obstacles for developers to overcome; but there can be a wide range in development quality allowed by right. A weak code can be fast to write and implement but can also lead to more unpredictable results.

### 2. GEOGRAPHIC LAND AREA

The land area should be large enough to fully integrate a transit station, but small enough for code enforcement purposes.

The geographical area a municipality wishes to code should typically be no smaller than the immediate bicycle sheds. This is generally a ½ mile radius around a transit station or stop, however this area is not a perfect circle. Impediments to walkability such as highways, rail lines, topography, and street grids can alter this geometry. The geographical area a municipality wishes to code should be no larger than what it can realistically enforce given budgetary and personnel limitations. The more stakeholders that are involved, the more difficult the process may become for developers, builders, and the public.

A compromise could be to apply different regulations to different areas. Immediately adjacent to the station the code could be more stringent, and as you move further from the transit stop the land use requirements may become looser. The municipality should also consider how development may change in the future. It is important to consider which corridors or parcels are more likely to develop based on the way the market is trending. Areas near a station where there is already a connected and compact street network with many existing buildings should be preserved.

### 3. SPEED OF APPROVALS

Streamlining approvals are an opportunity to incentivize high quality development. Developers may be willing to trade quicker, more predictable approvals for a higher design standard or a density bonus. A municipality could waive certain responsibilities of the applicant, such as traffic impact studies or check-in points throughout the process, but only if it means a higher quality neighborhood  will result. Municipalities should look for opportunities for administrative approval. Most importantly these incentives should match current market demands. If a market isn't ready to support taller or denser development, bonuses for these will not serve the intended purpose.



Station area and surrounding context



1/2 mile radius walk/bike shed



Adjusted 1/2 mile radius walk/bike shed. PAAC has created these for most of the stations that are part of their network and they are available upon request.

## OWNERSHIP CONTEXT

Another factor to consider when selecting the tool to be used is what type of entity owns the land and how many owners are in the area under consideration.

### PUBLICLY-OWNED SINGLE PARCEL

This is a larger parcel of land that is owned by a public entity. Typical examples include land owned by the Port Authority, a land bank, the State, or the City.

### PRIVATELY-OWNED SINGLE PARCEL

This is a larger parcel of land that is owned by a private entity. Examples include a shopping mall or office park.

### MULTIPLE OWNERS ON MULTIPLE PARCELS

This is a land owned by a multitude of entities on parcels of varying sizes which is the likely situation in a downtown or urban setting. This may limit opportunities for rapid or large-scale redevelopment; implementation methods need to set the stage for incremental change.

## PAIRING THE TOOL TO THE CONTEXT

### PUBLICLY-OWNED SINGLE PARCEL:

- Station Area Master Plan
- Regulating Plan
- Form-Based Code
- Amendments to Zoning Ordinance

### PRIVATELY-OWNED SINGLE PARCEL:

- Station Area Master Plan
- Conditional Use Permit
- Overlay Zoning District

### MULTIPLE OWNERS ON MULTIPLE PARCELS:

- Station Area Master Plan
- Conditional Use Permit
- Regulating Plan
- Form-Based Code
- Changes to Zoning Map
- Overlay Zoning District
- Amendments to Zoning Ordinance



Publicly-owned single parcel, such as Port Authority, Land Bank, or City such as the area around Heinz Field.



Privately-owned single parcel (or very few owners) such as the Southside Works.



Multiple owners on multiple parcels

# FORM-BASED CODES

Our streets and public spaces are shaped by the buildings that face them. A powerful tool some communities are using to proactively specify the type of physical environment they would like to have, and shape future development, is form-based codes (FBC). Form-based codes focus primarily on the physical form of development and can be used to realize a desired community vision.

Form-based codes differ from traditional zoning in that they prescribe specific urban design standards and place fewer restrictions of the specific use of land. For example, a traditional zoning code may designate a property be used specifically for commercial purposes but be silent about its urban characteristics. Conversely, a form-based code provides detailed regulation about elements of design that impact the quality of public streets and spaces. A method that form-based codes uses to identify which regulations are applicable on a given parcel is the transect. A transect describes the intensity of the buildings, their relationship to the street and with each other within its boundaries. A T6 transect designation identifies a dense downtown area, while a T2 identifies a rural character. T3 through T5 describe the areas in between.

Form-based codes specify where a building should be placed on its site to define the street space, that the building not have blank walls to face public spaces, and that it provides shade over the sidewalk with awnings or canopies. Some codes include detailed architectural standards that specify materials and configurations of design details that are harmonious with local and regional precedents. The code may allow for a wider range of uses than traditional zoning, which is particularly relevant in historic buildings that often require flexibility for change in use over time.

A form-based code approach to zoning can help to ensure that future infill buildings and improvements conform with the community vision, getting the basic form and massing of a building right while controlling for the key elements that affect how well buildings respect and contribute to the public space.

Another potential benefit of form-based codes is a streamlining of the review process, which encourages new development by providing clarity and certainty. Form-based codes allow by-right development in congruence with the standards set forth. If the community is involved in the creation of the code they can give input to and approval of the development forms specified by the code; thus the overall review and approval process can be shortened. In addition, the "guessing game" of what will be approved is eliminated. By establishing clear standards that support the community's vision and provide a visual guide to design criteria, community members can also be assured that infill development will be desirable and contributive to the character and function of the town.

The following pages show the components that are typically part of a form-based code:

- The Regulating Plan, a map that applies code standards to specific parcels, streets, and public spaces;

- Building Form Standards, that describe the relationship between buildings and streets/public spaces;

- General Standards, that describe rules for all development parcels such as permitted uses, parking, lighting, and signage;

- Architectural Standards, that describe the elements, materials and configurations permitted for building details; and

- Street Standards, that describe the desired physical conditions in the rights-of-way.

## What are Form-based Codes?

A form-based code is a land development regulation that fosters predictable built results and a high-quality public realm by using physical form (rather than separation of uses) as the organizing principle for the code. A form-based code is a regulation, not a mere guideline, adopted into city, town, or county law. A form-based code offers a powerful alternative to conventional zoning regulation.

Learn more at: formbasedcodes.org.

# Regulating Plan



The Regulating Plan is a map that applies the code standards to specific lots and parcels. These standards include:

- **Transect zones**
- **Building forms** — the shape, size, and height of a building as well as the location on the parcel
- **Build-to lines** — a line where a building must be built up to, rather than a setback which is a minimum number and tends to encourage parking lots out in front
- **Mandatory shopfronts**
- **Terminated vistas** — focal points at the end of a street or public space

This example shows Transect Zones that vary from most intense around a planned transit station area, to least intense at the edges.

# Building form Standards

Building Form Standards illustrate and describe the required relationships between buildings and public spaces for each Transect Zone or Building Type, incorporating build-to zones, setbacks, building heights, permitted encroachments, and location of parking.

# General Standards

Standards that are not specifically addressed elsewhere in the code are typically included in the General Standards, which provide provisions and regulations that apply to all Transect Zones or Building Types. Standards may include specifying permitted uses; and design of signage, lighting, and parking.

## C. T6: Station Area Mixed Use

### 1. Form



**Key**
- ⎯ ⎯ Property Line
- ▨ Build-to-Zone (BTZ)
- ▨ Potential Building Area (in addition to Build to Zone)

#### Building Placement

| | | |
|---|---|---|
| Front Build-to-Zone | 0' minimum to 6' maximum | A |
| Frontage Occupancy | 80% minimum | B |
| Side Setback (mid-block) | 0' minimum | C |
| Side Build-to-Zone (corner) | 0' minimum to 10' maximum | D |
| Rear Setback (lot or Alley) | 5' minimum | E |

NOTES:
- "Front" and "Side" orientation shall be determined by the Street Hierarchy in the Street Design Standards (Part 6).

#### Lot and Block Standards

| | |
|---|---|
| Maximum Block Perimeter | 1800 linear feet maximum |
| Lot Width | 18' minimum, 120' maximum |
| Lot Depth | no minimum, 180' maximum |
| Lot Coverage (%) | no maximum |

NOTES:
- Blocks shall be configured as shown in the Regulating Plan. Modification to Blocks may be approved by the FBCA/FBCS if determined to be consistent with the intent of this article and the above lot and Block standards.
- Blocks may be defined by streets or pedestrian walkways.

### 2. Height



**Key**
- ▨ Build-to-Zone (BTZ)
- ▨ Building

#### Building Heights

| | | |
|---|---|---|
| Building Height | 2 Stories minimum  4 Stories maximum | F |
| First Floor Height (floor to floor) | 14' minimum | G |
| Ground Finished Floor (above sidewalk or finished grade) | 0' min. (commercial)  24" minimum (residential) | H |

NOTES:
- Basements, uninhabitable Attics, and underground parking shall not count as a Story.
- Stories may not exceed 14 feet in height from finished floor to finished floor, except for a First Floor commercial function which may be a maximum of 25 feet.
- Building Heights shall be measured to the eave of the roof or roof deck (if flat).
- Small footprint towers, cupolas, and other rooftop features may above the designated height limit as described in Part 5, Architecture Standards.

### 3. Parking Location



**Key**
- ⎯ ⎯ Property Line
- ▨ Parking Area
- ⎯ ⎯ Setback Line

#### Parking Location

| | | |
|---|---|---|
| Front Setback | 30' minimum | I |
| Side Setback (mid-block) | 0' minimum | J |
| Side Setback (corner) | 30' minimum | K |
| Rear Setback (lot) | 5' minimum | L |
| Rear Setback (Alley) | 0' minimum | |

NOTES:
- Parking shall be accessed from rear Alleys or side streets whenever possible.
- See General Standards (Part 4) for parking requirements.

### 4. Permitted Encroachments



**Key**
- ⎯ ⎯ Property Line
- ▨ Encroachment Area

#### Permitted Encroachments

| | | |
|---|---|---|
| Permitted Frontage Elements / Encroachments | Gallery, Stoops, Forecourts, Awning/Marquee, Balconies | M |

NOTES:
- Frontage Elements may Encroach forward of the Build-to-Line or Zone and/or into the Right-of-Way, barring any additional restrictions by the public entity that has control over the public Right-of-Way.
- See Architecture Standards (Part 5) for additional requirements.

### 5. Miscellaneous

NOTES:
- Where a building Facade steps back or is absent from the Build-to-Line or Zone, the Build-to-Line or Zone should be defined by a fence, landscape wall or hedge.
- All buildings must have a Principal Entrance along the Front Facade.
- Loading docks and other service entries shall not be located facing Station Area Mixed Use street frontages or Civic Spaces.

Figure 5-9: Examples of ways to subdivide a Facade [into hori]zontal layers with Expression Lines

a,b.   Facades comprised of a single (1) horizontal la[yer]
c,d,e.  Facades subdivided into two (2) horizontal lay[ers]
f,g,h.  Facades subdivided into three (3) horizontal l[ayers]

### SECTION 213-586
### FACADE COMPOSITION

#### A. Centerlines

1.  Facades shall feature alternating structural centerlines and fenestration centerlines.

2.  These centerlines shall extend from the top of a mass to the bottom of a mass.

3.  Multiple windows and/or doors may be grouped symmetrically around a single fenestration centerline.

4.  The spacing of centerlines may be identical across a façade, or may vary.
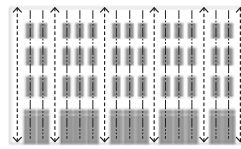


Figure 5-5: Stuctural and fenestration centerlines

#### B. Cornices

1.  The top of each primary and secondary mass shall be emphasized with a projecting cornice. This cornice shall feature a deeper projection, and therefore stronger shadow line, than any other Expression Line on a façade.

2.  A cornice may be used to visually support a pitched roof.

3.  A wall plane may extend above a cornice to form a parapet.
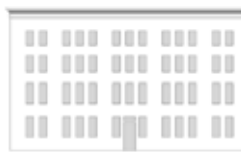


Figure 5-6: A cornice at the top of the mass

#### C. Expression Lines

1.  Expression Lines are formed by horizontal moldings which project minor shadow lines.

2.  Facades may feature a change of colors, materials or [textures at an Expression Line]
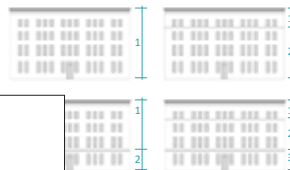


[F]acades divided into 1, 2, and 3 horizontal layers



[a]n Expression Line at the top of shopfronts
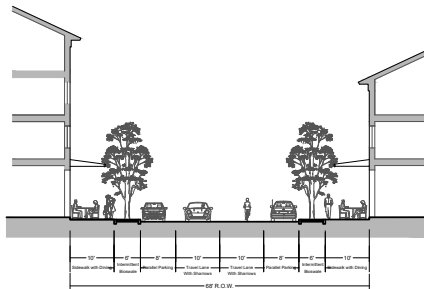


**FIGURE 6.6**

| Street Name | Main Street (new) |
| --- | --- |
| **ROW** | 68 feet |
| **Pavement Width** | 36 feet |
| **Target Speed** | 20 mph |
| **Vehicular Travel Lane** | 2 - 10 foot wide shared travel lanes |
| **Public Transit** | None |
| **Bicycle Facilities** | 2 - 10 foot wide shared travel lanes |
| **On-Street Parking** | 8 foot wide parking lanes on each side of the street, measured to face-of-curb *(Optional alternative: angled parking)* |
| **Median** | None |
| **Bump Outs** | Dispersed intermittently in on-street parking lane to provide additional planting space and snow storage |
| **Pedestrian Facilities** | 2 - 10 to 16 foot wide sidewalks with outdoor dining amenities |
| **Planter Type** | 6 foot wide intermittent bioswales on each side of the street |
| **Landscape Type** | Low canopy street trees |
| **Green Infrastructure** | Bioswales |

## Architectural Standards

Architectural Standards specify by categories the architectural elements, configurations, and materials for use in the construction of buildings. The level of detail included in a code varies based on community preference. Some codes go to a great level of detail to specify desired architectural style and design elements; others limit instruction to just those key elements that are vital to walkability, such as prohibiting blank walls, and providing shelter for pedestrians at the ground floor level.

## Street Standards

Street Standards illustrate by street type the physical conditions shown in the right-of-way, such as width of travel lanes, sidewalks, street trees, and on-street parking. Street types are prescribed to specific thoroughfares on the Regulating Plan. The standards can be used to guide the enhancement of streets, over time, as improvements are needed.

# Case Studies
## The Hometown Ordinance, South Miami, FL

The Hometown Ordinance in South Miami, Florida is an example of using form-based code to strategically remove zoning barriers, and allow and encourage development according to the community vision.

The Hometown Ordinance is an older code (adopted 1993), one of the earliest examples of using a form-based method. The code implements a Master Plan for South Miami's downtown area. The plan also induced public street improvements, including a "road diet" for Sunset Drive (the community main street) that reduced automotive lanes from 4 to 3 in order to widen sidewalks and enable a lively pedestrian environment. Numerous new street-oriented buildings have been constructed following the code's standards, with each addition positively enhancing the walkable, pedestrian-oriented character of South Miami.

## TAKEAWAYS

Key code innovations that could apply to FBCs in Allegheny County include:

### REVISED PARKING REQUIREMENTS

The code revamped parking requirements to reflect a main street, pedestrian-oriented vision. The old parking requirements were typical for strip shopping centers or suburban office complexes, resulting in building heights being limited to one story. The revised parking rules contain incentives for multi-story, mixed-use buildings. If developers combine residential units, retail and office uses in a single building, the total required on-site parking can be reduced by 45% or more. This is done through sharing the parking requirements between uses with opposite peak times (offices and restaurants) and by allowing on-street parking spaces to count toward the requirement for adjacent buildings.

### INCREASED FLEXIBILITY IN PERMITTED LAND USES; OUTDOOR DINING APPROVED

The Hometown Ordinance established flexibility on the land uses permitted by the code. On most streets, all of the uses permitted in the district (including many types of retail, office and residential) are now allowed on any given floor, allowing market forces to determine uses. Outdoor dining was once prohibited throughout South Miami, but the new code established areas where outdoor dining is pre-approved and encouraged.

### REPLACED SETBACKS WITH BUILD-TO LINES

The Hometown Ordinance makes the design requirements for buildings much more specific and rewards developers for meeting them. For example, the concept of "setback" was replaced with "build-to lines." Build-to lines set a line where a building must be built up to rather than a setback that requires a building to be no closer than a particular line. This helps to create a more walkable environment by changing the regulations that encourage parking lots in the front of buildings. The requirements are intended to give streets a human scale, and work to ensure a pleasing walk by shopfronts instead of along parking lots.

### STREAMLINED APPROVALS PROCESS

The Hometown Ordinance cuts red tape for developers. For example, there is a simple set of Pre-Approved Architectural Standards; as long as a design adheres to these standards, there is no need to obtain approval from the Environmental Review and Preservation Board (ERPB). Under the old code every project required ERPB



The Starbucks Building, an example of urban infill on Sunset Drive



New mixed-use infill building near the South Miami Metrorail station, made possible by transit-proximity parking reductions in the code



Outdoor dining is now found throughout South Miami's downtown

# Case Studies

## Columbia Pike, Arlington County, VA

Columbia Pike is south Arlington County's historic main street; as other areas of the County grew and thrived, this corridor was experiencing little new investment. In 1998, Arlington County embarked on a planning process to encourage revitalization and build a safer, cleaner, more competitive, and vibrant Pike. Initial planning efforts focused on the commercial centers, called the Revitalization District Nodes. During a public charrette process in 2002, over 700 citizens studied four specific areas along the corridor. The Revitalization District Form-Based Code is the result of this effort which sets forth the community's long-range vision to create a competitive and vibrant urban center. The plan and code have unlocked development potential, and public and private reinvestment (including the first mixed-use development projects in over 40 years) is transforming the Pike.

In 2011, a second phase of planning for the residential areas surrounding the mixed-use nodes was initiated. The Neighborhoods Plan implements community goals such as enhancing the quality of life, creating a pedestrian and bicycle-friendly community, supporting future transit investment, and, importantly, sustaining a supply of housing to serve a broad mix of incomes. The Neighborhoods Form-Based Code was created specifically to implement these goals, and includes standards for walkable urban form and provisions for the creation of new affordable housing.

In the first 13 years after the public charrette, new development added 3,084 residential units (of which 717 were committed affordable to residents earning up to 60 percent of AMI); more than 337,970 square-feet of commercial space; a 52,300 square-foot community center, public plaza, mini-parks and new supermarkets.

## TAKEAWAYS

Key code innovations that could apply to FBCs in Allegheny County include:

### TRANSIT-READY, WALKABLE URBAN FORM, BASED ON COMMUNITY VISION

Community support has been vital to implementation of the code. The County held extensive, interactive public charrette processes, to get community input about the types of urban environments that would be permitted by the code, shaping key details such as building height, placement, and character.

### MIX OF USES

Allowing a mix of uses, including residential, in the previously commercial-only nodes stimulated interest from property owners and developers. As a result, new street-oriented mixed-use storefront buildings with residences above replaced vacant commercial buildings.

### STREAMLINED APPROVAL PROCESS

A key incentive of the code is a streamlined approval process if the proposal meets code standards, bypassing an extended negotiation with the County Board and community. This provides predictability in outcomes for both the community and developers.

### AFFORDABLE HOUSING REQUIREMENT

The Neighborhoods Form-Based Code includes a requirement for on-site affordable units in proportion to any new density, and will facilitate the preservation of up to 6,200 affordable housing units, while encouraging higher density development and connecting housing to plazas, open space and transportation.



Community participants at the Neighborhoods Plan charrette



Example of new development made possible by the Revitalization District Form-Based Code



Example of new development made possible by the Neighborhoods Form-Based Code

# MAIN STREET REVITALIZATION

Allegheny County developed as a series of smaller towns and municipalities connected together complementing the larger Pittsburgh metropolitan region. Each area grew around its own commercial center, or main street, which was the center of community life.

A traditional main street is typically a highly walkable environment, where people can do many activities (live, work, shop, eat, use municipal resources and services, and be entertained) without having to use a car. Transit stations are often located on or near the main street, linking each community center to the region. Often, a town's oldest buildings can be found on its main street; these structures express community character and identity, and provide authentic links to history and local culture.

Healthy, vibrant main street areas act as an important resource for their community, producing revenue (typically with higher sales and property tax per acre than can be found in other parts of town due to the concentrated mix of uses), and providing goods, services, and recreational opportunities for residents. Being in or near a high-quality, walkable urban area can also produce more transit riders, making transit investment more viable. Therefore, revitalizing, maintaining and optimizing the health and vitality of the region's main streets should be a priority.

*Revitalization is about both placemaking, activation, and physical rehabilitation – which requires a collaborative effort between public and private stakeholders.* The following pages discuss actions and strategies that the PAAC, its local municipalities, and partners can take to encourage activity, shape future growth, and support its local main street centers.

## MAIN STREETS ARE

**PUBLIC SPACES:** A place for people to engage with friends and neighbors

**MARKETPLACES:** A place that promotes local businesses

**HISTORIC DISTRICTS:** A place that holds our stories

**WALKABLE ENVIRONMENTS:** A place that promotes healthy lifestyle choices like walking and biking

**DESTINATIONS:** A place to visit and a place to take visitors to

# MAIN STREET REVITALIZATION: TOOLKIT

The following list of tools and methods could be explored to fund and implement main street activation and rehabilitation:

## FINANCING AND ORGANIZATIONAL TOOLS:

- **501c3 Non-Profit Organization:** A non-profit organization such as a local main street organization can gain tax-exempt status and work to fund and implement community activities/improvements.

- **Ad Valorem Tax:** Tax revenues can be used to fund public improvements.

- **Business Improvement District:** Businesses within a defined area pay an additional tax to fund improvement projects in that district.

- **Historic Preservation Tax Credits:** An incentive that allows historic building improvements to reduce tax liability.

- **Loan Consortiums / Revolving Loan Pool:** Local banks can provide a source of money from which loans are made to community businesses, to support small business investment and improvements to their property.

- **National Main Street Center:** Partners with organizations and leaders at the local, city, state and national level to provide tools and strategies for main street revitalization.

- **Tax-Increment Financing (TIF):** By establishing a TIF district, tax revenue increases from a defined area can be used for economic development or public improvements.

- Other potential funding sources include: **Foundation Grants, Crowdfunding, Fundraising campaigns or events, government grants, etc.**

## POLICY AND REGULATORY TOOLS:

- **Certified Local Government:** Municipalities can gain access to grants and resources at the national level by becoming a Certified Local Government. This process would include undertaking a certification process and making a commitment to historic preservation through its policies.

- **Covenants and Easements:** Restrictive regulations that can preserve community resources.

- **Form-based Codes:** can shape new development and investment along main street with zoning that enforces the community vision for walkable, pedestrian-oriented, mixed-use public spaces.

- **National or Local Historic District Designation:** Designations at the national or local level can provide opportunities to property owners for funding/tax incentives, while preserving community character.

- **Transfer of Development Rights (TDR):** TDR policies preserve historic or culturally-significant buildings in "sending" areas by transferring their development potential to "receiving" areas more appropriate for new development. Property owners get the financial benefit from selling unused development potential.

- **Transit-Oriented Development:** Land development policies and regulations that require walkable, transit-oriented building forms support preservation and restoration of traditional main streets that are centered on transit (rail or bus).

# PUBLIC SPACE ACTIVATION / PROGRAMMING

Taking steps to activate a downtown main street will produce a steady supply of customers that ensure the vitality of local shops and businesses. Government agencies and planners, business improvement districts, chambers of commerce, main street programs, local businesses, grassroots initiatives, non-profits and other organizations can all play a role.

Local municipalities, volunteers, or community groups can help to organize available resources; a dedicated staff member can spearhead efforts by organizing stakeholders who can host activities, researching efforts in peer communities for ideas and inspiration, and establishing a calendar of events that is complimentary and involves many sectors of the community. Some guidelines include:

- **Start Small:** The most important step is to get started.

- **Something for Everyone:** Programming can be geared to adults, persons with differing abilities, kids, pets, and others; there should be a reason for everyone to participate and come together as community. Farmers markets, music events, art installations, a 5K race, a community festival; there should always be a reason to spend time downtown.

- **Prioritize the Pedestrian**: Once people are downtown and on foot, they are more likely to shop, eat, or otherwise support local commerce.

- **Shopping and Being:** Not every interaction should have to involve payment; the downtown can be a source of entertainment and community gathering that is accessible to all.

- **Temporary vs. Permanent (Events vs. Installations):** Programming can be temporary, with events occurring on a set date or over the course of a couple of hours. It is also possible to plan longer installations that are in place for months or years. Examples include art installations such as exhibits on area sidewalks, an "umbrella sky" overhead, and pop-up parks or plazas that transform underutilized areas (parking lots or vacant parcels) into public spaces with seating, food trucks, and other amenities.



Farmers Market



"Umbrella Sky" installation

## PLACEMAKING: THE POWER OF 10

The Power of 10+ is a concept *Project for Public Spaces* developed to evaluate and facilitate placemaking activities. The idea behind this concept is that places thrive when users have a range of reasons (10+) to be there. These might include a place to sit, playgrounds to enjoy, art to touch, music to hear, food to eat, history to experience, and people to meet. Ideally, some of these activities will be unique to that particular place, reflecting the culture and history of the surrounding community. (Learn more at www.pps.org.)

Planners working to activate their main street can use the Power of 10 to plan events and evaluate how well downtown's activities are engaging the community. Are there 10+ reasons for people to visit? Local residents and those who frequent the space most regularly are often the best source of ideas for which uses are needed or could be included.

# HISTORIC PRESERVATION

Historic preservation is essential to main street revitalization. Often, the community main street is where its first buildings were constructed; preserving these buildings while encouraging their re-use and maintenance preserves character and identity, provides a connection to past eras and movements, and creates an authentic sense of place that cannot be built from scratch. In addition, historic preservation is inherently sustainable; it maximizes the use of existing materials (embodied energy) and infrastructure, and reduces waste (does not encumber new energy).

A local or national historic designation can open new opportunities for property owners in terms of tax benefits and funding for improvements. However, with that designation comes accompanying restrictions intended to protect the resource. With this in mind, it is important that a municipality carefully evaluates what the appropriate size an historic designated area would be for them, so that new restrictions do not unduly prohibit other investment or revitalization opportunities.

Historic Preservation is about more than aesthetics. ***The revitalization of existing historic neighborhoods and downtowns is the best economic development tool your community possesses.*** Potential economic benefits that can be realized include: increased property values, decreased foreclosure rates, job attraction (employers are seeking municipalities or locations where their employees will have access to community resources like a walkable main street), heritage tourism, and increased investment due to stability of the market and predictability of the built environment on surrounding properties.

## ECONOMIC BENEFITS OF HISTORIC PRESERVATION INCLUDE:

- **Increased Property Values**

- **Decreased Foreclosure Rates**

- **Jobs**

- **Revitalization of urban districts and neighborhoods**

- **Heritage tourism**

- **Predictability for investors (through stability of environment and design)**

Determining which developer to partner with can seem like a daunting task. There are many factors to consider, including ensuring that the municipal investment will see returns to the community. This section explains the Request for Qualifications (RFQ) and Request for Proposals (RFP) process including: how to write a clear RFQ or RFP to attract the right developer, what to look for in a developer response, and other factors to consider throughout the process.

## Overview

An RFQ asks for qualifications of a team and seeks to identify who potential partners may be. An RFP asks for detailed information from responders including timeline, budget, qualifications, recommendations, etc. to determine who could best meet the needs of the community through their work. The complexity of this process is dependent upon several factors.

### 1. CONFIRM THE SCOPE AND THE MISSION

When issuing an RFP and RFQ, it is very important to clearly identify the objectives of the project and the roles and expectations of each party. If objectives are not clearly defined, a municipality may not meet their desired goal, pay more to achieve the goal, or have to perform certain aspects of the project on their own. Sometimes this means that additional research is needed so that the municipality is well versed in the type of project they are undertaking.

### 2. PREPARE THE RFQ OR RFP

As with confirming the scope and the mission, it is important to research the project to gain an understanding the type of process needed for a particular project. There must be a predictable pathway and a demonstrable end. This should be outlined in the RFP or RFQ. Keep in mind that when the market is weak, attracting qualified developers may require a thorough feasibility study.

### 3. SOLICIT QUALIFICATIONS AND PROPOSALS

A good understanding of the project, process, and goals will enable the RFQ and RFP to be clear and identify the necessary tasks. This will ensure that nothing extra is asked for, keeping estimates from being higher than necessary and potentially coming in over a municipality's budget. Ensure that requirements match the objectives and expectations.

### 4. EVALUATE QUALIFICATIONS AND PROPOSALS

As responses come in, the tough process to determine who to select as a partner to achieve the objectives begins. Throughout this process, focus on who makes up the responding team and what they are proposing. Understand specifically who is involved and what they are doing relative to objectives and their importance to the process. It is important to balance elements of the proposal with the budget and goals of the project.

### 5. DEVELOPER SELECTION AND NEGOTIATIONS

Once a developer is selected, there is an interim agreement to negotiate the actual contract for services. This time is spent discussing the scope and needs in more depth to ensure a more realistic cost and time frame. Make sure to allow sufficient time between selection and a signed contract.

## A Two-Step Process

A two-step "RFQ / RFP" process, as outlined below, requires more up front preparation but typically requires less negotiation at the end of the process since the expectations have been enumerated early in the process. It enables respondents to become more familiar with the site, challenges, and parties involved.

It is also important to keep in mind that the public sector and the private sector are driven by different motivations and objectives. The public sector typically has a longer-term vision and is not as constrained by delay. The private sector, on the other hand, sees delays as costly and wants the "RFQ / RFP" process to proceed quickly. If the land is publicly owned, the jurisdiction needs to decide if it is in their best interest to sell or lease the land; each option offers unique advantages and disadvantages, including legal regulations. Today almost any development that can be implemented on fee simple property can be implemented on leased land. That said, some uses – hotel and fast foods for example — are easier than others to realize and, in most cases, a process advanced on leased land will be more costly because of the expertise and technical support required. Each community will need to discuss the most effective strategy before moving forward with the solicitation.

### STEP 1: REQUEST FOR QUALIFICATIONS (RFQ)

The primary objective of a request for qualifications (RFQ) is to generate responses from the best qualified developer and development teams, but also to test the validity of the work completed to date and to generate additional insights and ideas regarding the project. An RFQ is in part a sales tool, designed to convey a sense of the project's potential as a both an investment and as a contribution to the quality of the communities. The specific components of an RFQ should include the following:

- A personal invitation from the primary stakeholder of the project (municipality, transit authority, property owner, etc.)

- A summary overview of the project initiative and its physical, social, and economic context

- A clear description of the site

- A summary of the site development strategy

- Development objectives: programmatic, design, and financial

- Development program options

- Selection criteria and selection process

- Schedule, including milestone dates and obligations/actions of the soliciting agency or local government.

- Submittal requirements

Importantly, respondents should be able to prepare a competitive response to the RFQ in a reasonable time frame and at reasonable cost. The two greatest potential pitfalls of an RFQ are either requiring too extensive an effort on the part of respondents, or failing to sufficiently describe the requirements of the issuing entity. Developers have choices, and recent experience shows that remaining competitive in public-private proposals will ultimately require significant cost and time, usually longer than anticipated. The jurisdiction must put forth a well-documented, well organized, attractive package to attract high-quality responses. An expected timeframe for the completion of an RFQ process, through development of a short-list of qualified respondents, is about two months (although this time frame can vary).

## STEP 2: REQUEST FOR PROPOSALS (RFP)

The RFP process should be designed to identify the best partner to achieve a community's goals. Because of this, the RFP should be designed to identify partners willing to undergo a serious and sustained effort to produce a compelling proposal. Part of this process is also a two-way street. The jurisdiction needs to send the message that the public partners in the project recognize the imperatives of private investment. The RFP should reflect this understanding.

At the same time, of course, prospective developer partners are being asked in this process to conform to the jurisdiction's vision of the project. The jurisdiction should initiate this process by sharing their prior analytical and planning work with the shortlisted teams.

If there is a housing component included in the plans, the agency or local government issuing the invitation may want to consider including an affordable housing component. In some cases, RFPs state that developers responding with affordable components will be given preference during selection of the project developer. Affordable housing requirements will likely add further complexities and time even where the outcome is desirable or needed. If this is a consideration, there should be confirmation the proposer is experienced in delivering this product.

The RFP must also convince shortlisted teams that the agency or local government is organized to deliver on their obligations: delivery of an unencumbered property interest, timely development approvals, constructive mechanisms for managing community input, and some sense of the categories and rough magnitude of expected financial incentives.

Developers should be asked in this stage to develop a fairly detailed development concept and financing plan. This typically requires them to engage the services of a professional planning team. Proposal submissions should outline the qualifications of any team members not already identified in the RFQ response.

In addition, responses should include the following components:

- **A detailed description, and visual depiction**. These elements of the developer's project concept as well as the development program, schematic site and building plans, sections, and elevations, phasing plans, if any, and a preliminary sense of building materials. It informs those reviewing the submissions and helps them understand how well the proposed project fits into their community.

- **A project budget**. This should include all hard and soft costs by category

- **A marketing and leasing plan**. This should include evidence of any tenant commitments.

- **A proposed financing plan**. Part of this plan should contain a statement of sources and uses of funds that clearly outlines the form, magnitude, and timing of any expected public resources, a multi-year cash flow analysis, and a statement of expected developer returns. Developers should demonstrate clear evidence of the capability of attracting sufficient equity and debt financing for the project.

- **A project management plan**. It should provide full description of the proposed development process, through final delivery of the completed project. This should include a detailed timeline and project schedule that clearly identifies the critical actions required by the county.

The RFP must also contain a complete description of the selection criteria and the process by which developer partners will be selected. It is customary to interview shortlisted teams and to visit their previous projects before making a final selection.

The experience of other cities suggests that this two-step "RFQ / RFP" process typically takes from four to six months to complete.

## PROPOSAL EVALUATION

The proposal evaluation process is outlined below and should include a review group of relevant stakeholders:

- Evaluate the capacity of the proposal to meet the plan goals.

- Review the designs, budgets, and specifications for the proposed plan and review the feasibility of the plan timing and cost.

- Evaluate the credit history and financial capacity of the proposer, including contacting prior references.

- Review the ownership and management agreements outlined in the proposal and ensure that the terms are aligned with the objectives of the jurisdiction.

- Evaluate the overall financial feasibility.

- Review the respective roles of the public and private parties, as enumerated in the proposal, and ensure that there is agreement regarding responsibility, financial terms, timing, regulatory issues, etc.

# Planning Considerations

A clear understanding of some of the potential obstacles of the "RFP / RFQ" process will help ensure that there are no unexpected surprises.

### DON'T LET THE RFQ OR RFP OBSTRUCT THE PROCESS.

- Both the RFQ and RFP need to fully anticipate the end state, or the intended outcome of the process. The process itself almost always moves along a nonlinear path, however, the ultimate vision and objectives should remain consistent.

- Appraisals are only as good as the instructions and often don't help in the RFP. In other words, the highest and best use of the land, as determined by the appraisal, may not be consistent with the community vision.

- The initial design or development schemes may be loosely or poorly defined. This allows the developer to more fully conceptualize a realistic proposal scheme for the site.

- Timing and phasing are critical. Keep in mind that most mixed-use development proposals are phased based on financing and market realities.

### PUBLIC AND PRIVATE ENTITIES OFTEN HAVE DIFFERENT OBJECTIVES.

- This means that time and money are evaluated differently.

- Sometimes it can be very difficult to identify shared objectives so this can take additional time, conversations, and consideration.

### THE PROCESS CAN OFTEN BE MORE POLITICAL THAN ANTICIPATED

- Prior to undertaking the "RFQ / RFP" process, it can be very helpful for there to be as much consensus as possible within the municipality on what the objectives are and who the responsible parties are. If this is unclear, it can reduce perceived savings and may increase cost.

### PUBLIC INVOLVEMENT?

- It can be very helpful for a municipality to incentivize development by offering to assist in the construction of needed infrastructure such as parking, outdoor plazas, and open space. Sometimes a municipality may offer to build these.

- Sometime the assistance or incentives may be more indirect. This can take the form of a density bonus, government commitment to lease space, regulatory relief, reduced processing time, work with neighborhood groups, etc.

### FLEXIBLE TIME LINES WILL AVOID HEADACHES

- A good rule of thumb is that the process of selecting a development partner and signing a contract will take longer than initially expected. This is typically due to a refining of the language of the contract and unanticipated issues that may arise during the process. Sometimes this can even occur at the beginning of the process as objectives and expectations are being defined.

## Developer Selection and Negotiations

Once a developer is selected, the jurisdiction might consider establishing a preliminary agreement of the intent to negotiate that defines the process to reach a final agreement. These agreements can include exclusive dealings agreements (EDAs), letters of intent (LOI), or memoranda of understanding (MOU). Even if there is uncertainty about the particulars of the public's role, anticipating what that role and its contributions will be is essential.

The preliminary agreement outlines the roles and responsibilities of the respective parties while they negotiate a formal development agreement, which can occur during the preliminary site design approval process. A preliminary agreement provides the benefit of providing a level of certainty to the developer while requiring them to meet certain milestones as a precursor to finalizing a development agreement.

Involving appropriate stakeholders at appropriate times at this stage should give all participants the opportunity to resolve outstanding issues and to improve the odds of achieving support for the development plan and development agreement from the community and the other stakeholders. In the end, establishing effective partnerships with the appropriate stakeholders should reduce complications and decrease the time necessary to deliver a joint development project.

Finally, the jurisdiction should be prepared to use a range of contractual agreements in formalizing a relationship with the chosen developer.

## SMART PROGRAM - AN ALTERNATIVE APPROACH

Another method of working effectively with the development community is based on a program instituted in Austin, Texas which broadly outlines incentives normally available. The program is called SMART (Safe, Mixed-Income, Accessible, Reasonably Priced, Transit-Oriented) Housing. The program allows fee waivers for certain items as well as expedited reviews for developers of housing projects that meet established criteria. As an example, city fees are waived on a sliding scale based on the percent of units that are "reasonably priced". The families being served earn no more than 80 percent of median family income and spend no more than 30 percent of their gross income on housing. In order to ensure that units remain affordable, city administrators are looking at extending the initial five-year affordability requirement. They are also looking at the potential for setting up a community land trust, in which case the public entity owns the land and partners with a developer. In this case, the land is leased to the homeowner for a nominal amount and the long-term lease restricts resales to prequalified buyers.

Expedited development review is a powerful tool since developers often state that the lengthy permitting process can make T.O.D prohibitive. Since developers often cite the length of the review and permitting process as a barrier to implementing transit-oriented development, strategies such as one-step T.O.D. approvals, removal or consolidation of steps in the review process (a "green tape" program), or conducting some of the permitting steps in advance of the development proposal can all serve as incentives for T.O.D. Similarly, team inspections allow the developer an assessment of all major permitting issues before a building plan is submitted for review.

Along the same lines, reduced development or impact fees also offer an incentive for developers involved in T.O.D.

# Parking

The T.O.D.s should include parking facilities that do not dominate the transit station area or consume large amounts of land.

- Reduce or eliminate off-street parking requirements for developments within easy walking distance of transit stations. Many T.O.D. ordinances have reduced parking by 25 percent or more, depending on how high the "standard" requirements are. Be cognizant that the developer understands what the necessary parking requirements (both their cost and the what the market dictates) are to sustain a concept, while satisfying lender's requirements.

- Place a cap (maximum limit) on the amount of surface parking that may be developed. Some ordinances have established caps of 125 percent above the required minimum or have even set the typical minimum as a maximum, while permitting a reduction in parking.

- Encourage shared parking between uses when peak times or hours of operation differ and provide a readily adaptable system to approve same.

- Limit all-day parking in transit station core areas. Encourage the use of short-term on-street parking.

- Locate surface parking to the rear of buildings or in the interior of blocks. *Parking should be hidden behind buildings with habitable space such as shops or living spaces. Parking access should not occupy more than one-third of the street frontage per block.*

- Screen surface parking from view with liner buildings that provide habitable space. This improves the walkability of a neighborhood while also increasing safety by creating a natural surveillance system, increasing transit ridership and further reducing the need for additional parking.

During Workshops held in January 2019, the planning team, project partners and meeting participants completed a "T.O.D. Zoning Synoptic Survey" to demonstrate how the Synoptic Survey tool can be used to evaluate existing regulations and shape new ones.

A Synoptic Survey is a recording of existing dimensions of the built environment, such as setbacks, street width, and building height, to determine the urban design metrics of a place. It can be used to quantify and study the "good DNA" of precedent areas; this analysis can then be used to write the rules for future development and public improvements.

## STEP 1: IDENTIFY LOCATIONS TO EMULATE

The first step is to identify precedent areas that have a desirable built form or character that the municipality or community would like to see emulated in future development. For example, the configuration and dimensions of a historic Main Street, a beloved neighborhood, or a new development that is positively regarded can be studied.

## STEP 2: OBSERVE, MEASURE, RECORD

Using a survey form like the Synoptic Survey included in this report, and maps and photos (or on-the-ground observations), stakeholders measure the key dimensions and elements that make up the built environment. Participants will learn the actual dimensions of lot sizes and building coverages, and note street design elements such as parking, trees, and awnings, that contribute to the pedestrian environment.

## STEP 3: INFORM AND/OR SPLICE INTO DNA OF EXISTING REGULATIONS

The final step is to apply this analysis to potential future development or street improvements. Observations from the survey can be used to audit existing regulations; one might find that the observed dimensions and street elements that are critical to achieving the desired built form are prohibited by existing zoning or street design standards. In this way, the audit can identify needed regulatory changes or updates that can lead to improved built results. The survey can also be used as the foundation of a form-based code, providing the key dimensions and measurements that become the rules that shape the design of new buildings.

During January workshops, participants measured the dimensions of precedents in the Alleghany County region, such as Beaver Street in Sewickly and Butler Street in Lawrenceville. After the Synoptic Survey forms were complete, participants then applied the measurements and observations to drawings of potential infill development sites in their municipality.

This hands-on method of understanding the metrics of quality urban design and evaluating existing and future development regulations can be repeated with municipal representatives and community groups. The exercise broadens appreciation for critical elements of desirable T.O.D. environments, and increases awareness of the ability (or shortcomings) of existing regulations to achieve the types of development the community wants to have.







Conducting a Synoptic Survey during January 2019 Workshops.

# SYNOPTIC SURVEY

Street Segment: _____

Building Uses (check all that apply)

_____ Retail

_____ Office

_____ Industrial

_____ Civic

_____ Single-family Residential

_____ Multi-family Residential

_____ Other:

Building Height (use photograph on back side)

_____ Maximum Stories

_____ Minimum Stories

Building Placement (measure and insert estimated average or typical number)

_____ Front Setback

_____ Side Setback

_____ Rear Setback (from an alley)

_____ Rear Setback (without an alley)

Are there outbuildings on the residential lots?

_____ Yes          _____ No

Parking Location (check all that apply)

_____ On-Street

_____ In Front of Building

_____ Behind Building

_____ Side of Building

_____ Parking Garage

_____ No Designated Parking Area

Lot Sizes (measure and insert number)

_____ Maximum Width

_____ Minimum Width

_____ Maximum Depth

_____ Minimum Depth

Lot Frontage and Coverage for commercial and office buildings

_____ % Building Coverage of Lot

_____ % Building Frontage along front Setback

Street Elements (check all that apply)

_____ One-Way Traffic

_____ Two-Way Traffic

_____ On Street Parking

_____ Bike Accommodations

_____ Sidewalks

_____ Planting Strips

_____ Tree Wells

_____ Street Trees

_____ Crosswalks

_____ Awnings, Galleries or Arcades

_____ Streetlamps

Street Section (measure and insert number)

_____ Width of Right-of Way

_____ Width of Pavement

_____ Width of Sidewalk

Implementation of any planning effort can appear to be a daunting hurdle. Once the community establishes a vision, the next steps are determining how to achieve that desired future for the community, neighborhood, or a street. Implementing "tactical" projects can help to create a path toward the future vision. This section discusses what is meant by Tactical Urbanism, the different types of goals Tactical Urbanism can help achieve, strategies for successful implementation, and potential tactical installations for T.O.D.

## WHAT IS TACTICAL URBANISM?

Tactical Urbanism refers to any low-cost, temporary changes to the built environment that are intended to improve local neighborhoods and public spaces. These changes are often used to test ideas and measure results before implementing a more permanent solution. The concept is growing in popularity as communities have found success in achieving more sustainable long-term goals with this strategy.

By utilizing short-term, inexpensive projects or events to test ideas, a community can adjust the fine details of their goals. This can ultimately lead to an increase in the effectiveness and satisfaction of the final implemented project in achieving the vision of the community. Often times, permanent changes can be very difficult and/or costly to implement. Using a tactical approach can gauge reactions, verify that the idea works, and provide time to make adjustments as needed. This process often leads to a result that responds most appropriately to the existing conditions and what the community ultimately wants.

Tactical Urbanism can foster additional discussion within the community by identifying opportunities to improve a neighborhood, street, intersection or other underutilized area. Sometimes an installation can spark new ideas and encourage community enthusiasm, generating support for multiple, permanent improvements. With grass-roots support, implementing enhancements can become easier and be fine-tuned to the needs of the community on a project by project basis.

## TACTICAL GOALS

Tactical Urbanism can address several different types of goals and concerns for a community, many of which may work together synergistically. Some of these include:

- Activate future building or development sites
- Test new parks and public space improvements
- Assess potential street improvements, and
- Energize the community

# STRATEGIES FOR SUCCESS

Tactical Urbanism installations are successful insofar as they are able to demonstrate the merit of an idea, generate enthusiasm and discussions, and gather feedback on how it might be improved in order to move forward with a permanent change. This means that it is important to have as many people as possible aware of the installation and participate in it. In order to achieve this there are several pointers to keep in mind:

## Tie the Effort to a Larger Movement

Interventions that feel random, in isolation, or fringe will be difficult to use to generate enthusiasm. In order for an installation to feel local and part of a bigger plan, it is important to keep larger strategies — such as a comprehensive plan or master plan — in mind. This focuses on where the intervention should be located and what permanent change is trying to be achieved.

## Demonstrate Good Urbanism

Temporary ideas may become permanent; it is important that installations promote pedestrian-friendly environments. Don't reduce on-street parking where it is needed, close streets that can't support being a pedestrian-only street or create parks that will not be used. Also keep in mind that results may also suggest that the proposed solution may not work.

## Know your Audience

Most residents in T.O.D. are between the ages of 45 to 64 and 0 to 14 years old. With this in mind, the tactical approaches should be geared to these age groups. This will maximize participation, leading to more feedback and greater success for the tactical installations by locals as well as visitors.

## Publicize, Publicize, Publicize

Utilize social media networks, newspapers, fliers, community groups, radio, and other means of getting the word out. Be sure to take a lot of before and after pictures for online and print publications. Speak at conferences and meetings. Use this as a great teaching tool for the community.

## Have Fun

People love to be part of a fun time. Invite the party people (and their children) to barbecue, dance, play music, etcetera. This will help draw attention and groups of people to the project. As more tactical interventions occur, be sure to invite people who have done it before and don't stress logistics during the project. Tactical urbanism is more organic in nature and it won't be atypical for something to not work, and other things to work unexpectedly.

# PROCESS

Determining what tactical methods to implement can also serve to promote the installation and promote awareness of the initiative. A public process enhances the ability for the tactical installation to respond to the goals and concerns for an area. It is important to note that the process may be slightly different for each neighborhood or area within T.O.D. The following outlines shows how process for determining the appropriate tactical installation could look:

### 1. IDENTIFY COMMUNITY GOAL, VISION & CONCERNS

Certain tactical installations are better suited to address particular concerns. Knowing what the community goals and concerns are helps to narrow down the selection from the potential installations. Determining these goals can be accomplished through:

- Holding public workshops to get feedback from the community
- Referencing previous plans and studies
- Reaching out to the community using surveys — through online outreach, phone calls, mailings, workshop exit surveys, etc.

### 2. DETERMINE TACTICAL INSTALLATIONS

After determining the goals, vision, and concerns of the community, reference the tactical concepts that could be installed. Keep in mind that these concepts are not definitive. They can be implements, however there may be adjustments to these concepts to better fit the community, or there may even be new ideas that are generated as a result of public workshops.

While determining the tactical installations, look for other tactical concepts that work synergistically with each other to enhance the initiative.

### 3. ESTABLISH A TIMEFRAME

After determining the tactical installations, determine when and how long each should be implemented. A variety of factors could be at play such as festivals or school events, anticipated seasonal weather, and cost.

### 4. ACQUIRE NECESSARY PERMITS

Often times, cities require certain permits for certain types of events. Be sure that all necessary paperwork is completed and approved prior to installation. This could be one area that is more difficult due to permitting restrictions. However, this could also help identify potential policy barriers to neighborhood improvements which is also an aspect of tactical urbanism. Part of the conversation may be how to resolve roadblocks to future long-term improvements.

### 5. ADVERTISE

Throughout the entire process, be sure to advertise the installation and invite members of the community to participate. The more people that join, the better the feedback and success of the installation.

### 6. IMPLEMENT...AND HAVE FUN!

Once all of the background information and permits have been acquired, mobilize and install the tactical concepts. This is also a time to gather feedback and document the event through video, photographs, and feedback forms. This will help to identify any necessary adjustments for long-term changes.

Keep in mind that the plan may have some hiccups the day of the event. This could also help identify adjustments for the future. Have fun, too! The more people that attend and have fun, the more people will feel invited to participate and the more successful the installation will be.



Tactical installations can create energy and bring the community together



Tactical installations should keep all ages in mind



Tactical installations can increase access for pedestrians through bike lanes, landscaping, and parallel parking. These narrow the street and reduce speeding, making the right-of-way safer for pedestrians

## CONCEPTS

The following pages propose a kit-of-parts to outline the various ideas, their goals, and the practical information needed to install various tactical interventions. The intent of these ideas is that they are inexpensive to implement, relatively easy to install, and easy to replicate. This makes it possible to recreate these installations around T.O.D. and its neighborhoods. These concepts can also be used in coordination with each other to address multiple tactical intervention goals.

The following section and pages illustrate examples of tactical interventions that could be possible in T.O.D. It is important to identify what goals are compatible with these ideas (new buildings, park locations and improvements, new streets and street improvements, energizing the community) and where they could be implemented to achieve the long-term goals of T.O.D. Always keep an eye and ear open for new ideas, especially from within the community.

Some interventions take form as a community event, which can be held on its own or in coordination with other existing or new events. The examples listed are samples, and leaders. should choose or design projects or events that best test specific master plan implementation ideas.

## HOW CONCEPTS CAN BE USED

Some goals and concerns that members of the community may have and the potential tactical installations may be:

1.  **Goal / Concern:** A particular street experiences a lot of speeding cars.

    **Potential Tactical Installations:** Typically, speeding occurs along streets that are perceived to be wide enough by the people driving. What is needed then, is a way to narrow the lanes. This can be done using the following tactical installations at the same time, or separately:

    *   *Street Reconfiguration:* Allow cars to be parked along the side of the street and paint parking spaces to show where parking is allowed. This helps to narrow the lanes for cars while also providing a buffer to pedestrians who are walking along the street.
    *   *Street Reconfiguration:* Install temporary planters along the side of the street. This reduces the lane width, provides landscaping along the street, and creates a buffer between car traffic and pedestrians.
    *   *Bike Lanes:* Install a minimum 5-foot wide, one-way bike lane along the side of the street with a 2- to 3-foot buffer for additional safety. This reduces lane width, provides a buffer between car traffic and walking pedestrians while also encouraging an active lifestyle.

2. **Goal / Concern:** A particular intersection is used by many pedestrians, but is not pedestrian friendly.

   **Potential Tactical Installations:** Intersections that are not pedestrian friendly can result from a variety of reasons such as speeding cars (due to wide lanes and turning radii at the intersection), and no crosswalks. To address these concerns, tactical installations should: reduce lane widths, reduce practical turning radii, and identify pedestrian crossing locations. This can be done using the following tactical installations at the same time, or separately:

   - *Street Reconfiguration:* Allow cars to be parked along the side of the street and paint parking spaces to show where parking is allowed. This helps to narrow the lanes for cars while also providing a buffer to pedestrians who are walking along the street. Placing these within 20 feet of the intersection also reduces the practical turning radius at the intersection.

   - *Street Reconfiguration:* Install temporary planters along the side of the street and at intersections. This reduces the lane width, provides landscaping along the street, reduces turning radii at intersections, and creates a buffer between car traffic and pedestrians. Be sure to keep plantings low at intersections so that drivers can adequately see oncoming traffic and pedestrians at the intersection.

   - *Street Reconfiguration:* Paint crosswalks at the intersection. Identifying specific locations for pedestrians to cross increases safety by alerting drivers to crossing pedestrians and by identifying safe places to cross to people who are walking.



Parallel parking and bike lanes help reduce the travel lanes, increasing pedestrian safety, and promote an active lifestyle

- **Bike Lanes:** Install a minimum 5-foot wide, one-way bike lane along the side of the street with a 2- to 3-foot buffer for additional safety. This reduces lane width, provides a buffer between car traffic and walking pedestrians while also encouraging an active lifestyle. Ensuring that the bike lane continues through the intersection also reduces the practical turning radius.

3. **Goal / Concern:** A public green space is seen as uninviting.

   **Potential Tactical Installations:** Public spaces are seen as uninviting for several reasons such as no public amenities, the site being in poor condition, and a sense of the space being unsafe. This sense that a space is unsafe comes from a lack of eyes on the space due to overgrown vegetation, lack of lighting, or a building that does not face the space. To address this concern, tactical installations should provide amenities, improve visibility, and bring the park to the attention of the community and maintenance departments. This can be done using the following tactical installations at the same time, or separately:

   - **Pop-up Park:** Install temporary park benches, or picnic tables. Having a place to rest makes a public space more inviting and increases the chance the residents will make use of the area.

   - **Pop-up Park:** If there is a lack of shade in the park, install temporary planters with trees. These could be placed next to benches, chairs, or tables. Shade increases the likelihood that residents will view the public spaces as comfortable.

   - **Pop-up Park:** Where paths have been worn into the grass in a park due to people walking, install a loose gravel path. This enhances the aesthetic of the park and conveys that the area is being cared for.

   - **Pop-up Park:** If there is a lack of lighting in the park, install temporary light posts. Some are  powered by generators, while others store power in solar-charged batteries. These should be pedestrian scaled and enhance the feeling of security in the space.

   - **Pop-up Park:** Organize a tree planting and care day for the park. Encourage residents to plant and care for vegetation in the space.

   - **Dog Park:** Install a temporary dog park to encourage use of the public space.

   - **Pop-up Education:** Hold educational opportunities for all ages from art, to nature lectures, to science projects. This helps to bring attention to the space and provides professional and educational growth. Part of the installation may provide amenities to the public while the activity is not happening such as benches, tables, tents, etcetera.

   - **Pop-up Entertainment:** Hold outdoor performances such as music, plays, or literature readings. This helps to bring attention to the space, celebrates local talent, and provides cultural opportunities. Part of the installation may provide amenities to the public while the activity is not happening such as benches, tables, tents, etcetera.

# TACTICAL INSTALLATION OVERVIEW

| Icon | Name | Goals | Works Along With... |
|---|---|---|---|
| | Ciclovia | 3, 4 | |
| | Pedestrian- Only Street | 3, 4 | |
| | Pop-up Market | 1, 2, 4 | |
| | Food Trucks | 1, 2, 4 | |
| | Chair Farms | 2, 3, 4 | |
| | Pop-up Park | 2, 4 | |
| | Dog Park | 2, 4 | |
| | Pop-up Education | 2, 4 | |
| | 5-on-5 Basketball | 2, 4 | |
| | Cook-Off | 1, 2, 4 | |
| | Pop-up Entertainment | 1, 4 | |
| | Guerilla Art | 1, 2, 3, 4 | |
| | Bike Lane | 3, 4 | |
| | Street Reconfiguration | 3, 4 | |

The chart above provides a general overview of the different potential tactical installations. Each approach is identified by a unique graphic associated with the name of the approach. The types of goals and concerns that could be addressed using the related tactical installation. Certain tactical installations could also work synergistically with other tactical approaches. These related tactical installations are indicated using the associated graphics for other tactical concepts within this section.

# TACTICAL INTERVENTIONS

## Ciclovia

Ciclovia is a Spanish term that means "cycleway". A Ciclovia event is a network or route of streets that has been closed off to vehicular traffic and is intended to be used for bicycle and pedestrian traffic. This often takes the form of a closed route for adults and children to use. A Ciclovia can promote healthy lifestyles, teach good biking practices, and teach young children how to ride bicycles while promoting local businesses and amenities. This can also help bring attention to and test street improvements such as paving, pot holes, sidewalks, street trees, and different types of bike lanes.

This tactical intervention tends to be a day-long or half-day-long event but could become several days long. Some installations, such as bike lane tests could remain in place after the ciclovia event; the event could celebrate, or kick-off the bike lane test to bring attention to the initiative.

Ciclovia events occur in cities throughout the world on a regular basis. Some like on the Champs-Élysées in Paris is a yearly event; Madison, Wisconsin holds a "Ride the Drive" event twice during the summer; Miami, Florida has a monthly event. T.O.D. can join the tradition that is building around the world and begin its own regular ciclovia event. It could be once a year, but a monthly event on a Saturday or Sunday could attract more regular activity in the city and attract visitors as well.


Decorations and tent stations can highlight the ciclovia


Kids get to have fun and learn good biking practices


Ciclovias encourage active lifestyles and promote local businesses and amenities

## Materials

| | | | |
|---|---|---|---|
| tempera paint | stencils | bike lane barriers | tents |
| spray chalk | planters | barriers | decorations |
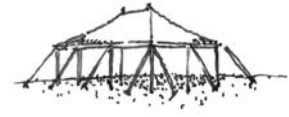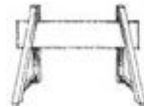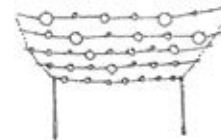
## Installation

Ciclovia routes can be a variety of lengths. To determine a route, look for opportunities to connect different street improvement initiatives such as bike lanes, street paving, and the T.O.D. trail. These could even be installed in proximity to other tactical installations or connect to different parks.

Once a route has been selected, determine the length of time for the event. This will have an impact on the types of barriers to be used. Bike lanes that remain after a day-long ciclovia will need more robust barriers that could be in the form of planters, or plastic poles. Roads that are blocked off should also have temporary barriers for the duration of the event.

Plan out any street painting that will be needed. Bike lanes will need at least a stencil to identify the lane for bicycles. Sometimes the lane is painted green under the stencil. Bike lane widths should be 5 feet, minimum, for a one-way lane; 6 feet is a more comfortable width. Be sure to add 2 to 3 feet minimum as a buffer with the barrier between the bike lane and vehicular lane.

Decorations can add a festive atmosphere to a ciclovia and make the event easy to find for residents. Food trucks and tents can be set up at the main area for relaxing.

## Pedestrian-Only Streets

Pedestrian-Only Streets help to gather the community and create a festive atmosphere. This tactical intervention can be used to help identify and test new public spaces. In this approach, streets are blocked off and designated for pedestrian use only. Adjacent amenities can also receive attention as a result of this temporary connection. This approach can be programmed in many different ways. It is important to take note of where people gather and the types of activities that they are interested in, because it will indicate where public spaces are successful and how they could be programmed.

Installation types have a broad range for Pedestrian-Only Streets. These can be food areas, art spaces for children, outdoor games, personal fitness areas, arts and crafts sales, or simply benches with trees. A benefit to this approach is that temporary planters may be left behind if they are successful and do not have a negative impact of the paved area after it is converted back to its original use. This can be a good way to leave a little bit of a test behind. It may also show places where sidewalks could be improved.

Pedestrian only streets could be coordinated with markets to activate the space. The street itself can become the venue.


Chalk areas provide a creative outlet for families


Outdoor games create a way for residents to meet and have fun


Creating pedestrian-only streets can gather the community and highlight areas of T.O.D.

## Materials

| | | | | |
|---|---|---|---|---|
| planters | chairs | spray chalk | large games | barriers |
| picnic tables | umbrellas | tents | tables | |
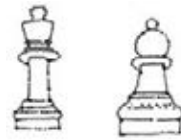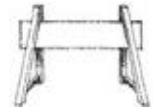
## Installation

In order to identify potential street improvements or new public spaces, it is important to first identify the right street. These streets will be low-traffic streets that are easy to navigate by car if needed. It helps to have either side of the street bordered by either a public amenity, or buildings along the edge.

Once the street is chosen, a method for closing it to car traffic should be selected. This can be done using a variety of materials including "Jersey Barriers", or large temporary planters. Shade and a place to sit are important in each location. This can be achieved through chairs, picnic tables, umbrellas, or trees in temporary planters.

These pedestrian-only streets can then have other temporary installations such as large games (chess, connect four), a chalk area, or vendor locations at tents. Be sure to leave room for circulation and people to gather.

## Pop-up Markets

Pop-up Markets can take the form of farmers' or crafts markets that help to activate a space, promote local agriculture and artisans, and also benefit the community by bringing local produce and goods to new areas. Temporary installations make them relatively inexpensive to operate. They are very flexible and can be located in tents, simple pavilions, or existing warehouse spaces.

Pop-up Markets can highlight areas that are planned for park installations or improvements, and sites that the City is interested in seeing develop through renovation, or new construction. These markets can have different locations each month and popularity for each could identify areas and designs that might be more successful than others for improvements.

### Installation

Consult City or neighborhood plans to identify locations where redevelopment, or park improvements or installations are desired. It may be a good idea to identify a rotation at this point and identify several locations to test.

Set up tents where necessary. Tents come in a variety of sizes, so coordinate appropriate sizes with rental companies.

If indoors, ensure that there will be enough natural light for stalls to show their goods. If not, artificial lighting might be required.

Set up tables for stations, chairs, and picnic tables for visitors. These may be outside, or under tents, depending on availability. Planters can be used to mark entries and any public areas to gather.



Pavilions in parks can serve as locations for pop-up markets.



Large interior spaces can be converted into markets.

## Materials


tents


tables


chairs


picnic tables


planters
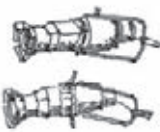

lighting

# Chair Farms

Chair Farms are temporary or permanent chair installations that are intended to improve sidewalks for pedestrians by providing a place to sit and rest where benches are not located. Placing street furniture encourages people to walk because a chance to rest is available just in case. Creating a place where people can rest brings attention to local amenities and can promote local businesses. This tactical approach calls attention to a lack of street furniture and can be easily implemented in several places. It can also enhance other tactical approaches.

Chairs for chair farms can be built from many materials such as reclaimed shipping crates. Another approach is to collaborate with local schools and wood shops to build and place chairs around the City.

## Installation

Walk around city blocks and note locations without places to rest. Coordinate with the City to identify if there are areas where benches are planned but have not yet been installed.

Collaborate with local community groups, wood shops, and high schools to gather a team and materials for the construction of chairs. Determine a date when the chair farm will be installed and for how long; one month should be a good starting point but leave the possibility of shortening or lengthening the installation. This can be done on a weekend morning to avoid conflict with work, school, or rush hour, and also give the community a chance to make use of the farm.


Chairs can be made from reclaimed shipping crates.


Chair farms help make sidewalks more pedestrian friendly

## Materials



chairs
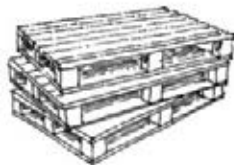


palettes



benches

## Food Trucks

Food Trucks are a versatile tactical approach. Installing a small kitchen and sales point in a truck enables local entrepreneurs to test their ideas before spending larger sums of investment in a permanent location. By being mobile, they can also add variety on a daily basis. Food trucks can be located on their own, but also be used to compliment other tactical events.

Food trucks make it possible to test potential future building locations or define street edges. If arranged properly, they can also help to frame potential future public spaces, or draw attention to underutilized areas.

### Installation

Consult City or neighborhood plans to identify locations where new development, or redevelopment of underutilized sites is desired by the plan. These should be coordinated with other tactical events or at historic neighborhood centers. Accept applications for food truck permits to be included as part of a rotation at approved locations.

Once strategic locations are identified, a rotation can be established with the food truck operators. The City can monitor these daily for lunch and dinner times.

Set up tables for stations, chairs, and picnic tables for visitors. These may be outside, or under tents, depending on availability. Planters can be used to help define spaces.

Food trucks can complement other tactical installations.

Food trucks can add variety to everyday downtown life.

## Materials

planters

tables

chairs

picnic tables

tents

# Pop-up Dog Parks

Pop-up Dog Parks are a good way to embrace other aspects of residents' lives by providing a place where dogs can run off-leash and residents can meet. The City has a permanent dog park on Pinetree Boulevard. Other locations for dog parks can be explored. These parks can be permanent, or temporary as pop-up dog parks. These pop-up dog parks can have month-long installations and test potential future locations for similar parks, or places within parks.

Pop-up dog parks may be programmed with activities such as an obstacle course or be less programmed with a simple fenced-in green space.

It is good to design a small entry vestibule-type space. This space acts as a transition between the open park and the dog park. When one enters this vestibule, the first gate in the fence must be closed before the next gate can be opened. This minimizes the risk that a dog runs out of the park and gets lost.

## Installation

Find existing parks, or underutilized green spaces that are identified for future park use as part of the City plan. Establish a date for setup and a length of time. A good time should include at least one month.

Set up temporary fences. This could be as simple as a metal post with wired fencing that is at least 5 feet tall. Set up a tent for a shady break on sunny days and protection from rain. Picnic tables may be set up here for dog owners to rest while the dogs play.

Some parks may have activities installed, and some may not. Try testing both options throughout the duration of the park. Some activities may be as simple as walking up platforms and old tree logs. Others may be hoops and tunnels.


Pop-up Dog Parks help to test locations.


Dog Parks are a place where dog owners can meet and let dogs run freely for exercise.

## Materials


tents


fence


picnic tables


activities

## Pop-up Parks

Pop-up Parks can be a useful tactical installation to test new parks and park improvements around T.O.D.. Creating a pop-up park event can encourage more people to attend and draw attention to an initiative, which in turn provides feedback on how successful the new park or park improvement will be.

Parks are public amenities for all residents, so these tactical installations should be for residents of all ages. Programming can include everything from areas designated for exercise such as yoga, to areas for active recreation such as temporary playgrounds. If the pop-up park will be installed for several weeks, consider how the programming might be relocated around the park to test for better locations. Sometimes a series of pop-up parks may be organized. If this is the case, testing different uses in each park may be a good exercise.

Installations don't need to be expensive to be fun. Ask parents or local organizations to bring large, unused cardboard boxes for families to color and organize to build forts. Other low-cost park activities can be water fights, capture the flag games, or chalk art.

Park(ing) Day is a national event that takes place in September. People around the country turn parking spaces into parklets to add green space to cities for a day. These parklets have sometimes become permanent and can provide additional seating at restaurants or extend the sidewalk.



Inexpensive installations can be very informative



Parklets along streets can identify locations where green is missing.



Parks should also keep adults in mind and provide opportunities for relaxing with friends

## Materials

| | | | |
|---|---|---|---|
| planters | umbrellas | benches | sod |
| picnic tables | large games | small fence | tents |

## Installation

Refer to City plans for future park locations, or park improvements to identify locations to promote awareness. Look for locations near the proposed T.O.D. trail system.

Determine the types of green infrastructure that will be needed. A pop-up park on pavement will need sod, planters, and a small fence or border to keep soil from eroding quickly. Existing parks will likely not need sod unless there are areas that are in need of grass as part of the improvement.

Plan initial locations for planters, park furniture, and where activities will be held. If the installation will be held over a period of several weeks, plan several different locations for the different programmed elements — perhaps a different location each week. If there are to be a series of parks together, determine different uses for each. These could be playgrounds, dog parks, meditation parks, sports and recreation, etcetera.

## Pop-up Education

Pop-up Education can be utilized to draw attention to underutilized parks, or highlight existing natural resources that have the potential to be transformed into a park within the T.O.D. park system. This tactical intervention gives the opportunity for residents and their children to explore creative and scientific extracurricular activities in an outdoor setting while encouraging and promoting local resources and talent.

Temporary stations could be set up over a weekend in natural areas and host a range of outdoor educational activities from painting classes, to science experiments, to music lessons, to writing and poetry classes. Through these installations, members of the community can learn about local talents, meet teachers, learn, and have fun exploring the outdoors. A food station or food trucks could also be invited to compliment a small art show/performance/science fair as a wrap-up for the event.

During the event it will be important to notice where people tend to gather and set up. These may identify locations for future park furniture such as pavilions, or benches. Scenic areas may also draw a group; these should be highlighted as a feature of existing or future parks.



Pop-up Education can highlight local talent and instruct all ages.



Creative outdoor activities activate the community.



Outdoor music lessons can be a fun way to spend an afternoon.



Outdoor science projects show connections to the world around us.

## Materials
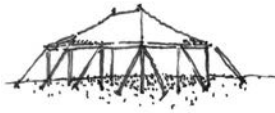
tents

chairs
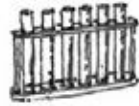
science supplies

instruments

picnic tables

art supplies

paper

instructors

## Installation

Identify existing or future park locations that the City is interested in promoting to the public. Determine what type of event will be held. This could be held during a local or national recognition event. If there is a local art fair, an outdoor art lesson could help to promote the artists. Likewise science fairs, or a National Science and Technology month could be recognized with an outdoor science lab.

Prior to the event, coordinate with instructors to determine where the event should be located. Some places will need flat land, others may want a location with more topography and a scenic view.

Once an event, park, and station location have been identified, set-up furniture such as chairs, or picnic tables. Keep in mind that weather can change so a tent can provide shelter in case there is rain. It can also provide shade if needed in warmer weather. These could be set-up shortly before the event — often the day before. Tents can be rented and the appropriate size should be coordinated and scheduled for delivery with rental agencies.

## 5-on-5 Basketball

A 5-on-5 basketball, or other sports tournament is an event that can be a fun way to gather the community, encourage physical activity, and bring attention to the potential uses of vacant areas or places such as poorly placed parking lots. One particular use for this activity would be to test a location for a park, or active recreation within a park.

In this tactical intervention, a series of 5-person teams participate in a tournament. Teams could compete seriously or be light-hearted in sportsmanship. The tournament could be sponsored by a local business, with the winning team getting a certificate for a professional service, or dinner. There could also be awards given for the most clever team name, or funniest athletic attire. Different competition categories for age could be established to encourage residents of all ages to play. An entry fee could also be collected to benefit a local charity.

The combination of competition and fun make this an event that can energize a community and even become an annual event, taking place in different neighborhoods each year for a "home-field" advantage. This approach could also be modified for soccer, field hockey, kickball, softball, or other outdoor sports.



A 5-on-5 competition can bring community members together



Some competitors may play just for fun



A 5-on-5 competition can become an annual event encouraging physical activity and benefitting local charities

| | | | | |
|---|---|---|---|---|
| portable basketball hoops | basketballs | basketball containers/ storage | spray chalk | small boards/ way to keep score |
| picnic tables | stop watches | whistles | trophies | referees |

## Installation

Once a location has been selected for a basketball tournament, the layout for the basketball courts should be determined. Ideally, at least two courts can fit at a single location. In order to accommodate players of varying ages, a high school regulation size court can be used (84 feet x 50 feet). If games are to be played in the evening, try to orient the courts to avoid sun glare if possible (northwest to southeast orientation is ideal).

Choose a spray chalk color that will effectively stand out from any parking lot lines such as a bold yellow, green, or red and paint the basketball court. Spray chalk can last up to a month, and may need to be re-applied depending on environmental conditions. It is typically easily removed, but some power washing may be necessary in some instances.

Arrange picnic tables around the basketball courts for waiting teams, or viewers to relax and watch the games. These can also be installed as eating locations for food trucks or food stations set up around the courts.

## Cook-Off

Cook-Offs are a fun way to gather the community, have fun, and activate underutilized areas in T.O.D.. The placement of stations and open areas also makes it possible to test potential future building and public space/park locations.

Depending on interest, a city- or county-wide cook-off can be organized in several ways. Several tents can be set up according to different categories from baking, to chili, to barbecue, to restaurants, to kid's creations, and more. Different quail dishes could be a category to honor local hunting traditions. Trophies could be awarded and placed on display downtown each year.

Eating and play areas should be set up as well with picnic tables and temporary playground equipment. Play could be as simple as hay bales and kid-friendly competitions.



A cook-off can be an event to bring people into T.O.D.



A cook-off can celebrate local cooking or baking talent



Community Cook-offs offer a chance for the community to gather and highlights the talent of local residents.

## Materials

| | | | | |
|---|---|---|---|---|
| tents | chairs | microphone | umbrellas | trophies |
| picnic tables | sound system | planters | tables | |

## Installation

Choose an underutilized location that is part of a wider development plan or park location. This could be a green space, a parking lot, vacant lot, or the amphitheater. Depending on the interest in the event, a large space may be desired.

Set up tents for each food category in locations that are identified as potential future building sites or around the public space. Tents come in varying sizes, so coordinate appropriate sizes with the rental company — a 40 foot by 80 foot size may be a good starting point. Set up tables and chairs for food preparation and presentation stations. Be sure to leave room for outdoor cooking if necessary. Set up a tent for food juries to meet and determine winners. A sound system could be installed here for announcements.

Set up outdoor seating with picnic tables and a play area. Consider erecting a tent here as well for shade or inclement weather. Planters can bring some green and shade to open areas as well.

## Pop-up Entertainment

Pop-up Entertainment can bring the community together while also promoting local talent, amenities, and underutilized properties. The entertainment can range in scale from a one day performance, to a festival scale. No matter the scale, local businesses will see a positive effect.

On a short time frame, pop-up entertainment can be a very local event or even a city-wide event that highlights local talent in music and theater. A First Friday Funday could feature a local band at the end of the day to kick off the weekend. Longer festivals could highlight T.O.D. as a creative destination and draw visitors to the city.

Performance stages can be set up indoors and outdoors. Indoor performances can highlight underutilized properties and generate interest and discussion about a property. Outdoor stages or movie nights can highlight existing public amenities. The amphitheater is an excellent location for a main stage. A second stage could be located near the Big Oak. A variety of performance venues can also help to expand existing festivals such as Due South.

Food trucks, or food stations should be encouraged to set up at these events. Food trucks can be used to simulate potential future restaurant locations.



The amphitheater is an amazing new venue



Temporary stages can showcase local talent



Community movie nights offer a chance for the community to gather and relax, and highlights public amenities

## Materials



stage



sound system
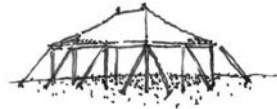


tent



chairs



picnic tables
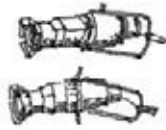


lighting



movie screen
and projector



bathrooms

## Installation

Installation will differ depending on what type of venue will be set up. Indoor venues should highlight existing buildings that have been incorporated into a master plan for redevelopment. A tent can be used to simulate a structure where a building is desired, but none currently exists. A variety of sizes should be encouraged for multiple venue sizes. Outdoor venues will want to be on relatively flat ground, or on an incline with the stage at the bottom if possible.

Set up a temporary stage (platforms are typically 4 feet by 8 feet) along with sound and lighting systems. Chairs should be set up for seating. Movie screenings don't necessarily need chairs, but participants should be encouraged to bring blankets or chairs if desired.

If there are multiple venues, try to place them within easy walking distance — potentially connected through a pedestrian-only street.

Invite food trucks to participate and locate them where future buildings are desired. This will help to suggest how the area might be in the future with permanent structures.

## Guerilla Art

Guerilla Art is an approach that can be used to encourage the redevelopment of existing buildings, enliven streetscapes, promote existing natural resources, and celebrate local talent. This tactical intervention can take many forms including: murals, sculptures, staged theatrical readings, poetry or literary readings, poetry slams, improvisation comedy performances, and music installations.

The range of possibilities of Guerilla Art as a tactical installation make it a very flexible intervention. The idea is that it is quick and easy to set up, and as a result maintains a rough and informal quality to it. Local artists can be commissioned for wall and street murals, or sculpture installations. These can be permanent, or temporary with the overarching goal of improving streetscapes and paths.

Changing installation locations and various exhibits can keep interest in familiar places. Performance art can be located outdoors or indoors and can be a fun way for the community to gather. Indoor locations can highlight underutilized spaces and encourage reinvestment in these locations. Outdoor performances can highlight community amenities, streets, and potential new amenities. Music installations encourage residents to explore their creative side and also make public spaces more fun and interesting while drawing attention to other nearby initiatives and businesses.

Wall art in T.O.D.

Poetry slams can serve as a creative outlet for youth

Murals bring a creative flavor to neighborhoods

Music installations bring surprise and delight to a public space

## Materials

| | | | | |
|---|---|---|---|---|
| microphones | music stands | temporary stages | barriers | speaker system |
| picnic tables | pianos | tents | chairs | lighting |
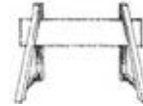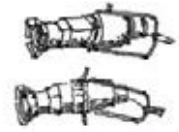
## Installation

Identify existing or future park, street, and building locations that the City is interested in promoting to the public. Determine what type of event will be held. A local, or national event might help inform what type of event to hold. Once an event has been chosen, collaborate with local individuals. This may be English teachers, theater groups, artists, comedy groups, music departments, etcetera to determine the exact needs for a performance.

If indoors, ensure that temporary occupation is safe and acquire any necessary temporary use permits from the City. If outdoors, determine the location. This will typically need to be a flat location. Install a tent for outdoor performances. Chairs, picnic tables and other furniture can be brought on-site shortly before the event. Sound systems should be relatively portable and should not be left outdoors. If an outdoor sound system is needed, make sure that there is an adequate power source nearby. If necessary, install street barriers at intersections. Allow these to be painted.

Street and wall murals should be accommodated with new language in the T.O.D. code to allow for these installations. This should be separate from the signage code.

# Bike Lane

As more and more people decide to use bicycles as a means of transportation, it becomes important to establish a safe and effective means to incorporate bike users into street networks. A bike lane helps bikers, pedestrians, and motor vehicles to share the public right-of-way safely.

A temporary installation can help to identify successful locations for bike lanes. This can be done using temporary paint and barriers along the testing location.

## Installation

Consult City or neighborhood plans to identify locations where a future bike lane has been planned. Other locations may also be tested. Streets that are good candidates are typically main streets, or streets that are well connected to other major destinations.

Bike lane widths tend are 5 feet minimum, however 6 feet is preferred. A buffer between the bike lane and motor lane is also a good idea and should be between 2 and 3 feet wide. Bike lanes are safer for bicyclists and motorists if the bike lane follows the direction of traffic, so avoid having a cycle track (two directions of travel in one area) if possible, and place bike lanes on either side of the street.

Bike lanes tend to be painted green, however they can also be white, or blue.



Protected bike lanes can make biking safer around T.O.D.



One-way bike lanes buffered by parallel parking increase safety

## Materials



tempera paint



stencils



spray chalk



bike lane barriers

# Street Reconfiguration

Sometimes areas designated for cars can be slightly adjusted to improve safety for a right-of-way. These may be repainting a lane, or parking spaces to reduce the lane width, or reorient parking spaces. This approach can be tested prior to permanent adjustment utilizing temporary paint, or other installations at the desired locations.

Testing the desired outcome can help identify any problems prior to the revision and improve the satisfaction with the end result.

## Installation

Locate streets that could benefit from a reduction in lane widths, introducing parking, changing parking orientation or size, or other changes that could help improve pedestrian movement and safety in the public right-of-way. Some examples may include giving a buffer for parallel parking spaces, placing a planter to test a bump out in the road, painting new cross walks, and changing pull-in street parking to back-in street parking.

Lines painted range between 4 and 6 inches in width depending on the type of road and the related agency that oversees the maintenance of the road. Paint the street using either a tempera paint, or spray chalk. Keep in mind that yellow lines are on the left-side of a lane, and white lines are on the right side. Make sure to keep painting colors and dimensions within Department of Transportation standards.


Bump outs can be tested with temporary planters


Back in parking spaces are safer by improving visibility for the driver.

## Materials


tempera paint


spray chalk


planters

An important aspect of designing and implementing T.O.D. is to understand who the current residents are and who the potential future residents might be. A Market tapestry study helps to understand where priorities of these different groups might be, and determines how to grow, maintain the character of a municipality, and attract new residents.

This section describes two groups – the first identifies people who live in the different transit areas of Allegheny County, and the other identifies people who live in Downtown Pittsburgh. This is important, because while first group likely makes up most of the municipalities outside of Pittsburgh, the group that lives Downtown is most likely to be attracted to T.O.D. Knowing what each group is looking for will outline what to include or allow in a T.O.D. while providing services for existing local groups. The top three segments of each group are identified using ArcGIS Business Analyst and their wants are briefly discussed. These groupings and their brief descriptions are called tapestry segments. It is important to note that only the top three largest tapestry segments for each municipality is presented. Each community has a varied population and there are more segments that make up each community.

Following this discussion of general regional trends and identifying what will attract transit riders, a study was conducted of the highest ranking T.O.D. typology in each community. This study was conducted using ArcGIS Business Analyst and includes the top three tapestry segments.

A tapestry segment is an analytical tool used by Business Analyst that identify 68 distinctive markets in the U.S. based on socioeconomic and demographic composition. It is uses to identify the types of people who live in a given area and how to attract specific groups.

Using ArcGIS Business Analyst and the top three tapestry segments along with a review of what is in overabundance and uses that are lacking and may be sources of potential development. This study examined what is available within a 5-, 10-, and 15-minute walk from the transit station. This is to reflect the willingness of people to walk 10 minutes to a transit station along with the reach of increased property revenue. The top three tapestry segments that are reported reflect the findings within a 15-minute walk to give an overview of the population around the station. The areas of overabundance and opportunity are taken from a 10-minute walking radius.

## PRELIMINARY RECOMMENDATIONS

Based on the market overview in the following pages, the following are general recommendations to inform T.O.D. implementation.

**1.** Provide a wider variety of housing choices for a variety of people seeking a T.O.D lifestyle.

**2.** Encourage more restaurants and dining experiences.

**3.** Encourage more services from experience-based small shops and services.

# WHO LIVES IN THE PITTSBURGH REGION?

The following are the three largest groups of people that live in the Pittsburgh region. The percentage changes depending where in the region one is located and the T.O.D. typology.



## Rustbelt Traditions

| | |
|---|---|
| **6.8%** | Suburban Neighborhood T.O.D.s |
| **23.2%** | Urban Neighborhood T.O.D.s |
| **21.7%** | Transit Neighborhood T.O.D.s |

This group of people include a mix of married-couple families and singles living in older single-family homes. They are typically skilled workers.

- Median Age: 39.0
- Average Household Size: 2.47
- Median Household Income: $51,800
- Median Household Net Worth: $98,100
- 46% married-couple family
- Households have 1 or 2 vehicles
- 71.2% Home Ownership – 50% of which have no mortgage
- Most have graduated from high school or have some college
- 5.2% unemployment
- 67% Labor Force Participation



## Mid-life Constants

| | |
|---|---|
| **11.7%** | Suburban Neighborhood T.O.D.s |
| **12.2%** | Urban Neighborhood T.O.D.s |
| **10.2%** | Transit Neighborhood T.O.D.s |

Seniors at or approaching retirement that live in smaller cities. Their lifestyle is more country than urban.

- Median Age: 47.0
- Average Household Size: 2.31
- Median Household Income: $53,200
- Median Household Net Worth: $138,300
- Older homes typically built before 1950
- 72.7% Ownership – more than 50% of which have no mortgage
- 63% have a high school diploma or some college
- 4.7% unemployment (low)
- Labor Force Participation low
- Buy American



## Comfortable Empty Nesters

| | |
|---|---|
| **8.6%** | Suburban Neighborhoods T.O.D.s |
| **10.2%** | Urban Neighborhood T.O.D.s |
| **9.6%** | Transit Neighborhood T.O.D.s |

Baby Boomers, nearly half 55 or older, that live in the suburbs where they grew up. This is a large growing segment of the population.

- Median Age: 48.0
- Average Household Size: 2.52
- Median Household Income: $75,000
- Median Household Net Worth: $293,000
- Homes built between 1950 and 1990
- 86.9% Home Ownership
- 1 or 2 vehicles
- 36% are college graduates while 68% have some college
- 61% Labor Force Participation
- 4% unemployment (low)

Source: GIS Business Analyst, 2018

# WHO LIVES IN DOWNTOWN PITTSBURGH?

The following are the three largest groups of people that live in Downtown Pittsburgh.
These groups are likely to seek out and live in areas that are served well with transit.



## College Towns

**37.8%** Downtown Pittsburgh

Non-family households with college students or people who work for a college or services. This group of people are about new experiences.

- Median Age: 24.5
- Average Household Size: 2.14
- Median Household Income: $32,200
- Median Household Net Worth: $11,600

- 75.4% Rent
- Bike & Pedestrian friendly
- Limited income = thrifty purchases
- Environmentally friendly
- Use good gas mileage vehicles & transit



## Social Security Set

**37.7%** Downtown Pittsburgh

25% of the social security set are 65 or older. They typically have low, fixed incomes. They enjoy the hustle and bustle of city life. They typically live in low-rent, high-rise buildings.

- Median Age: 45.6
- Average Household Size: 1.72
- Median Household Income: $17,900
- Median Household Net Worth: $10,200

- 86.2% rent
- Use Public Transportation
- Eat at home
- TV trusted source of information



## Metro Renters

**11.9%** Downtown Pittsburgh

Metro renters are young professionals. They are single, educated and mobile. They have good incomes and are a fast-growing segment of the population.

- Median Age: 32.5
- Average Household Size: 1.67
- Median Household Income: $67,000
- Median Household Net Worth: $21,000
- 79.8% rent

- They use public transportation like taxis, rideshare, walking, and biking
- Well educated, many enrolled in college
- They use environmentally safe products

Source: GIS Business Analyst, 2018

# WHAT USES ARE LACKING?

## WITHIN A 10-MINUTE DRIVE, 15-MINUTE TRANSIT RIDE

To establish and understanding of what general trends are for the region, a leakage analysis was conducted for the different T.O.D. typologies. A leakage analysis reveals what types of retail are oversupplied and what retail opportunities might exist. A series of graphs was formed to visualize this information. Red indicates areas of overabundance — retail that is oversaturated in the area. Green indicates retail that is lacking — potential retail opportunities.

Reviewing the leakage analysis for the different T.O.D. typologies revealed that there is an excess of car-related services, building repair, and garden supplies within a 10-minute drive or 15-minute transit ride from each of the station areas. There is, however a lack of food and

drinking establishments, sporting goods, electronics, and health and personal care stores in most station areas, in general. There was a notable exception in the clothing and accessories category where there was a surplus in the Transit Neighborhood typology areas.

It is important to note that each area has its own unique market conditions. These charts indicate general trends for the different T.O.D. station typologies. A finer grained study can be conducted within each municipality to learn site-specific results. The following pages include a finer-grain study of one station area in each municipality and includes a tapestry overview and a leakage analysis.

### Suburban Neighborhood T.O.D.s

### Urban Neighborhood T.O.D.s

### Transit Neighborhood T.O.D.s



- Motor Vehicle & Parts Dealers
- Furniture & Home Furnishing Stores
- Electronics & Appliance Stores
- Building Materials, Garden Equip. & Supply Stores
- Food & Beverage Stores
- Health & Personal Care Stores
- Gasoline Stations
- Clothing and Clothing Accessories Stores
- Sporting Goods, Hobby, Book, and Music Stores
- General Merchandise Stores
- Miscellaneous Store Retailers
- Nonstore Retailers
- Food Services & Drinking Places

# BALDWIN TOWNSHIP

## WHO LIVES NEAR MCNEILLY STATION?

The following are the three largest groups of people that live a 15 minuite walk from McNeilly Station.





### Rustbelt Traditions - 65.8%

This group of people include a mix of married-couple families and singles living in older single-family homes. They are typically skilled workers.

- Median Age: 39.0
- Average Household Size: 2.47
- Median Household Income: $51,800
- Median Household Net Worth: $98,100
- 46% married-couple family
- Households have 1 or 2 vehicles
- 71.2% Home Ownership – 50% of which have no mortgage
- Most have graduated from high school or have some college
- 5.2% unemployment
- 67% Labor Force Participation

### Heartland Communities - 18.9%

These older householders are primarily homeowners, and many have paid off their mortgages. Their children have moved away, but they have no plans to leave their homes. They embrace the slower pace of life here but actively participate in outdoor activities and community events.

- Median Age: 42.3
- Average Household Size: 2.39
- Median Household Income: $42,400
- Median Household Net Worth: $70,900
- Most are married
- Households have 1 or 2 vehicles
- 69.4 % Home Ownership
- More workers are white collar than blue collar; more skilled than unskilled
- 5.2% unemployment
- Less than 60% Labor Force Participation

## Traditional Living - 8.4%

The householdsare a mix of married-couple families and singles. Many families encompass two generations who have lived and worked in the community; their children are likely to follow suit.

- Median Age: 35.5
- Average Household Size: 2.51
- Median Household Income: $39,300
- Median Household Net Worth: $33,900
- Most are married
- Households have 1 or 2 vehicles
- 58.9 % Home Ownership – 50% of which have no mortgage
- 70% graduated from high school or have some college
- 7.3 % unemployment
- 63.4% Labor Force Participation

## WHAT USES ARE LACKING?
### WITHIN A 10-MINUTE WALK OF THE STATION



Surplus ← | → Leakage

- Motor Vehicle & Parts Dealers
- Furniture & Home Furnishing Stores
- Electronics & Appliance Stores
- Building Materials, Garden Equip. & Supply Stores
- Food & Beverage Stores
- Health & Personal Care Stores
- Gasoline Stations
- Clothing and Clothing Accessories Stores
- Sporting Goods, Hobby, Book, and Music Stores
- General Merchandise Stores
- Miscellaneous Store Retailers
- Nonstore Retailers
- Food Services & Drinking Places
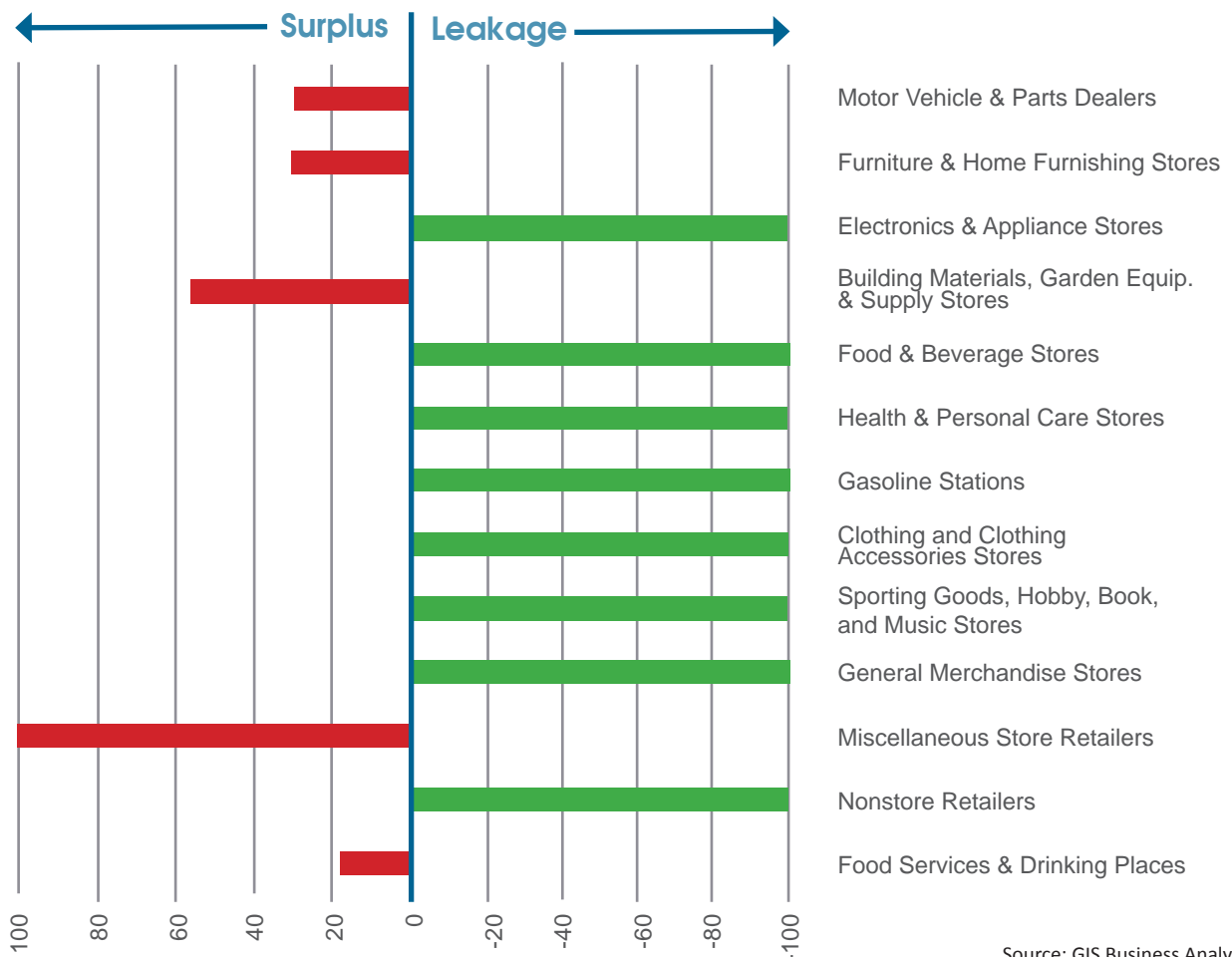
Source: GIS Business Analyst, 2018

# BETHEL PARK

## WHO LIVES NEAR SOUTH PARK ROAD STATION?

The following are the three largest groups of people that live a 15 minute walk from South Park Road Station.



### Retirement Communities - 36.5%

This group consists of mostly retired people. They enjoy watching cable TV and stays up-to-date with newspapers and magazines. Residents take pride in fiscal responsibility and keep a close eye on their finances. Although income and net worth are well below national averages, residents enjoy going to the movies, fishing, and taking vacations. While some residents enjoy cooking, many have paid their dues in the kitchen and would rather dine out

- Median Age: 53.9
- Average Household Size: 1.88
- Median Household Income: $40,800
- Median Household Net Worth: $53,300
- Small household size; many residents have outlived their partners and live alone
- Nearly one in five households has no vehicle
- 45.1 % Home Ownership
- Less than 60% Labor Force Participation



### Rustbelt Traditions - 32.8%

This group of people include a mix of married-couple families and singles living in older single-family homes. They are typically skilled workers.

- Median Age: 39.0
- Average Household Size: 2.47
- Median Household Income: $51,800
- Median Household Net Worth: $98,100
- 46% married-couple family
- Households have 1 or 2 vehicles
- 71.2% Home Ownership – 50% of which have no mortgage
- Most have graduated from high school or have some college
- 5.2% unemployment
- 67% Labor Force Participation

Source: GIS Business Analyst, 2018

## Comfortable Empty Nesters -30.7%

Baby Boomers, nearly half 55 or older, that live in the suburbs where they grew up. This is a large growing segment of the population.

- Median Age: 48.0
- Average Household Size: 2.52
- Median Household Income: $75,000
- Median Household Net Worth: $293,000
- Homes built between 1950 and 1990
- 86.9% Home Ownership
- 1 or 2 vehicles
- 36% are college graduates while 68% have some college
- 61% Labor Force Participation
- 4% unemployment (low)

## WHAT USES ARE LACKING?

### WITHIN A 10-MINUTE WALK OF THE STATION

Surplus ← | → Leakage

| Category | |
|---|---|
| Motor Vehicle & Parts Dealers | |
| Furniture & Home Furnishing Stores | |
| Electronics & Appliance Stores | |
| Building Materials, Garden Equip. & Supply Stores | |
| Food & Beverage Stores | |
| Health & Personal Care Stores | |
| Gasoline Stations | |
| Clothing and Clothing Accessories Stores | |
| Sporting Goods, Hobby, Book, and Music Stores | |
| General Merchandise Stores | |
| Miscellaneous Store Retailers | |
| Nonstore Retailers | |
| Food Services & Drinking Places | |

Axis: 100  80  60  40  20  0  -20  -40  -60  -80  -100

Source: GIS Business Analyst, 2018

# CARNEGIE

## WHO LIVES NEAR CARNEGIE STATION?

The following are the three largest groups of people that live a 15 minute walk from Carnegie Station.

### Rustbelt Traditions - 29.2%

This group of people include a mix of married-couple families and singles living in older single-family homes. They are typically skilled workers.

- Median Age: 39.0
- Average Household Size: 2.47
- Median Household Income: $51,800
- Median Household Net Worth: $98,100
- 46% married-couple family
- Households have 1 or 2 vehicles
- 71.2% Home Ownership – 50% of which have no mortgage
- Most have graduated from high school or have some college
- 5.2% Unemployment
- 67% Labor Force Participation

### Old and Newcomers - 28.2%

This market features singles' lifestyles, on a budget. The focus is more on convenience than consumerism, economy over acquisition. Old and Newcomers is composed of neighborhoods in transition, populated by renters who are just beginning their careers or retiring. Age is not always obvious from their choices.

- Median Age: 39.4
- Average Household Size: 2.12
- Median Household Income: $44,900
- Median Household Net Worth: $30,900
- 31% have a college degree.
- They are more comfortable with the latest technology than buying a car
- 45.2 % Home Ownership
- 5.1% Unemployment
- 67% Labor Force Participation

Source: GIS Business Analyst, 2018

## Social Security Set - 20.1%

25% of the social security set are 65 or older. They typically have low, fixed incomes. They enjoy the hustle and bustle of city life. They typically live in low-rent, high-rise buildings.

- Median Age: 45.6
- Average Household Size: 1.72
- Median Household Income: $17,900
- Median Household Net Worth: $10,200
- 86.2% rent
- Use Public Transportation
- Eat at home
- TV trusted source of information

## WHAT USES ARE LACKING?

### WITHIN A 10-MINUTE WALK OF THE STATION



Surplus | Leakage

| Category | |
|---|---|
| Motor Vehicle & Parts Dealers | |
| Furniture & Home Furnishing Stores | |
| Electronics & Appliance Stores | |
| Building Materials, Garden Equip. & Supply Stores | |
| Food & Beverage Stores | |
| Health & Personal Care Stores | |
| Gasoline Stations | |
| Clothing and Clothing Accessories Stores | |
| Sporting Goods, Hobby, Book, and Music Stores | |
| General Merchandise Stores | |
| Miscellaneous Store Retailers | |
| Nonstore Retailers | |
| Food Services & Drinking Places | |

100  80  60  40  20  0  -20  -40  -60  -80  -100

Source: GIS Business Analyst, 2018

# CASTLE SHANNON

## WHO LIVES NEAR CASTLE SHANNON STATION?

The following are the three largest groups of people that live a 15 minute walk from Castle Shannon Station.





### Old and Newcomers - 57.6%

This market features singles' lifestyles, on a budget. The focus is more on convenience than consumerism, economy over acquisition. Old and Newcomers is composed of neighborhoods in transition, populated by renters who are just beginning their careers or retiring. Age is not always obvious from their choices.

- Median Age: 39.4
- Average Household Size: 2.12
- Median Household Income: $44,900
- Median Household Net Worth: $30,900
- 31% have a college degree.
- They are more comfortable with the latest technology than buying a car
- 45.2 % Home Ownership
- 5.1% Unemployment
- 67% Labor Force Participation

### Golden Years - 17.2%

Independent, active seniors nearing the end of their careers or already in retirement best describes Golden Years residents. This market is primarily singles living alone or empty nesters. Those still active in the labor force are employed in professional occupations and actively pursuing a variety of leisure interests. They are involved, focused on physical fitness, and enjoying their lives.

- Median Age: 52.3
- Average Household Size: 2.06
- Median Household Income: $71,700
- Median Household Net Worth: $184,000
- 62.7 % Home Ownership
- 22% have graduate or professional degrees, 28% have bachelor's degrees
- 4% unemployment
- 56% Labor Force Participation

## Pleasantville - 9.0%

Prosperous domesticity best describes the settled denizens of Pleasantville. Situated principally in older housing in suburban areas in the Northeast, these slightly older couples move less than any other market. Families own older, single-family homes and maintain their standard of living with dual incomes.

- Median Age: 42.6
- Average Household Size: 2.88
- Median Household Income: $92,900
- Median Household Net Worth: $339,300
- Most are married
- Households have 3 or more vehicles
- 83.1 % Home Ownership
- 66% college educated
- 4.6 % unemployment
- 67% Labor Force Participation

## WHAT USES ARE LACKING?
### WITHIN A 10-MINUTE WALK OF THE STATION



Surplus | Leakage

| Category | |
|---|---|
| Motor Vehicle & Parts Dealers | |
| Furniture & Home Furnishing Stores | |
| Electronics & Appliance Stores | |
| Building Materials, Garden Equip. & Supply Stores | |
| Food & Beverage Stores | |
| Health & Personal Care Stores | |
| Gasoline Stations | |
| Clothing and Clothing Accessories Stores | |
| Sporting Goods, Hobby, Book, and Music Stores | |
| General Merchandise Stores | |
| Miscellaneous Store Retailers | |
| Nonstore Retailers | |
| Food Services & Drinking Places | |

100 80 60 40 20 0 -20 -40 -60 -80 -100

Source: GIS Business Analyst, 2018

# CRAFTON

## WHO LIVES NEAR CRAFTON STATION?

The following are the three largest groups of people that live a 15 minute walk from Crafton Station.



### Old and Newcomers - 43.9%

This market features singles' lifestyles, on a budget. The focus is more on convenience than consumerism, economy over acquisition. Old and Newcomers is composed of neighborhoods in transition, populated by renters who are just beginning their careers or retiring. Age is not always obvious from their choices.

- Median Age: 39.4
- Average Household Size: 2.12
- Median Household Income: $44,900
- Median Household Net Worth: $30,900
- 31% have a college degree.
- They are more comfortable with the latest technology than buying a car
- 45.2 % Home Ownership
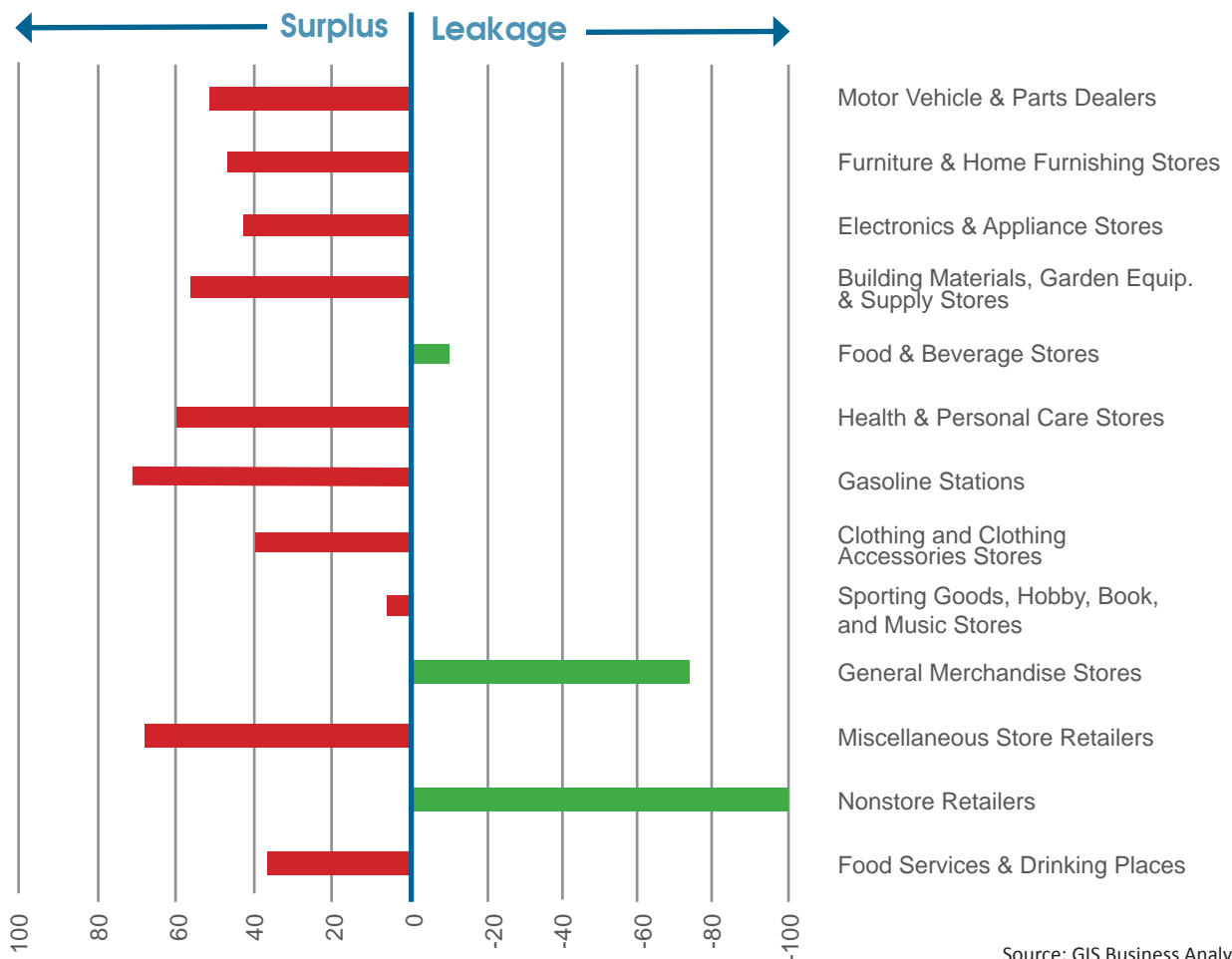- 5.1% Unemployment
- 67% Labor Force Participation



### Parks and Rec - 34.2%

These practical suburbanites have achieved the dream of home ownership. They have purchased homes that are within their means. Many of these families are two-income married couples approaching retirement age; they are comfortable in their jobs and their homes, budget wisely, but do not plan on retiring anytime soon or moving. The appeal of these kid-friendly neighborhoods is now attracting a new generation of young couples.

- Median Age: 40.9
- Average Household Size: 2.51
- Median Household Income: $60,000
- Median Household Net Worth: $125,500
- Households by type mirror the US distribution; married couples, fewer children
- Older residents draw Social Security and retirement income
- 69.7 % Home Ownership
- More than 50% college educated

## Rustbelt Traditions - 22.0%

This group of people include a mix of married-couple families and singles living in older single-family homes. They are typically skilled workers.

- Median Age: 39.0
- Average Household Size: 2.47
- Median Household Income: $51,800
- Median Household Net Worth: $98,100
- 46% married-couple family
- Households have 1 or 2 vehicles
- 71.2% Home Ownership – 50% of which have no mortgage
- Most have graduated from high school or have some college
- 5.2% unemployment
- 67% Labor Force Participation

## WHAT USES ARE LACKING?

### WITHIN A 10-MINUTE WALK OF THE STATION

← Surplus | Leakage →

| Category | |
|---|---|
| Motor Vehicle & Parts Dealers | |
| Furniture & Home Furnishing Stores | |
| Electronics & Appliance Stores | |
| Building Materials, Garden Equip. & Supply Stores | |
| Food & Beverage Stores | |
| Health & Personal Care Stores | |
| Gasoline Stations | |
| Clothing and Clothing Accessories Stores | |
| Sporting Goods, Hobby, Book, and Music Stores | |
| General Merchandise Stores | |
| Miscellaneous Store Retailers | |
| Nonstore Retailers | |
| Food Services & Drinking Places | |

Axis: 100  80  60  40  20  0  -20  -40  -60  -80  -100

Source: GIS Business Analyst, 2018

# DORMONT

## WHO LIVES NEAR DORMONT JUNCTION?

The following are the three largest groups of people that live a 15 minute walk from Dormont Station.

### Emerald City - 30.4%

Emerald City's denizens live in lower-density neighborhoods of urban areas throughout the country. Young and mobile, they are more likely to rent. Well educated and well employed, half have a college degree and a professional occupation. This group uses the Internet for entertainment and making environmentally friendly purchases. Long hours on the Internet are balanced with time at the gym. Many embrace the "foodie" culture enjoy music and travel.

- Median Age: 37.4
- Average Household Size: 2.06
- Median Household Income: $59,200
- Median Household Net Worth: $52,700
- Single-person and nonfamily types make up over half of all households
- 48.5 Home Ownership
- Well-educated
- Very conscious of nutrition, they regularly buy and eat organic foods.

### Old and Newcomers - 19.5%

This market features singles' lifestyles, on a budget. The focus is more on convenience than consumerism, economy over acquisition. Old and Newcomers is composed of neighborhoods in transition, populated by renters who are just beginning their careers or retiring. Age is not always obvious from their choices.

- Median Age: 39.4
- Average Household Size: 2.12
- Median Household Income: $44,900
- Median Household Net Worth: $30,900
- 31% have a college degree.
- They are more comfortable with the latest technology than buying a car
- 45.2 % Home Ownership
- 5.1% Unemployment
- 67% Labor Force Participation
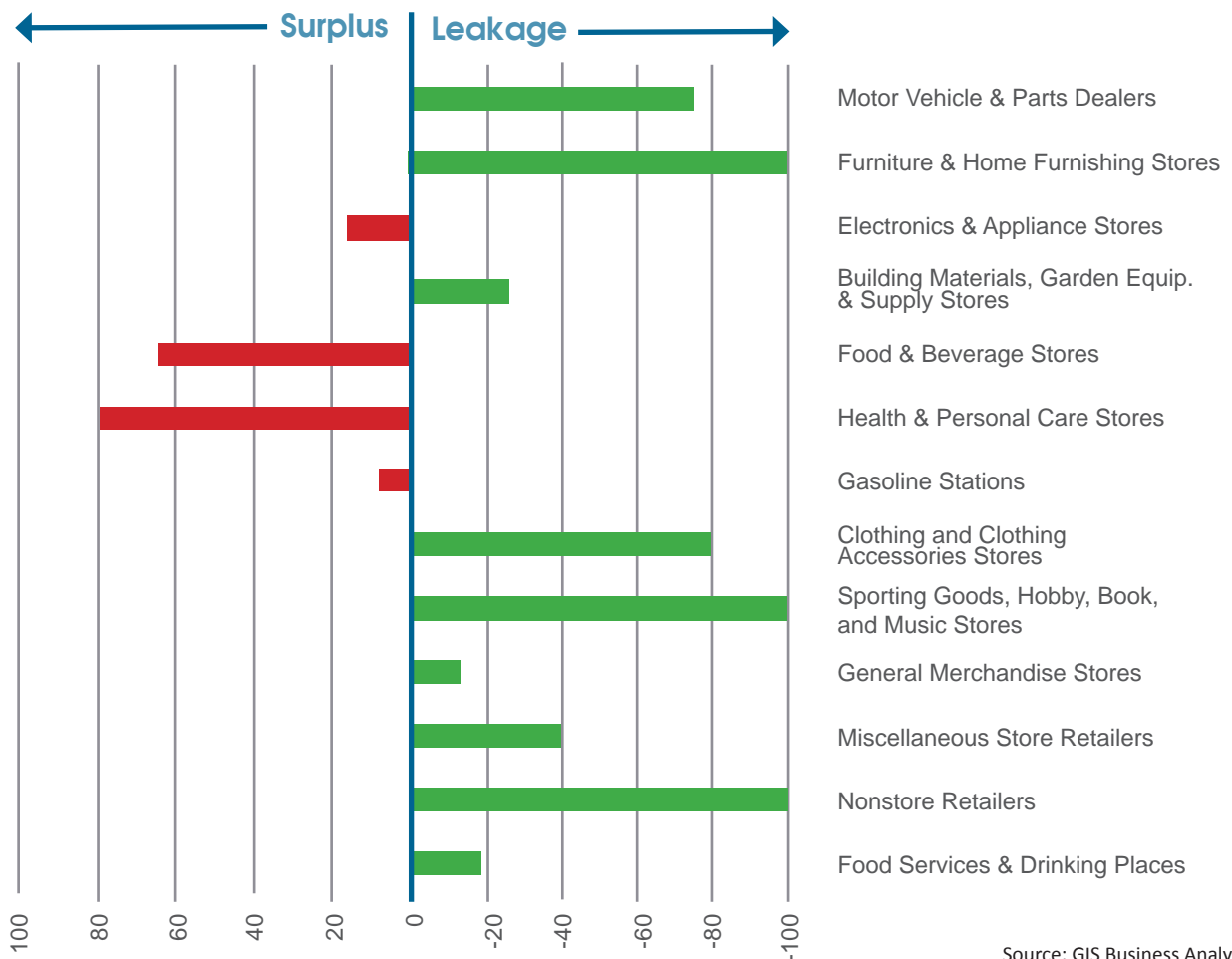
Source: GIS Business Analyst, 2018

## Rustbelt Traditions - 18.6%

This group of people include a mix of married-couple families and singles living in older single-family homes. They are typically skilled workers.

- Median Age: 39.0
- Average Household Size: 2.47
- Median Household Income: $51,800
- Median Household Net Worth: $98,100
- 46% married-couple family
- Households have 1 or 2 vehicles
- 71.2% Home Ownership – 50% of which have no mortgage
- Most have graduated from high school or have some college
- 5.2% Unemployment
- 67% Labor Force Participation

## WHAT USES ARE LACKING?

### WITHIN A 10-MINUTE WALK OF THE STATION

Surplus ← | → Leakage

| Category | |
|---|---|
| Motor Vehicle & Parts Dealers | (surplus) |
| Furniture & Home Furnishing Stores | (surplus) |
| Electronics & Appliance Stores | (surplus) |
| Building Materials, Garden Equip. & Supply Stores | (leakage) |
| Food & Beverage Stores | (leakage) |
| Health & Personal Care Stores | (leakage) |
| Gasoline Stations | (surplus) |
| Clothing and Clothing Accessories Stores | (leakage) |
| Sporting Goods, Hobby, Book, and Music Stores | (leakage) |
| General Merchandise Stores | (leakage) |
| Miscellaneous Store Retailers | (leakage) |
| Nonstore Retailers | (surplus) |
| Food Services & Drinking Places | (surplus) |

Scale: 100 80 60 40 20 0 -20 -40 -60 -80 -100

Source: GIS Business Analyst, 2018

# INGRAM

## WHO LIVES NEAR INGRAM STATION?

The following are the three largest groups of people that live a 15 minute walk from Ingram Station.



### Rustbelt Traditions - 44.1%

This group of people include a mix of married-couple families and singles living in older single-family homes. They are typically skilled workers.

- Median Age: 39.0
- Average Household Size: 2.47
- Median Household Income: $51,800
- Median Household Net Worth: $98,100
- 46% married-couple family
- Households have 1 or 2 vehicles
- 71.2% Home Ownership – 50% of which have no mortgage
- Most have graduated from high school or have some college
- 5.2% unemployment
- 67% Labor Force Participation



### Old and Newcomers - 40.1%

This market features singles' lifestyles, on a budget. The focus is more on convenience than consumerism, economy over acquisition. Old and Newcomers is composed of neighborhoods in transition, populated by renters who are just beginning their careers or retiring. Age is not always obvious from their choices.

- Median Age: 39.4
- Average Household Size: 2.12
- Median Household Income: $44,900
- Median Household Net Worth: $30,900
- 31% have a college degree.
- They are more comfortable with the latest technology than buying a car
- 45.2 % Home Ownership
- 5.1% Unemployment
- 67% Labor Force Participation
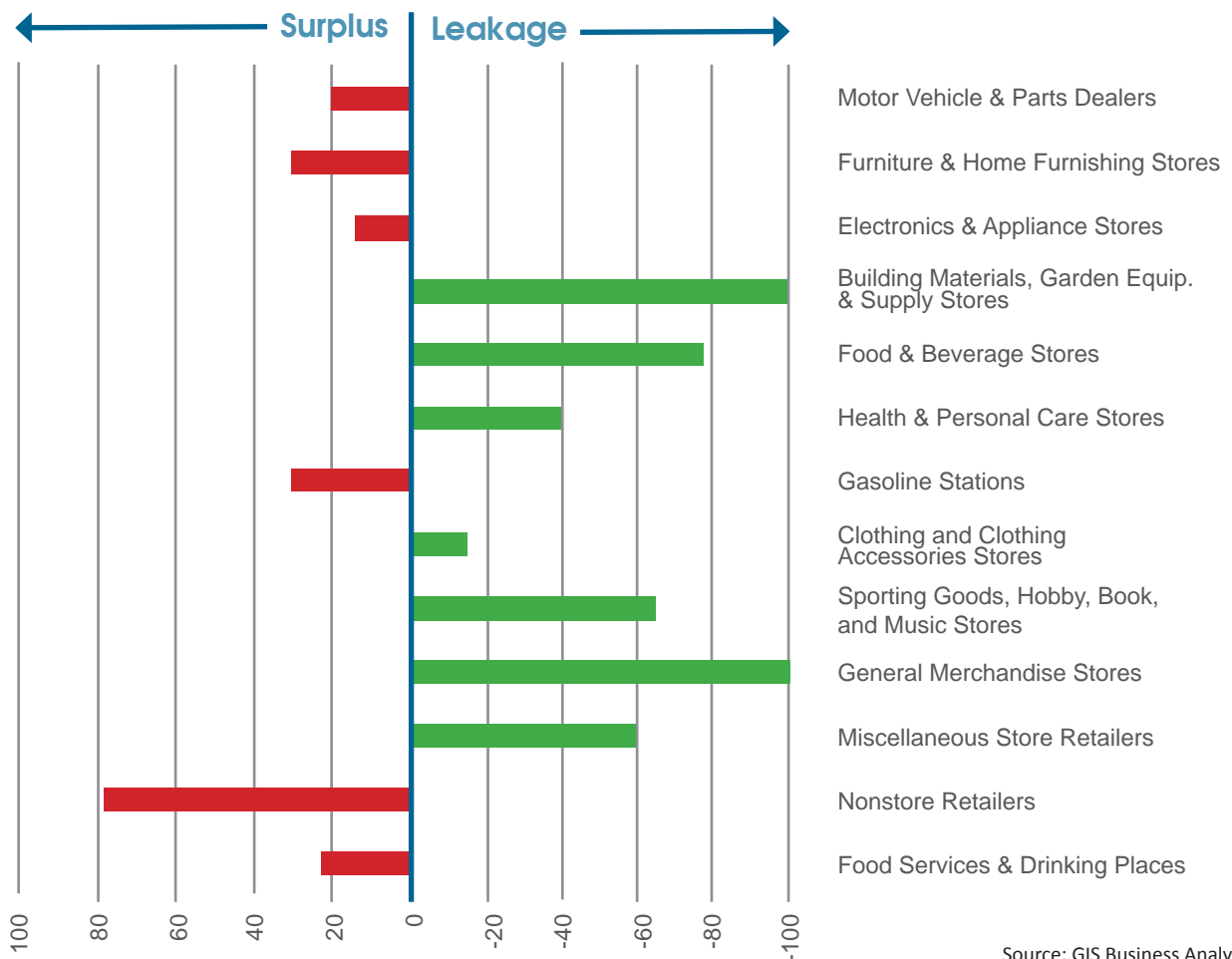
Source: GIS Business Analyst, 2018

## Traditional Living - 9.1%

The householdsare a mix of married-couple families and singles. Many families encompass two generations who have lived and worked in the community; their children are likely to follow suit.

- Median Age: 35.5
- Average Household Size: 2.51
- Median Household Income: $39,300
- Median Household Net Worth: $33,900
- Most are married
- Households have 1 or 2 vehicles
- 58.9 % Home Ownership – 50% of which have no mortgage
- 70% graduated from high school or have some college
- 7.3 % unemployment
- 63.4% Labor Force Participation

## WHAT USES ARE LACKING?

### WITHIN A 10-MINUTE WALK OF THE STATION

Surplus ← | → Leakage

| Category | |
|---|---|
| Motor Vehicle & Parts Dealers | |
| Furniture & Home Furnishing Stores | |
| Electronics & Appliance Stores | |
| Building Materials, Garden Equip. & Supply Stores | |
| Food & Beverage Stores | |
| Health & Personal Care Stores | |
| Gasoline Stations | |
| Clothing and Clothing Accessories Stores | |
| Sporting Goods, Hobby, Book, and Music Stores | |
| General Merchandise Stores | |
| Miscellaneous Store Retailers | |
| Nonstore Retailers | |
| Food Services & Drinking Places | |

100  80  60  40  20  0  -20  -40  -60  -80  -100
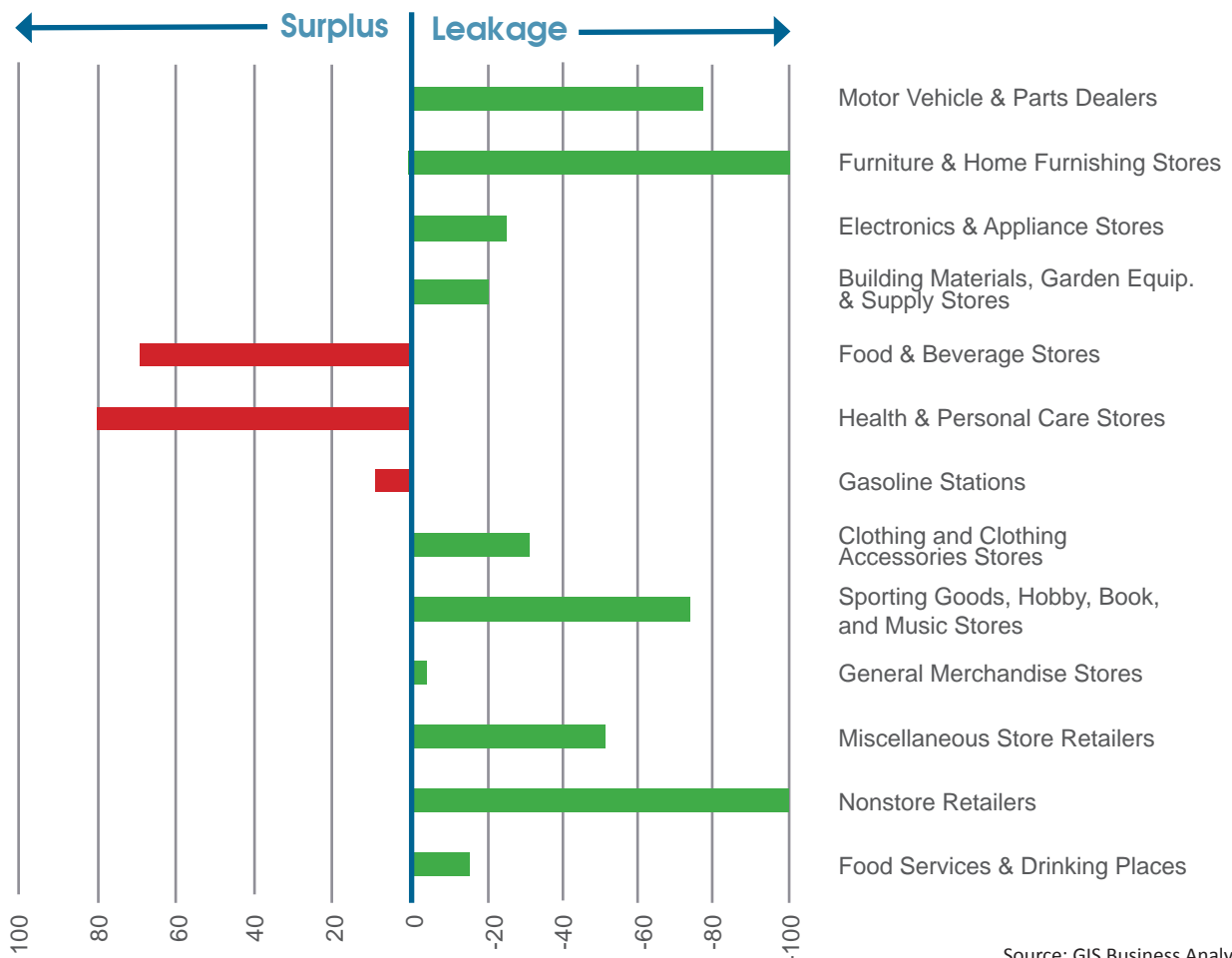
Source: GIS Business Analyst, 2018

# MT. LEBANON

## WHO LIVES NEAR MOUNT LEBANON STATION?

The following are the three largest groups of people that live a 15 minute walk from Mt. Lebanon Station.



### Emerald City - 37.6%

Emerald City's denizens live in lower-density neighborhoods of urban areas throughout the country. Young and mobile, they are more likely to rent. Well educated and well employed, half have a college degree and a professional occupation. This group uses the Internet for entertainment and making environmentally friendly purchases. Long hours on the Internet are balanced with time at the gym. Many embrace the "foodie" culture enjoy music and travel.

- Median Age: 37.4
- Average Household Size: 2.06
- Median Household Income: $59,200
- Median Household Net Worth: $52,700
- Single-person and nonfamily types make up over half of all households
- 48.5 Home Ownership
- Well-educated
- Very conscious of nutrition, they regularly buy and eat organic foods.



### Golden Years - 15.7%

Independent, active seniors nearing the end of their careers or already in retirement best describes Golden Years residents. This market is primarily singles living alone or empty nesters. Those still active in the labor force are employed in professional occupations and actively pursuing a variety of leisure interests. They are involved, focused on physical fitness, and enjoying their lives.

- Median Age: 52.3
- Average Household Size: 2.06
- Median Household Income: $71,700
- Median Household Net Worth: $184,000
- 62.7 % Home Ownership
- 22% have graduate or professional degrees, 28% have bachelor's degrees
- 4% unemployment
- 56% Labor Force Participation

Source: GIS Business Analyst, 2018

## Old and Newcomers - 10.5%

This market features singles' lifestyles, on a budget. The focus is more on convenience than consumerism, economy over acquisition. Old and Newcomers is composed of neighborhoods in transition, populated by renters who are just beginning their careers or retiring. Age is not always obvious from their choices.

- Median Age: 39.4
- Average Household Size: 2.12
- Median Household Income: $44,900
- Median Household Net Worth: $30,900
- 31% have a college degree.
- They are more comfortable with the latest technology than buying a car
- 45.2 % Home Ownership
- 5.1% Unemployment
- 67% Labor Force Participation

## WHAT USES ARE LACKING?

### WITHIN A 10-MINUTE WALK OF THE STATION



Surplus ← | → Leakage

| Category |
|---|
| Motor Vehicle & Parts Dealers |
| Furniture & Home Furnishing Stores |
| Electronics & Appliance Stores |
| Building Materials, Garden Equip. & Supply Stores |
| Food & Beverage Stores |
| Health & Personal Care Stores |
| Gasoline Stations |
| Clothing and Clothing Accessories Stores |
| Sporting Goods, Hobby, Book, and Music Stores |
| General Merchandise Stores |
| Miscellaneous Store Retailers |
| Nonstore Retailers |
| Food Services & Drinking Places |

100  80  60  40  20  0  -20  -40  -60  -80  -100

Source: GIS Business Analyst, 2018

# SWISSVALE

## WHO LIVES NEAR ROSLYN STATION?

The following are the three largest groups of people that live a 15 minute walk from Roslyn Station.
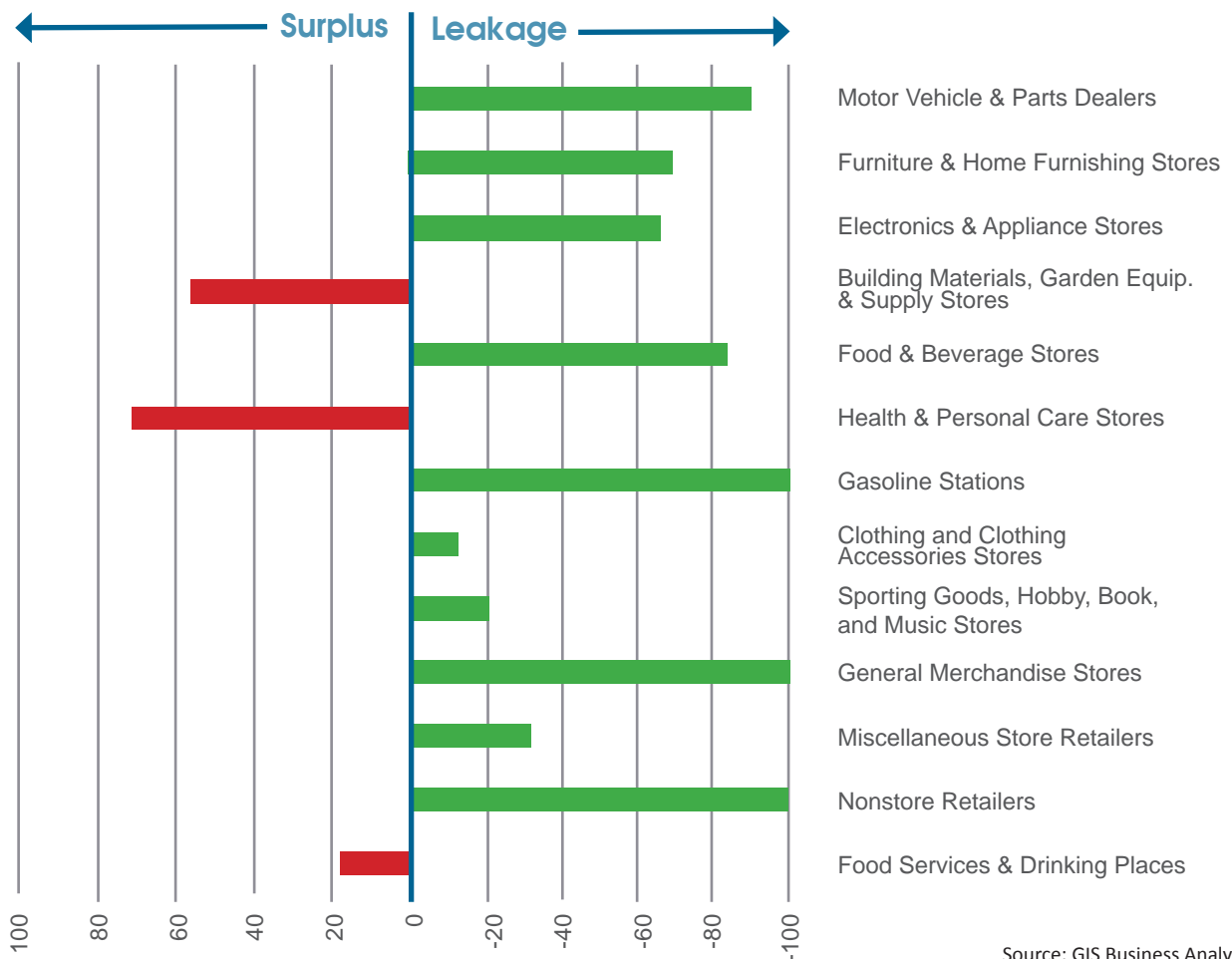
### Old and Newcomers - 37.3%

This market features singles' lifestyles, on a budget. The focus is more on convenience than consumerism, economy over acquisition. Old and Newcomers is composed of neighborhoods in transition, populated by renters who are just beginning their careers or retiring. Age is not always obvious from their choices.

- Median Age: 39.4
- Average Household Size: 2.12
- Median Household Income: $44,900
- Median Household Net Worth: $30,900
- 31% have a college degree.
- They are more comfortable with the latest technology than buying a car
- 45.2 % Home Ownership
- 5.1% Unemployment
- 67% Labor Force Participation

### Hardscrabble Road - 16.5%

Hardscrabble Road neighborhoods are in urbanized areas within central cities, with older housing. This slightly smaller market is primarily a family market, married couples (with and without children) and single parents. Younger, highly diverse (with higher proportions of black, multiracial, and Hispanic populations), and less educated. Unemployment is high and median household income is half the US median. Almost 1 in 3 households have income below the poverty level.

- Median Age: 32.4
- Average Household Size: 2.66
- Median Household Income: $28,200
- Median Household Net Worth: $12,500
- 40 % Home Ownership
- 38% have a high school diploma
- 11.2% unemployment
- Labor force participation rate is lower at 57.1%.
- 56% Labor Force Participation
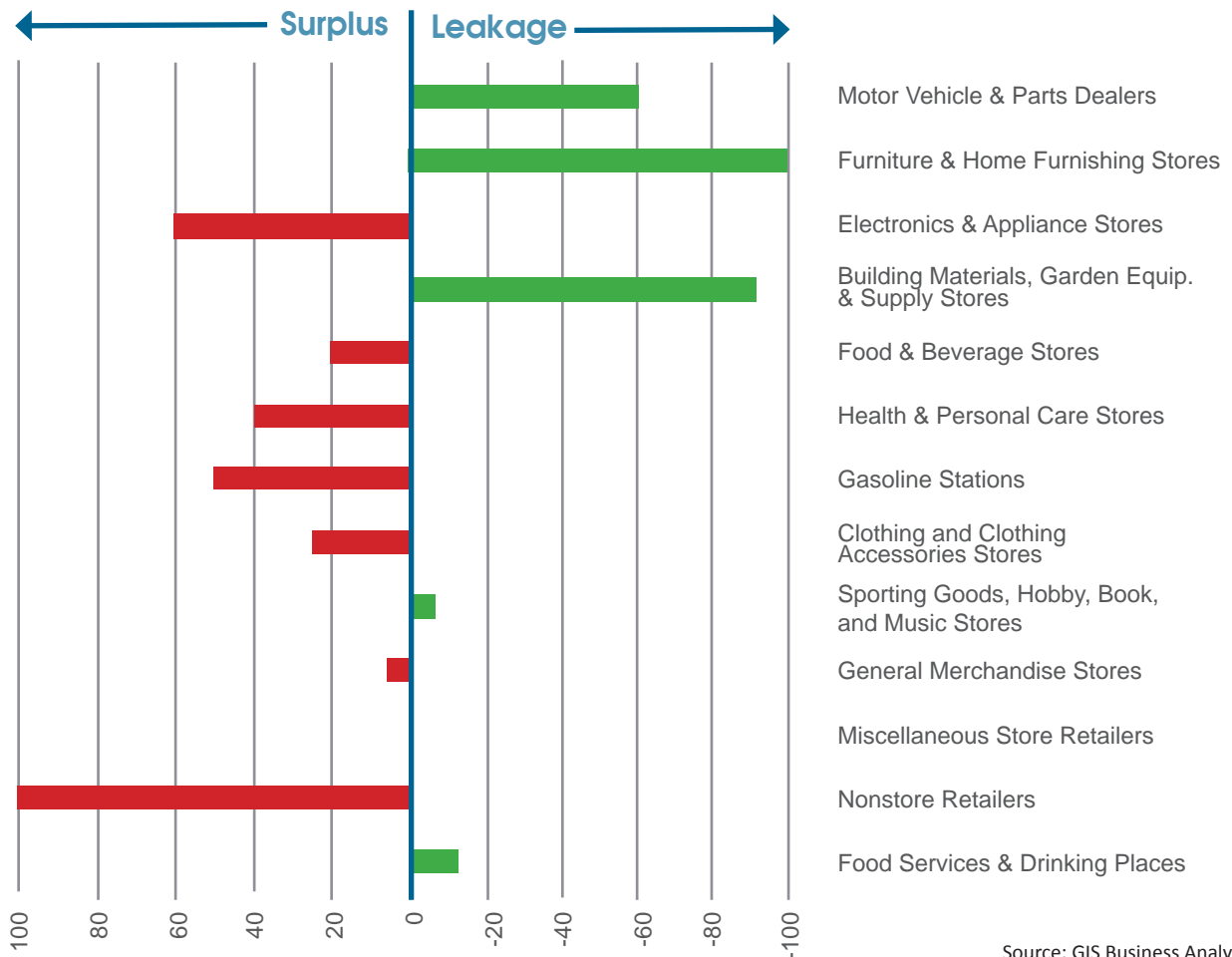
Source: GIS Business Analyst, 2018

## Social Security Set - 15.6%

25% of the social security set are 65 or older. They typically have low, fixed incomes. They enjoy the hustle and bustle of city life. They typically live in low-rent, high-rise buildings.

- Median Age: 45.6
- Average Household Size: 1.72
- Median Household Income: $17,900
- Median Household Net Worth: $10,200
- 86.2% rent
- Use Public Transportation
- Eat at home
- TV trusted source of information

## WHAT USES ARE LACKING?

### WITHIN A 10-MINUTE WALK OF THE STATION



Surplus ← | → Leakage

| Category | |
|---|---|
| Motor Vehicle & Parts Dealers | |
| Furniture & Home Furnishing Stores | |
| Electronics & Appliance Stores | |
| Building Materials, Garden Equip. & Supply Stores | |
| Food & Beverage Stores | |
| Health & Personal Care Stores | |
| Gasoline Stations | |
| Clothing and Clothing Accessories Stores | |
| Sporting Goods, Hobby, Book, and Music Stores | |
| General Merchandise Stores | |
| Miscellaneous Store Retailers | |
| Nonstore Retailers | |
| Food Services & Drinking Places | |

100  80  60  40  20  0  -20  -40  -60  -80  -100

Source: GIS Business Analyst, 2018

# WILKINSBURG

## WHO LIVES NEAR WILKINSBURG STATION?

The following are the three largest groups of people that live a 15 minute walk from Wilkinsburg Station.

### Set to Impress 40.6%

Nearly one in three residents is 20 to 34 years old, and over half of the homes are single person and nonfamily households. Although many residents live alone, they preserve close connections with their family. Income levels are low; many works in food service while they are attending college. This group is always looking for a deal. They are very conscious of their image and seek to bolster their status with the latest fashion.

- Median Age: 33.9

- Average Household Size: 2.12

- Median Household Income: $32,800

- Median Household Net Worth: $12,000

- It is easy enough to walk or bike to work for many residents

- Quick meals on the run are a reality of life

- 27.7 % Home Ownership

- Unemployment is higher, although many are still enrolled in college

### Modest Income Homes 14.0%

Families in this urban segment may be nontraditional. Reliance on Social Security and public assistance income is necessary to support single-parent and multigenerational families. High poverty rates in this market make it difficult to make ends meet. Nonetheless, rents are relatively low (Index 70), public transportation is available, and Medicaid can assist families in need.

- Median Age: 37.0

- Average Household Size: 2.56

- Median Household Income: $23,900

- Median Household Net Worth: $12,400

- 44.7% Home Ownership

- 75% have a high school diploma

- High unemployment (3x national average)

- Labor Force Participation low at 50%
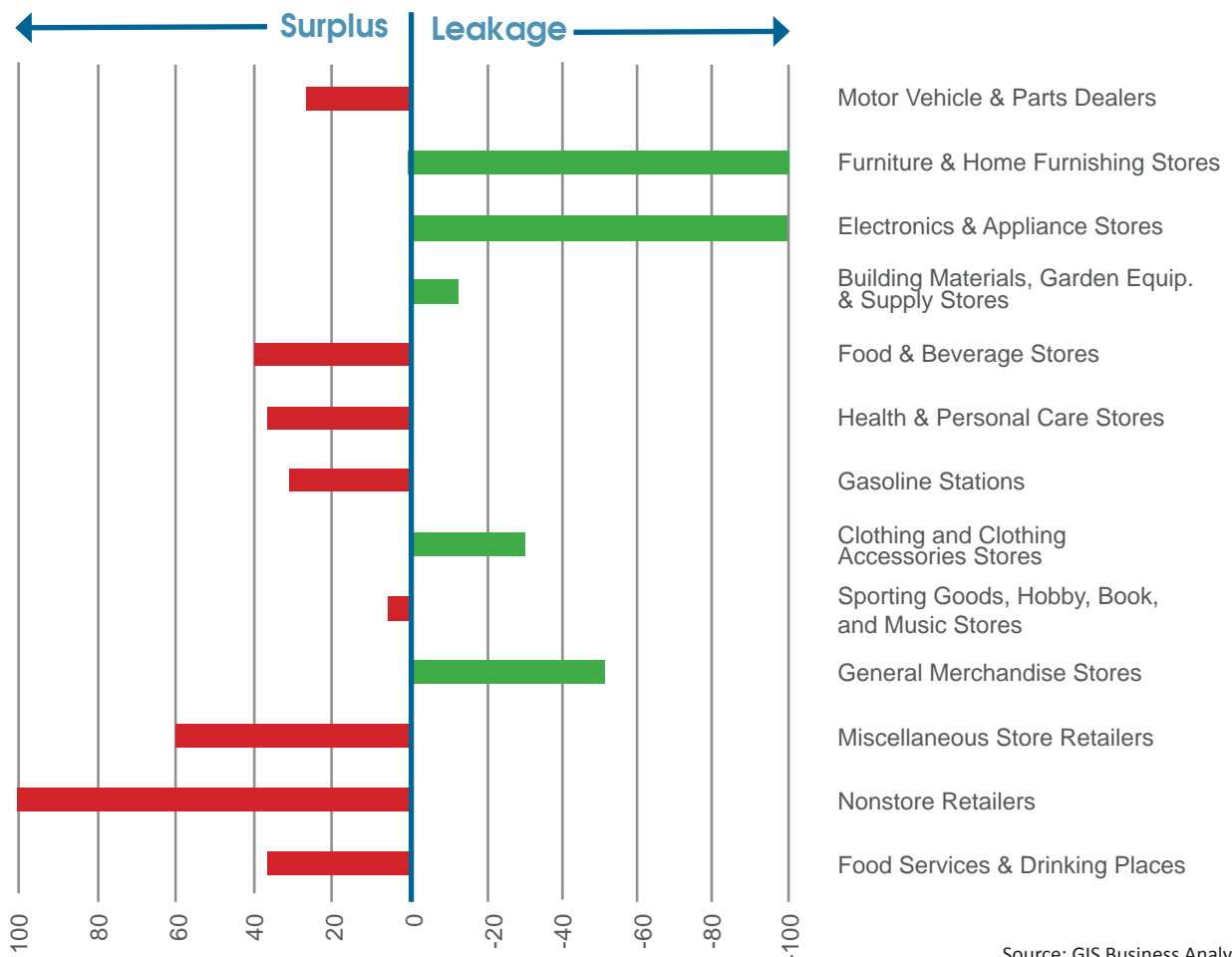
Source: GIS Business Analyst, 2018

## Emerald City - 17.0%

Emerald City's denizens live in lower-density neighborhoods of urban areas throughout the country. Young and mobile, they are more likely to rent. Well educated and well employed, half have a college degree and a professional occupation. This group uses the Internet for entertainment and making environmentally friendly purchases. Long hours on the Internet are balanced with time at the gym. Many embrace the "foodie" culture enjoy music and travel.

- Median Age: 37.4

- Average Household Size: 2.06

- Median Household Income: $59,200

- Median Household Net Worth: $52,700

- Single-person and nonfamily types make up over half of all households

- 48.5 Home Ownership

- Well-educated

- Very conscious of nutrition, they regularly buy and eat organic foods.

## WHAT USES ARE LACKING?
### WITHIN A 10-MINUTE WALK OF THE STATION



Source: GIS Business Analyst, 2018

During the July workshops, the team led discussions with each of the participating municipalities to discuss three examples of T.O.D. around the Pittsburgh Region. During this conversation, participants were asked to evaluate what is working well and what is not working. This section gives an overview of these locations and includes a combination of the consultant team's analysis and the participants' responses to the examples.

## East Liberty Station

The East Liberty Station area was redeveloped as a part of the larger East Liberty reinvestment strategy, which began in the 1990s and continues today, over 25 years later.

**The pre-development condition includes:**
- Ramping for the busway that took up considerable real estate
- An indoor tennis center
- One-sided frontage onto Penn Circle South (development did not front the busway)
- One-way Penn Circle South
- Less than pedestrian-friendly experience at the station

**The completed T.O.D. project includes:**
- Two-way conversion of Centre Avenue (formerly Penn Circle South)
- New pedestrian connections from Centre Avenue to Spirit street, which break the large block down into smaller, more walkable sized blocks
- Creation of the new Spirit Street along the busway as a front address
- Improvements to the busway station and shelters
- A new pedestrian bridge (wide, well-lit, and comfortable)

**What is working well?**
- Frontage on Centre Avenue
- Creation of lateral pedestrian connections through the development to the station
- Buildings that take advantage of topography, while still connecting pedestrians
- New pedestrian plaza and gathering spaces
- Mixed-use at ground floor
- Historic building frontages preserved on Centre Avenue
- Truly integrated T.O.D. (transit-oriented, not transit-adjacent)
- Spirit Street address with the street designed as a shared space
- Improvements to the station itself
- New pedestrian bridge (wide, comfortable, well lit, landscaping)
- Shared parking resource
- High quality interiors

**What is not working?**
- Affordability (the developer chose to develop market rate housing, maximizing housing near transit, but didn't think about affordable housing near transit as an asset for the community)
- Scale of the buildings is too large
- Generic building character
- Minimal outdoor spaces for residents (small, inset balcony space)
- Lack of green space for public space (too much hardscape)



East Liberty Station before



East Liberty Station today

## North Side Station

The redevelopment of the North Shore was approached holistically as a redevelopment strategy and plan. Through the plan, infrastructure was put in place first to create development and sites for the two stadiums. In 2012, two new T stations opened, servicing the stadiums and North Shore attractions.

**What is working well?**

- North Shore Connector acts as an extender (of downtown's economic strength; several of the municipalities have similar opportunities to extend areas that have strong economies)
- Proactive planning and a forward thinking development strategy (embraced T.O.D. form before the fixed-rail transit was extended)
- Frontage along pedestrian-friendly streets
- It feels more organic, because it is developing slowly over time
- The building scale relates well to the scale of downtown

**What is not working?**

- Stations are still removed from the more walkable environment
- The process seems to be taking a long time
- There are a lot of empty surface parking spaces between destinations



2003



2017

## South Hills Village Station

The Port Authority leased a former park-n-ride lot to a joint-venture development partnership for the development of a 200-unit rental apartment complex. The lot is located in the parking lot of South Hills Village Mall and is adjacent to the PAAC parking garage, which has excess capacity for shared parking.

**What is working well?**
- Located residential density in walking distance to transit and retail
- A step towards T.O.D. in the South Hills
- Some participants felt "nothing" is working

**What is not working?**
- Transit-adjacent, but not integrated with the station
- Single-use
- Buildings in a parking lot (no streets or defined blocks)
- Sidewalks don't define the blocks or lead to destinations
- Building designs are generic
- Too much impervious area
- Seems out of place in the shopping mall context
- Suburban garden apartments design, outdated
- No publicly-accessible green space



## The Ashby Apartments





South Hills Village Station

2016



South Hills Village Station

2017
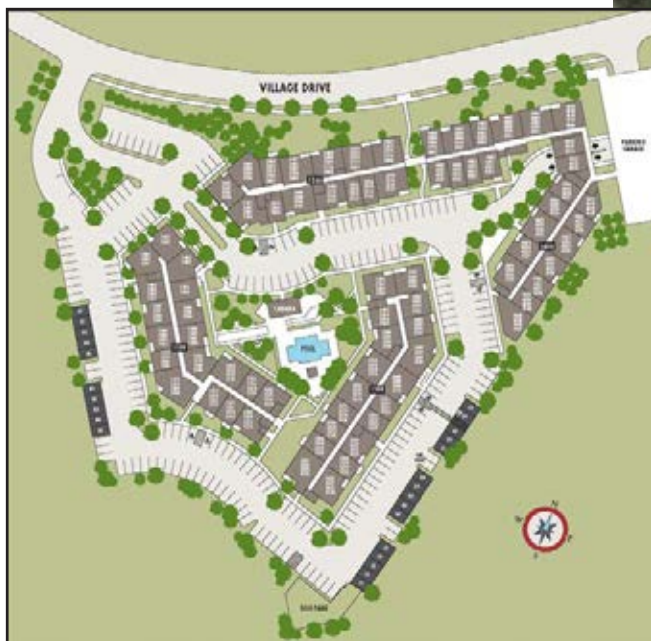
This Page Intentionally Left Blank