Transit Oriented Development Design Guidelines

A fundamental guide to building with transit in Indianapolis
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1 | Introduction

1.1 Forward
In an effort to establish leading class transit-oriented development, the city of Indianapolis has outlined guidelines to encourage thoughtful, context-sensitive design that supports the community’s vision and investment in public transit. With the implementation of IndyGo’s Red, Purple, and Blue Line BRT systems and more frequent network, the city recognizes the need to adjust the way we build along these new transit corridors that both maximizes public investment and encourages sustainable economic development. These TOD Design Guidelines identify and explain transit-oriented development design principles in a straightforward and highly-visual document, providing an educational guidebook that informs and inspires quality design at strategic locations throughout the city. As Indianapolis approaches its bicentennial, our community continues to make measurable progress in becoming a healthier, more equitable city to live, work, play, and learn.

1.2 What Is TOD?
Transit-oriented development, or TOD, is a type of urban development that includes a mixture of housing, office, retail, and/or other amenities integrated into a walkable neighborhood and located within a half-mile of quality public transportation.\(^1\)

Successful TOD depends on access and density around transit stations. Here, density refers to the number of dwelling units in a particular area. Convenient access to transit reinforces compact, walkable development, and higher density maximizes the amount of residents who can then use the transit system.

Focusing growth around transit stations capitalizes on public investments in transit and provides many benefits, including public health and economic resilience. TOD primarily occurs when regional or local governments encourage its development through public policy, like land use planning, zoning ordinances, and changes to building codes.\(^2\)

1.3 Why TOD?
TOD encourages healthy lifestyles while providing an environmentally and fiscally responsible model for urban redevelopment in Indianapolis. Further, market demands for mixed-use, walkable development in urban areas is outpacing supply in many regions in the country, including Indianapolis. TOD has the potential to meet these needs.

Most importantly, TOD directly supports the values and goals set by Indianapolis residents through years of public outreach and planning efforts. The community’s vision is outlined in the Plan 2020 Bicentennial Agenda as part of the city’s multi-year comprehensive plan update.
1.4 TOD Design Guidelines Goals

The TOD Design Guidelines goals include bringing established best practices to a handful of TOD locations throughout Marion County. The document strives to provide the appropriate links and references to get designers designing, community members to a more comfortable level of understanding, and our city to building more TOD. This document will provide accurate reference to:

- What each TOD Typology consists of.
- Design features to consider (such as lighting, signage, bicycle parking, and outdoor seating).
- How to address parking in any new TOD project.
- Methods to find location of station areas, current zoning, and parcel locations.

This document’s goal is also to encourage residents to consider more economical solutions to transit. The combined transit and housing expenses for over half of the region’s households sits at 45% of household income. Providing multiple forms of transit for the population allows people options, which can lead to improved economic mobility for all households, especially those earning less than the area median income.

1.5 Changing Preferences

More people every year are looking for walkable neighborhoods in which to live.

A 2017 survey provided by the National Association of Realtors found that of the 60% of those who currently live in single-family, detached homes, 21% of the same respondents would prefer to live in attached homes with greater walkability. The surveying also concluded that 60% of respondents stated they were willing to pay a little to a lot more to live in neighborhoods within walking distance to parks, shops, and restaurants. There is a moderate discrepancy between the desired housing options in Indianapolis, and what is currently available. The Metropolitan Indianapolis Board of Realtors (MIBOR) conducted a survey in 2013 which found that while 72% of respondents desire single-family detached homes in the city, 90% of all new construction within the city has been single-family detached, leaving a market imbalance of 18%. This poses an opportunity for TOD in Indianapolis. New developments along transit corridors could tap into this market demand and fulfill a gap for housing in the Central Indiana market.

1.6 Current Transit Plan

The Marion County Transit Plan has outlined a focus on shorter wait times between buses, service earlier in the morning and later at night, more efficient transfers, advanced payment technology and real time arrival information, and the implementation of three bus rapid transit (BRT) lines (Red, Blue, and Purple).
1.7 How to Use This Document

This document is an educational resource to introduce concepts of TOD, BRT, urban design, and provides useful references to other documents to get the city one step closer to implementing TOD. This document should be used as a guidebook to encourage thoughtful TOD. These guidelines are drawn from national and international best practices, with succinct case studies to help the reader understand details of appropriate TOD design in action. Where necessary, diagrams and renderings are used to illustrate what makes these spaces compatible with public transit. Renderings are purely for demonstration purposes. After considering these guidelines, you will be able to identify quality TOD within your neighborhood and understand its positive impacts on community development.
### Transportation in Indianapolis through the Years

#### 1821-1889

**Bikes, Canals, Carriages, and Foot Traffic**

Before it was known as the “Crossroads of America,” Indianapolis was conceived as Indiana’s new capitol by Alexander Ralston in 1821. The city was planned at a time that predated trains, cars, and buses. At its founding, transportation was primarily done by foot, horse carriage, or boat.

As roadway technology improved throughout the 19th century, Indianapolis became an important regional stop on the Michigan Road (opened in 1829) and National Road (opened in 1837). Construction began on the Indiana Central Canal in 1836 as a means to transport goods more efficiently than by horse. The canal was a short-lived endeavor—due to financial difficulties, the state halted construction in 1839. Like much of the Midwest and Northeast, the arrival of the railroad quickly ushered in major economic growth. At the convergence of eight railroads, Indianapolis opened the world’s first Union Station in 1853.

The city’s first form of mass transit was introduced in 1864 with mule-drawn streetcars.

#### 1890-1953

An image of a streetcar, automobile, and pedestrians sharing the intersection at Market and Illinois streets in 1934.

Opened in 1904, Indianapolis’ Traction Terminal became the hub for Indiana’s interurban system.

**Streetcar System**

The city’s electrified streetcar and interurban system replaced mules in 1890, extending further out from downtown. The localized streetcar system connected Indianapolis’ neighborhoods and brought with it the earliest examples of what we refer to today as TOD. Meanwhile, the interurbans linked Indianapolis to regional Indiana cities, including Fort Wayne, Muncie, Kokomo, Richmond, Lafayette, Columbus, and Terre Haute.

Beginning in 1894, plans were first drafted for the Indianapolis Park and Boulevard System. This plan included a system of parkways following Indianapolis waterways, providing residents with leisurely walking and cycling routes to new neighborhoods on the city’s fringes. These stretched south to Garfield Park and east to Irvington (following Pleasant Run) and northeast (following Fall Creek and Pogue’s Run).

At its peak, the Indianapolis Traction Terminal, the hub of the state’s interurban network, was reputed to be the busiest in the world.

Lagging profits and increasing competition from the automobile industry, the interurban system ended operations in 1941, followed by the streetcar system in 1953.
Bus Rapid Transit System

IndyGo’s plans for a more reliable, accessible, and frequent bus network marks the first major public investment in Indianapolis’ public transportation system since the 1970s. The plan includes adding more frequent transit coverage across all existing local routes, new buses, and the implementation of three dedicated bus rapid transit (BRT) lines, among other improvements.

Although anticipated completion isn’t until 2022, planning is well underway to identify strategies Indianapolis can pursue to help reverse some of the negative impacts automobile transportation has had on the city’s built environment. Part of these efforts includes supporting TOD around a higher-quality transit system.

Over 100 years after the first streetcars were introduced to Indianapolis, IndyGo’s enhanced bus system will build on the lost benefits the streetcars once provided. In fact, much of the BRT network is planned to travel along some of the city’s historic streetcar corridors, including N. College Ave. (Red Line), Washington St. (Blue Line), and E. 38th St. (Purple Line).

Much like the streetcars before it, the new frequent network will improve accessibility throughout Indianapolis, connecting neighborhoods, schools, stores, major employment centers, and cultural institutions with frequent, comfortable, and affordable rapid transit service.

Interstate Highway System

With the help of paved federal and state highways, the automobile quickly became the preferred mode of transportation for those who could afford it. Not until the post-World War II economic boom of the 1940s and 1950s did the automobile become a staple of everyday American life.

After the implementation of the Federal-Aid Highway Act of 1956, cities around the U.S. received federal funding to develop the Eisenhower Interstate Highway System. The highways were planned to criss-cross the nation and offer direct routes for automobiles and trucks.

Locally, the I-465 loop was constructed around the city, with I-70 and I-65 later routed through Indianapolis’ central core during the 1960s and 1970s. Construction continued on I-69 and I-74.

Reliance on the automobile and aggressive development of the Interstates dramatically altered development patterns throughout the city, resulting in the growth of low-density suburban sprawl and growth far from the city center.

This period of transportation history is still the prevailing story in Central Indiana and much of the US.
Identifying new locations for future TOD can be complex. One has to cross analyze available properties with station locations, pricing, position along a BRT corridor, and current zoning of the site. To simplify this process, the document has attached a link to a working city model of Marion County in both .dwg and .skp formats. The above diagrams are a workflow process where the project is first identified by the township in which the project resides. From there, overlay the planned BRT routes layer. Then, import the major roads layer. Next, establish a 400’ offset from the nearest BRT corridor to establish whether one will be within or outside of a TOD Typology (see “2.11 TOD Typologies Matrix” on page 24). Then, import the building footprints layer and decide if the available property is located inside of the corridor or within 2500’ of a station location. For downloadable content, refer to Indianapolis City Models Files on page 72.

Note: Any or all modeling data does not guarantee accuracy of station locations, dimensions, building footprints, or any other information. Model information is purely to be used as a guide only.
Let's take a look at a corridor located north of downtown in what is often called the Near North. The Red Line route will run up Capitol Avenue, cut over on 18th Street, and continue north on Meridian Street. There are dozens of acres of developable land along this route.

By placing the 2500’ diameter around each TOD station within the neighborhood, we begin to see where density is lacking the most. These are prime locations for TOD and could become attractive properties for a wide range of TOD uses.

A conceptual massing model reveals the high amount of infill which could occupy these existing surface lots and greenfields. Within just a 1/4 mile stretch of the Red Line route exists at least 20 potential TOD locations. Further, any site within 2500’ of a station area could also be built for TOD.

To identify current zoning, parcels, land ownership, and more check out maps.indy.gov/MapIndy
For information on station area locations, refer to IndyGo's interactive Red Line map at indygored.com/project-overview

Introduction
1.10 Focus Zones

**Capitol and 14th Street**
The station located at Capitol and 14th Street will be the first station north of the I-65 overpass on the north side of downtown. This station area will serve local businesses, apartments, and commuters in the area. Currently, two surface lots sit adjacent to this station and will be a prime location for new development.

**Capitol and 18th Street**
The next station to the north is located at the intersection of Capitol and 18th Street. This location is unique due to its immediate proximity to IU Health Methodist Hospital, one of Indianapolis’s anchor institutions. Over 20,000 jobs exist within a half mile from this station area, making it one of the highest projected stations in terms of volume. High ridership here could reduce the need for nearby surface parking and allow for alternative land uses to service this projected high ridership station area.
Meridian and 18th Street

The station area located at Meridian and 18th Street is just a block east of the Capitol and 18th station. It will be closer to the residential district located to the east in the Herron Morton Place neighborhood. This suggests development patterns around this station should have heights between the 2-3 story residential houses to the east and 8+ story hospital structures on Capitol Street.

Meridian and 22nd Street

The last station in our focus zone will be best utilized by connecting with the growing 22nd Street district. Currently there are empty ground floor storefronts at this intersection. Developments within this district can unite with the 22nd Street businesses and residential pockets along Fall Creek Place. Passengers could walk along 22nd Street to get to the station, and this intersection could become an economic hub for bus riders traveling North-South on Meridian and residents walking east-west on 22nd Street.

Note: Diagrams for illustrative purposes only, not official plans.
2.1 Overview
In order to provide effective guidance to the more than 300 bus rapid stations (BRT) along the Red, Blue, and Purple Lines, four unique TOD Typologies have been created. These typologies are intended to provide case-sensitive guidance along various levels of density that each station will exist within. The typologies will be nothing more than organizational and form suggesting standards for future TOD projects.

2.2 Purpose of TOD Typologies
The following TOD Typologies describe the area around the BRT (bus rapid transit) stations. It is important to evaluate the function of each station area independently, because each station will serve various buildings of various density, populations, and types of use. The following four TOD Typologies attribute characteristics that each station area should follow to maximize its effectiveness. Typologies include Central Business District (CBD), District Center (DC), Community Commercial (CC), and Walkable Neighborhood (WN).

2.3 Guidelines vs Zoning
It is important to note the following classifications will not work as a component of zoning or overlays, rather guidelines in identifying best practices of design for future TOD by defining the best uses for the station area. This will include identifying features such as sidewalk widths, parking considerations, building heights, lot coverage, and block design (if the project is large enough). The TOD Typologies will be introduced in order of the most dense station area of Central Business District (CBD), to the least dense station areas of Walkable Neighborhoods (WN). Station area typologies have already been identified for the ...

2.4 How to Read this Matrix
Each typology introduces a brief explanation of the features, a figure-ground diagram to show relative block density, a photograph showing the relative density and a concept model displaying the suggested forms. Refer to the table along the bottom of each typology for suggested density, setbacks, and lot coverage. Page 24 provides a comprehensive table for each typology.
Note: These typologies were developed over conversation with market rate developers and city planners and cross referenced to peer cities across the nation.
2.5 Central Business District

**TOD Typology**

The Central Business District (CBD) typology describes a station area in the region’s largest employment districts. CBD station areas are the most intense in scale, and serves the region’s workers, residents, and visitors with high connectivity to multiple transit destinations. A highly functioning public realm supports mobility and interaction with all users in this dense station area. Redevelopment of surface parking lots and underutilized buildings should focus on vertical and horizontal density, and a wide mix of uses within structures. CBD should support an active and safe pedestrian experience at the street level through effective crosswalks, sidewalk widths, permeable groundfloors and appropriately sized BRT stations.

**Typical Relative Density**

CBD’s contain very dense and full city blocks. Buildings offer larger footprints to support the immense height and scale of the structures, and are often built abutting each other. Open space (public or private) is designated to apartment courtyards, city parks, and public right of ways. Surface parking lots (shown within the negative space) are strongly discouraged.

**Development Standards for CBD Parcels**

<table>
<thead>
<tr>
<th>Description</th>
<th>Housing Types</th>
<th>Commercial Size</th>
<th>Height</th>
<th>Lot Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most dense, tallest, MU</td>
<td>5+ units/structure</td>
<td>5+ units/structure</td>
<td>5 stories min</td>
<td>100% min</td>
</tr>
<tr>
<td></td>
<td>w/in 400'</td>
<td>w/in 400'</td>
<td>o/s 400'</td>
<td>w/in 400'</td>
</tr>
</tbody>
</table>
Central Business District (CBD)

Landmark civic buildings, monuments, skyscrapers, and public plazas define the CBD station areas the heart of the region with the highest benefit of TOD. A complete street and alley grid system provide for efficient mobility, with generous public space to support the various users at all times of the day and night. Cleanliness, safety, and high-quality pedestrian amenities are crucial to support a positive experience for visitors, as this district will leave a lasting impression.

Land Use Mix
A dense mix of office, entertainment, civic, retail, and residential uses.

Urban Form
Regularly sized blocks of walkable lengths, with alleys.

Housing Types
High-density mixed-use and multifamily buildings. Vertical/stacked residential preferred.

Street Design
Wide sidewalks, highly identifiable pedestrian crossings, a mix of on-street and separated bikeways, narrow vehicle travel lanes with turning restrictions, priority for transit services.
2.6 District Center

**TOD Typology**

The District Center (DC) typology describes station areas with major hubs of activity located just outside of the city’s center. These will generally be in identified “cultural districts” or areas of planned major community investments. DC is similar to CBD, but slightly smaller in scale. Buildings should be optimized for mixed-use development and contain a wide variety of residential, commercial, and light industrial uses. New development should focus on uniting an active ground floor with other uses above. DC areas will be optimized for workers, residents, and a modest amount of visitors. DC should support an active and safe pedestrian experience at the street level.

**Typical Relative Density**

Higher density and building heights should follow nearby BRT stations. Buildings should reach maximum building height nearby stations, and gradually decrease in height and density further away from the stations. Surface parking lots are still strongly discouraged in this typology.

**Development Standards for DC Parcels**

<table>
<thead>
<tr>
<th>Description</th>
<th>Housing Types</th>
<th>Commercial Size</th>
<th>Height</th>
<th>Lot Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>w/in 400’</td>
<td>w/in 400’</td>
<td>o/s 400’</td>
<td>w/in 400’</td>
</tr>
<tr>
<td>Dense, tall, MU</td>
<td>5+ units/structure</td>
<td>-- min</td>
<td>3 stories min</td>
<td>100% min</td>
</tr>
<tr>
<td></td>
<td>5+ units/structure</td>
<td>-- max</td>
<td>1 stories min</td>
<td></td>
</tr>
</tbody>
</table>

3-4 story buildings are typical in DC, with wide sidewalks and building footprints with maximum lot coverage. DC station areas should have abutting buildings, which gradually become shorter and introduce sideyards further away from station.
**District Center (DC)**

DC can be characterized as a less intense version of CBD. The functions of both DC and CBD are similar: “to provide a highly connected network of streets, alleys, sidewalks, and other transportation amenities”. The demands for skyscrapers however, will be minute and the fringes will have more evidence of their transitions into surrounding residential neighborhoods. DC will be less focused on the experience of visitors, instead requiring cleanliness, safety, and high-quality pedestrian amenities for residents and workers. Surface parking is generally discouraged, but may be permissible if located behind structures and accessible by alleys. On-street parking is encouraged.

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**Land Use Mix**

A dense mix of office, entertainment, retail, and residential uses, transitioning to residential neighborhoods on the fringes.

**Housing Types**

High-density mixed-use and multifamily buildings. Vertical/stacked residential preferred. On the fringes, single- and double- family structures would be acceptable.

**Urban Form**

Regularly sized blocks of walkable lengths, with alleys.

**Street Design**

Wide sidewalks, highly identifiable pedestrian crossings, a mix of on-street and separated bikeways, narrow vehicle travel lanes with turning restrictions, priority for transit services.
2.7 Community Commercial

TOD Typology
Community Commercial (CC) typologies describe station areas with moderate density and a wide variety of uses. New structures should be moderate in height and surface parking is discouraged. These station areas will serve mostly residents and workers, with less focus on visitors. New, infill, and re-development should prioritize mixed use structures that encourage safe, comfortable pedestrian movement with consideration of façade treatments, lighting, landscaping placement, etc.

Typical Relative Density

CC station areas will include a mix of single family houses and historic apartment and civic buildings. Commercial uses front major corridors and currently cater to automobiles while encouraging a higher market of cyclists and bus riders. New development should build over underutilized surface parking to increase density. Surface parking is generally discouraged but is acceptable when being structures and accessible by alleyways.

Development Standards for CC Parcels

<table>
<thead>
<tr>
<th>Description</th>
<th>Housing Types</th>
<th>Commercial Size</th>
<th>Height</th>
<th>Lot Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>w/in 400’</td>
<td>o/s 400’</td>
<td>w/in 400’</td>
<td>o/s 400’</td>
</tr>
<tr>
<td>Dense, MU</td>
<td>5+ units/structure</td>
<td>3+ units/structure</td>
<td>-- min</td>
<td>-- min</td>
</tr>
</tbody>
</table>
Community Commercial (CC)
Directly adjacent to transit stations, structures will be modest in height, with varying amounts of separation and open space. Effort should be made to redevelop surface parking areas and vacant land into vertical structures (including garaged parking) or dedicated public recreation space. The fringes of CC areas will consist primarily of historic/urban-scaled residential development patterns, with housing unit structures serving one or more families and modestly separated.

Land Use Mix
A mix of office, entertainment, retail, and residential uses, transitioning to residential neighborhoods on the fringes.

Housing Types
High-density mixed-use and multifamily buildings near stations, gradually transitioning to single- and multi-family structure residential neighborhoods.

Urban Form
Large properties should be replatted to create regularly sized blocks of walkable lengths, with safe, efficient access points (preferably alleys).

Street Design
Wide sidewalks near stations, comfortable sidewalks elsewhere; highly identifiable pedestrian crossings at intersections, bikeways, and priority for transit services.
2.8 Walkable Neighborhood

**TOD Typology**

Walkable Neighborhood (WN) typologies provide moderate density without sacrificing connectivity. Sidewalks should be wide and easily accessible to promote walkability within WN areas. Buildings closest to the station will be mixed use residential and commercial, with a focus on creating a livable village. Outside the immediate station area, buildings will transition to primarily residential uses. WN should prioritize quality places for residents to live, shop, and work.

**Typical Relative Density**

WN areas have historic patterns of development, with a limited amount of slightly larger commercial structures clustered near an intersection or along significant roadway corridors. Immediately outside of these corridors or intersections are moderate density historic housing patterns that follow the street grid network. Residential single-family lots are rarely larger than 1/3 acre.

**Development Standards for WN Parcels**

<table>
<thead>
<tr>
<th>Description</th>
<th>Housing Types</th>
<th>Commercial Size</th>
<th>Height</th>
<th>Lot Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>w/in 400’</td>
<td>o/s 400’</td>
<td>w/in 400’</td>
<td>o/s 400’</td>
</tr>
<tr>
<td>MU</td>
<td>5+ units/structure</td>
<td>1+ units/structure</td>
<td>-- min</td>
<td>-- max</td>
</tr>
<tr>
<td></td>
<td>-- max</td>
<td>-- max</td>
<td>3 stories max</td>
<td>100% max</td>
</tr>
</tbody>
</table>
Walkable Neighborhood (WN)
Structures immediately adjacent to station areas will be commercial or mixed-use, relatively short at 1-3 stories, transitioning to historic patterns of residential uses. As depicted here, open spaces should be moderate for private property, but dedicated public recreational spaces are encouraged. Surface parking is discouraged near stations or in front yards, but permissible if located behind structures that front major corridors and intersections, accessible by alleys. On-street parking is encouraged.

Land Use Mix
A mix of office, entertainment, retail, and residential uses, transitioning to residential neighborhoods outside of the immediately adjacent station area.

Housing Types
Moderate-density mixed-use and multifamily buildings near stations, surrounded by single- and multi-family structure residential neighborhoods on modest-sized lots.

Urban Form
Regularly sized blocks of walkable lengths, with alleys.

Street Design
Wide sidewalks, highly identifiable pedestrian crossings, a mix of on-street and separated bikeways, narrow vehicle travel lanes with turning restrictions, priority for transit services.
2.9 Example Typologies

Central Business District

District Center
Community Commercial

Walkable Neighborhoods
2.10 Keys from a Diverse Corridor

1. Internal greenspaces can be shared amongst various apartments and condominiums. Greenspaces off of main roads can work to serve primarily residents, while also not excluding the public.

2. Freestanding apartments units are valid options when developers cannot purchase larger sections of the street block.

3. The BRT lanes will be vibrantly painted on the street, distinctly separating them from other lanes of traffic.

4. Corner developments can take advantage of the strong vantage points they will provide along major north-south and east-west corridors in the city through use of windows and corner entrances.
Parking garages should be internally located and concealed on two or three sides by the apartment, building structure, or exterior walls. This encourages more walking, biking, and use of the public transit.

Rooftop gardens help mitigate urban heat island effect and bring greenery in the densest parts of the city.

Tree-lined streets can compliment an existing streetwall or make up for a lack of one when building to the street edge is not always plausible.

The Big Idea

Within a few city blocks can exist a wide variety of building uses which can all benefit from TOD. Close access to a transit station provides residents, visitors, businesses, and civic groups a dynamic community in which to live and interact.
## 2.11 TOD Typologies Matrix

<table>
<thead>
<tr>
<th>Description</th>
<th>CBD</th>
<th>DC</th>
<th>CC</th>
<th>WN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most dense, tallest, MU</td>
<td>Dense, tall, MU</td>
<td>Dense, MU</td>
<td>MU</td>
<td></td>
</tr>
<tr>
<td>Housing Types</td>
<td>5+ units/ structure</td>
<td>5+ units/ structure</td>
<td>5+ units/ structure</td>
<td>3+ units/ structure</td>
</tr>
<tr>
<td>Commercial Size</td>
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<td>-- max</td>
<td>-- min</td>
<td>-- max</td>
</tr>
<tr>
<td>Height</td>
<td>5 stories min</td>
<td>3 stories min</td>
<td>2 stories min</td>
<td>1 stories min</td>
</tr>
<tr>
<td>Lot Coverage</td>
<td>100% min</td>
<td>100% min</td>
<td>80% min</td>
<td>100% max</td>
</tr>
<tr>
<td>Setbacks</td>
<td>F = 0', S = 0', R = 0’-10’</td>
<td>F = 0', S = 0', R = 0’-10’</td>
<td>F = 0', S = 0', R = 0’-10’</td>
<td>F = 0', S = 0', R = 0’-10’</td>
</tr>
<tr>
<td>Parking</td>
<td>structured only, active first floor</td>
<td>structured only, active first floor</td>
<td>structured only, active first floor</td>
<td>surface permitted with treatment</td>
</tr>
<tr>
<td>Desired Urban Form</td>
<td>Block spacing 1/10 mile min</td>
<td>Block spacing 1/10 mile min</td>
<td>Block spacing 300’ min</td>
<td>Block spacing 300’ min</td>
</tr>
<tr>
<td>Min Sidewalk Width</td>
<td>18’</td>
<td>18’</td>
<td>18’</td>
<td>10’</td>
</tr>
</tbody>
</table>
3.1 What are Design Guidelines

Design Guidelines are a set of recommendations for best practices in design. They are developed to provide insight for designers, developers, and community members in reference to details such as building facades, setbacks, streetscapes, public art, materiality, etc.

Design guidelines differ from policy documents because design is messy. Every future project within a TOD Typology district will have its own unique challenges depending on a neighborhood’s context. Each project will vary by ownership, zoning, adjacent properties, land use, existing structures, and financing. Further, overly strict rules can create limitations on a project’s success, often requiring buildings to meet the rules even if it goes against common sense and the betterment of a project. Design guidelines however, encourage guiding better decision-making and providing helpful resources, diagrams, and references to encourage quality design choices. The guidelines aim to inspire projects to perform the best they possibly can, while still being flexible enough to offer alternative solutions when a project runs into challenges.

3.2 Community Engagement

Every TOD project will influence a wide variety of people. New projects will need to consider the surrounding communities and residents. In order to maintain good relations throughout a project’s lifespan, it is good to consider the following approaches:

- **Start at the community level**
  Ask what the needs of current residents are and how a new project might serve them. First, go to neighborhood association meetings and see if the community has already defined items for their neighborhood like street lamps, bicycle parking, or other design standards. Build on top of what has already been established rather than starting from scratch. Some neighborhoods in Marion County have Quality of Life Plans or other strategic initiatives that may already outline the wants and needs of that community.

- **Get a hold of the plan**
  Find the most recent comprehensive plan for the city, the neighborhood association, or the corridor, and also this document of course. Many plans have already calculated population growth projections, land value, traffic numbers and other helpful information.

- **Identify neighborhood needs**
  If a neighborhood lacks greenspace, consider offering this in a new project. If the neighborhood lacks daycare centers, consider building out a project with a groundfloor which might encourage more businesses for childcare services.
• **Partner with local entrepreneurs**
  Try to work with local businesses in the neighborhood. Some neighborhoods lack good storefront space or decent buildings. Business ventures currently located in a house or a garage might need more office, retail, or light industrial space in the future. The next TOD project in the neighborhood could be the home for a growing neighborhood business.

• **Design with collaboration in mind**
  Chances are, there will be more than just one new TOD project in a district. Try to avoid including everything in a project. If a neighboring business already has a coffee shop, first work with them rather than against them. Provide a bakery or something that might compliment a neighboring business rather than being in direct competition with them.

• **Design to be memorable**
  Design new projects to be the best they can be. Make sure they are original, yet follow a neighborhood standard. Every project should be both unique and uniform. Design buildings that people can take community pride in.

### 3.3 Best Practices

The following design guidelines are more than just suggestions, they are methodically researched best practices for TOD. The city wants new TOD projects to succeed, and that is why each element of the design guidelines have been established over conversation with industry experts in the fields of real estate, transportation planning, zoning, and economic development. All case studies within the document are pulled from peer cities across the US, meaning cities that have similar populations, density, and age to Indianapolis. Many case studies throughout the document are local to Indianapolis as well, and teach of different practices which have already proven to be successful at the local level. Consider all of the following design guidelines and refer to the checklist on page 73 to make sure all aspects of a future project have been considered.
3.4 Front Door Placement

**Design Guideline 1**

The front door is a building’s first interaction with the public realm. Whether a building is residential, commercial, civic, or a combination of each, the front door placement will influence a building in terms of safety and functionality. Front doors activate the ground floor and allows people to move in and out of a building. No one enjoys seeing a nice storefront shop and then having to walk to the back of the building to enter.

**Apartments**

Axis Apartments on Senate Avenue provide an effective option for residents who wish to live in an apartment building yet still enjoy the characteristics associated with private homes. The ground floor units’ front doors lead to porches and provides direct access to sidewalks without residents having to funnel through the building. This allows a large apartment building to feel more personable and accessible.

**Townhomes and Balconies**

Regardless of housing type, all residents should be encouraged to have access to some outdoor space in front of their units. In townhomes, front doors can lead to small porches and patios which provides a buffer zone between the sidewalk and housing unit. In apartments above the ground floor, doorways can lead to balconies and allow residents to engage visually with the street below.
A local example of an effective front door placement exists in the Lockerbie Square neighborhood of Indianapolis. Each residential unit shown above has a distinctive porch and are allotted a small garden to provide some greenery and a defined sense of entry.

The doorways to the Mass Ave animal clinic and Henry’s Coffee Bistro draw customers from the sidewalk, through the patio, and into the stores.
3.5 Public/Private Space Buffers

**Design Guideline 2**

Vibrant urban areas necessarily have lots of public activity in close proximity to private space and buildings. A clear delineation and appropriate buffering helps the two coexist and benefit from each other. Thoughtful layering of public and private space will help balance freedom of movement and activity with order and safety.

**Residential: Street-Facing**

The private home has a semi-private stoop, where people who are invited or intend to interact with the occupant are understood to be welcome. A semi-public walk or green buffer separates this from the public realm where anyone can be.

**Residential: Courtyard-Facing**

On the interior of a block, the public space is more enclosed, and watched over by the private homes. It will serve a different function, more closely tied to these buildings, than the street which serves more of a mobility function.
A clearly defined gradient of public-private space clarifies where people can move or be in a safe and orderly fashion. The site plan show where buildings and other elements delineate these different spaces.

**Buffer Zone Elements**
- Patios
- Hedges
- Gardens
- Half Fences
- Planting Beds
- Raised Steps

**Building Elements**
- Doors
- Windows
- Setbacks
- Lighting
- Awnings
- Material Change
3.6 Uniform yet Unique

Design Guideline 3
Residential urban environments should contain a combination of uniform and unique building characteristics. Buildings are uniform with structured rules such as setbacks, building height, materiality, street lamps, and street trees. Unique characteristics include windows, paint, accent materials, front doors, entrances, and facade options. Too much uniformity creates a sterile environment with little personality, yet too much uniqueness is random and can create chaos. A balance of both uniform and unique characteristics create the best urban environments, sometimes referred to as “an organized chaos”.

Architectural Variation

Architectural variation may include contrasting building materials, design styles, cornices, and other minor differences. However, to maintain a sense of order, setbacks, building heights, and window and door placements remain consistent. This local example is located in Indianapolis’ Chatham Arch neighborhood fronting the Cultural Trail.

Banners and Color

No matter how formal a building code, residents should be encouraged to celebrate their unique tastes in ways that add visual distinction to the streetscape. Flags, banners, or unusually-colored doors (pictured) are examples of this recommended approach.
Tips on Design

Retaining basins provide nature for residents and helps to mitigate rainwater on site.

Sidewalks should be provided on both sides of the street when possible, providing safe options for pedestrian travel.

Uniquely defined doorways or facade alterations give residents a chance to personalize their home.

On-street parking can help to slow thru-traffic in residential neighborhoods and creates a more quiet area to live in.

Large cornices and overhangs introduce a historic architectural style and builds on the architectural charm of the older neighborhoods such as Chatham Arch and St. Joseph.

Gaps between the rowhomes give a place to enter within the site and creates a portal into the internal courtyard spaces.

Uniform Elements

- Building Setbacks
- Street Trees
- Sidewalk Widths

Unique Elements

- Building Heights
- Door Placement

- Architectural Façades
- Entrances

- Banners
- Cornices
- Window Trim

Design Guidelines
3.7 Courtyard/Greenspace Design

Design Guideline 4
Buildings footprints should be laid out with high consideration for a complimentary greenspace. Avoid placing greenspace and parks as an afterthought because the functionality and success of these spaces rely heavily on how well they are integrated within the project site. TOD acquired land will be highly valuable, so begin to think of ways to program the spaces inside for events, concerts, and festivals, and other monetary functions which can help to offset maintenance costs. When not in use for events, the spaces should be designed to give urban residents chances to enjoy outdoor space focused on quiet and comfort.

Traditional Courtyard

Contemporary Space

Traditional courtyards are appropriate in older neighborhoods and at locations where the buildings are positioned in a quad or U shape. Trees, fountains, and seating areas compliment these styles of courtyards.

Contemporary spaces can be introduced on newer buildings and in odd locations between two different building forms. Lighting, seating, and greenery compliment these style of spaces.
Tips on Design

- Structured walls can block the views of the internal parking structures and provide greenery along an empty wall.
- Art should be featured when possible and can include painted murals that represent the culture of Indianapolis.
- Rooftop gardens create healthy environments on the site and provide residents with semi-private green space.
- Balconies support views into a courtyard and increase sociability and safety.
- Pergolas and covered walkways unite the building with the courtyard and draw people in and out.
- Water features provide white noise and places for kids to play.
- Developments should select materials that respect the traditional architectural character of the neighborhood such as brick and stone for pathways.
- Shops can have multiple frontages, one facing the larger road, and one internally facing. These can be programmable spaces for entertainment.
3.8 Active Rooftops

**Design Guideline 5**

Initially, every building has the potential for outdoor space on the roof. Many buildings avoid this due to costs and difficulty in watershed, yet rooftop decks prove to be highly successful spaces for restaurants, lounges, gardens, and pools. Consider implementing rooftop spaces into future projects when possible and follow the patterns of already successful rooftop spaces throughout Indianapolis. Consider creative ways to help fund these spaces, such as rentable garden space, public pool access, ticketed events, and restaurants.

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**Athletic Space**

A hockey rink sits on top of the Commonwealth Apartments. The rink was a project done through the Englewood Community Development Corporation which is also housed in the building.

**Rooftop Gardens**

Farming in the Sky at Eskenazi Hospital (above) was able to produce 2,200 pounds of fresh vegetables, fruits, and herbs in its first year. The garden produces food served in the dining hall and focuses on health and healing within the hospital.17
Apartments, condos, and houses...
Residential units of all types can include rooftop spaces for its occupants. Narrow lots for rowhomes and townhouses encourages incorporating greenery along the roof rather than in small yards at ground level. Apartments can provide uses such as rentable gardens, pool space, and lounges for tenants.

3.9 Facade Variation

Design Guideline 6

The facade is the face of a building, primarily the face that overlooks the largest right-of-way. Historical midwestern facades were usually more narrow in nature and offered substantial variation in design along a short walk. Facades were designing to allure customers to each tenants’ stores, and the best way to offer this was through a flashy storefront. Each unit was usually shorter in width and longer in depth, anywhere from 20’-45’ in width and 60+’ in depth. Store owners often lived above the units and one block could contain enough local economy to serve an entire neighborhood.

The historic downtown of Depot Town, Michigan offers vibrantly painted buildings with similar historic windows which vary in color. The groundfloor level offers heavier variations in awnings, signage, and entrances to create a picturesque city block.

Downtown Madison, Indiana contains a wide variety of building styles, yet are all similar in proportions and height. Trimwork and color differentiates buildings apart from one another. Photograph by Steven Ainsworth
The 300 block of East Street in the Lockerbie Square district features homes that sit on narrow lots and provide high density to encourage walkability.

City Way in Indianapolis provides 5-6 small business storefronts along a few city blocks.

Downtown Lafayette, Indiana features a variety of local business around the courthouse where food, hotels, and theaters exist within 1000’ of each other.

The golden ratio of building facades

A general rule for building facades is to try to keep the width-to-height ratio of a structure to be at a ratio no higher than a 1 to 1.61 building height. This offers a wide variety of uses at the ground level and helps to encourage an environment of small business. This can however vary along wider roads.

Facade Scale Amongst Various Typologies

The 100 block of North Delaware Street in downtown Indianapolis features 9 unique storefronts along one city block.
3.10 Streetwall

**Design Guideline 7**

The streetwall refers to the physical wall created by the building’s frontages when they follow consistent setbacks along a city block. Streetwalls are important in creating walkable urban spaces which maximize TOD potential. Factors such as street trees, building height, road width, curb cuts, and surface lots will determine the success or failure of a streetwall.

**Improper Setbacks**

Surface lots and corner parking lots ruin a block’s ability to create a streetwall. Parking in urban locations should always be located underground, in garages, behind buildings, or (in the cases of lower density) behind buildings in surface lots (refer to section 3.22 and 3.23 on parking design).

**Proper Setbacks and Build Out**

Buildings with appropriate setback bring a more valuable use to the land and clearly articulate a solid streetwall along both roads. BRT stations will serve the higher density of people and provide more “car free” transit solutions.

**Hug the Corridor**

Buildings should hug the BRT corridor as much as possible to create great streetwalls.
It is important to avoid wide streets that are lined with short buildings. Street-oriented buildings should have be taller if they are on large roadways. Single-story buildings are discouraged. There should be as many windows and doors at the street level as possible to avoid dull, blank walls. Where blank walls are unavoidable, the walls should use surface details, plantings, or paint or artwork to add interest.
3.11 Street Trees

Design Guideline 8

Trees can help to compliment a lacking streetwall, or substitute for one when building density is not achievable. In lower density residential areas, or in urban areas where one side of the street sits on water, or unbuildable land, street trees can achieve a similar effect to the streetwall.

Sparse Tree Line

This low density residential neighborhood along Alabama Street lacks defined edges. Buildings are setback further from the road, and the roadway is quite large. Trees have been planted, yet are still young and rather small.

Well Defined Tree Line

Just one street west, Talbott offers a highly engaging line of street trees. They are much taller and direct sitelines towards the ends of the block. The trees are quite proportional to the roadway and work to achieve a well defined edges.
3.12 Signage

Design Guideline 9

Signage refers to any marketing, branding, and conveying of information to a business, neighborhood, or district. Signs should follow standards of materiality, height, and style (blade, wall, awning, etc.). A great sign creates a distinctive brand for a building. Design signs for the appropriate scale of transit. People walking by might just need a simple window decal to grab their attention, while a bus passing by might need a grand projecting wall sign to get their attention. Consider some of the following well-known Indianapolis signs below. Refer to the Signage Guide on page 43 as well to identify the style of signage that would work best for other TOD locations.

“Signage with no guidelines is like a symphony with no director.”
-FAICP
Signage Guide

1. Grand Projecting Sign
2. Marquee Sign
3. Grand Wall Sign
4. Wall Signs
5. Blade Sign
6. Projecting Sign
7. Awning Face Sign
8. Awning Valance Sign
9. Awning Side Sign
10. Above Awning Sign
11. Under Awning Sign
12. Canopy Fascia Sign
13. Above Canopy Sign
14. Under Canopy Sign
15. Recessed Entry Sign
16. Window Sign
17. Building I.D. Canopy Fascia Sign
18. Building I.D. Wall Sign
20. Temporary Window Sign
21. Temporary Wall Sign
3.13 Public Art

**Design Guideline 10**

Public art helps to define a neighborhood identity. Public art gives people a sense of place and attachment to a community. Public art comes in all shapes, sizes, and styles, ranging from a small painting to full scale interactive installations. Be sure to include some component of public art into future projects to engage the people to interact with the space. Public art will be a major step in creating a culture of creative expression and will also help provide a point of interest that a neighborhood can use to market.

**Installations**

*The Conversation Plinth* in Columbus, IN by IKD was part of Exhibit Columbus 2017 where dozens of art installations were placed throughout the city. The event drew in thousands of visitors and generated substantial money into the community.

Photo: Susan McKee

**Murals**

*Untitled (Urban Wall)* by Roland Hobart was part of the Urban Walls Project, which was a regional project intended to draw more residents to downtown Indianapolis during the 1970’s era of suburban flight. Today, it is a well known piece and defines the region between the city market and the circle.¹⁹

Photo: Indy Arts Guide
Tips on Design

Artwork prominently displayed on corners and highly visible right of ways promote a culture of art within a community.

Surrounding businesses will optimize highly permeable groundfloors to benefit from visitors coming into the neighborhood to see and photograph local art.

Make the art accessible. Include walkways and safe passages for all who want to come and interactive with the art.
3.14 Streetscapes

**Design Guideline 11**

Streetscapes are all of the pedestrian amenities which exist along the sidewalks. Great urban spaces usually offer a higher amount of streetscape features, including street lamps, bike parking, outdoor seating, wayfinding, signage, awnings, planters, and waste bins just to name a few. Consider the following components around TOD station locations and how the selection of streetscape amenities could improve them.

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**Case Study: Bill Gray Plaza, Mass Ave Cultural District, Indianapolis**

What constitutes a useful, memorable, and interesting urban street? Most people can point to a favorite street that defines these characteristics, but many struggle to point out the contributing details.

The Bill Gray Plaza on Mass Ave is a locally beloved public space. The plaza is well designed and both Bru Burger and Starbucks have utilized their outdoor seating to interact with the plaza. The drawing above identifies major streetscapes features.
A Lacking Public Space Lacking Streetscape

A public place which has sufficient building frontages, a proper ground floor and setbacks, sets the stage for a functional urban space. However, the absence of appropriate street amenities leaves the space less than inviting.

A Public Space with Ample Streetscape

With the addition of outdoor seating, bicycle parking, tree-lined streets, lamp posts, water features, greenery, and awnings, a previously-underutilized space can be transformed into a vibrant streetscape that supports local business and invites a mix of users.
3.15 Street Furniture

Street furniture is wide-ranging and includes numerous features. Besides the essentials listed on this page, additional pieces of street furniture should be considered for a successful streetscape. Utilitarian components may include mailboxes, parking meters, telephone booths, newspaper dispensers, and traffic signals. Street furniture should be accessible to people of all abilities, where necessary. All of these features should be constructed of durable materials that can withstand weathering and need minimal maintenance. For additional information, see NACTO’s Transit Street Design Guide.

1 Seating

Seating is one of the most basic features included in successful TOD. Seating designs may include benches, swings, movable chairs, leaning rails, terraces, steps, and even some public art. Seating can incorporate varying materials, textures, and colors. This example shows recycled Bush Stadium seats that have been adapted for reuse as transit stop seating along frequent bus routes in Indianapolis.

2 Bollards

Bollards are usually short posts or pillars that are placed to prevent vehicle movement in public spaces. This example in downtown Indianapolis helps separate a pedestrian plaza from bicycle movement on the Cultural Trail and vehicle traffic on Alabama St. Bollards can vary in height, material, and design, and may also be illuminated.

3 Waste Receptacles

Waste receptacles should be strategically placed within the public realm to deter littering. Receptacles should also be clearly marked and placed for maximum visibility. Pictured is an example in downtown Indianapolis.

4 Planters

Planters can serve several purposes, including stormwater detention, seating, traffic buffering, and added aesthetics. This example sits along Chicago’s Michigan Avenue.
3.16 Street Lighting

Special attention to lighting schemes is important in considering public safety and ambiance of a particular streetscape. The visual characteristics of lighting can determine whether a space feels safe or dangerous, quiet or busy, residential or commercial, public or private, and all kinds of other vibes. Lamp posts, string lights, and embedded LEDs are just a few of the many lighting treatments public spaces can benefit from. How these fixtures are designed, their placement, and other details will depend entirely on the neighborhood or district context.

1. Embedded LEDs
   - Avenida Houston promenade contains embedded LED lights

2. String lights help illuminate Denver’s 16th Street Mall

3. Large street lamp in Chicago’s Greektown

4. Small street lamp along Indianapolis’s Canal Walk

5. Lamp posts with hanging planters in San Diego

6. A Parisian styled wall mounted lamp

7. Bollards to illuminate pathways and trails

8. Rope lighting to accentuate rooftop architectural features in Nevada City

Design Guidelines
1. Classical Mounted
2. Globe Mounted
3. Double Classical Mounted
4. Double Hanging Globe
5. Triple Classical Mounted
6. Triple Globe Mounted
7. Classical Mounted w/ Banner
8. Classical Mounted w/ Banner and Hanging Basket
9. Accent Up/Down Lighting
10. Accent Up Lighting
11. Accent Gooseneck
12. Street Overhang Double
13. Street Overhang Single
14. Street Overhang w/ Banner
15. Street Overhang w/ Double Banner
16. Wall Mounted Classical
17. Bracket Suspended
18. Cove Ceiling Lighting
19. Bollard w/ Protected Casing
20. Architectural Bollard w/ Covered Bulb
21. Classical Lantern on Masonry and Landscape Features
22. Classical Lantern on Pole
23. Landscape Lighting
3.17 Bicycle Parking

Bicycle parking is a vital component to successful TOD, by supplementing transit ridership and enhancing multi-modal access to transit station-adjacent destinations. Parking for bikes can be categorized into two classes of design: Class I and Class II. Class I standards consider the needs of bicyclists who may need to park for extended periods of time, usually office or student commuters. Class II standards are most commonly associated with public spaces where bike parking is necessary for shorter periods of time, like restaurants or shops. For additional information, see NACTO’s Transit Street Design Guide.

1 Bike Rack Parking

Simple bike racks come in several designs, but all include Class II standards for short-term parking. These include U-racks, waves, bollard-style, grid-style, innovative, and decorative racks. At left, an example of decorative U-racks in Minneapolis, MN. Bike racks can be can be dual-purpose, serving as a piece of public art or branding for a neighborhood or district.

Photo: American Planning Association

2 Covered Bike Parking

Covered bike parking is usually a hybrid of racks and lockers. Though they include open-air canopies, covered bike parking provides users with protection from weather, while maintaining the ease of simple bike racks. This example is near a transit station for TriMet in Portland, OR.

Photo: TriMet

3 Bike Lockers

Bike lockers, like this on-demand facility in Seattle, WA, fit the Class I designation. These lockers provide users with secure long-term bike parking that prevents theft and vandalism, while providing protection from weather. Bicycle commuters are the most common users.

Photo: King County Metro

4 Double-Decker/Stack Racks Bike Parking

Double-decker bike parking is usually found in high-traffic commuter areas with limited space for parking. This example is at the Indy Bike Hub YMCA at City Market in Indianapolis.

Photo: Mike Basarich
3.18 Wayfinding

Every transit stop should include clear and legible wayfinding signage to help orient users. There are four types of wayfinding signage: Identification; Directional; Informational; and Regulatory. Information about routes served, bus system maps, directions to public amenities, expected travel times, and ridership procedures improves rider satisfaction while easing access. Special accommodations should be made for the visually or hearing impaired. Additionally, wayfinding signage can help bolster neighborhood or district identity through the integration of a branding strategy.

1 Regulatory Wayfinding
Regulatory Wayfinding includes basic symbology developed by the American Institute of Graphic Arts and U.S. Dept. of Transportation. The 50 symbols are internationally recognized, including icons that represent public restrooms, public phones, public parking, and other basic needs. This wayfinding example was developed for the Moreton Bay Cycleway (MBC) in Brisbane, Queensland, Australia.

2 Directional Wayfinding
Directional Wayfinding includes arrows that point pedestrians toward familiar landmarks, like neighborhoods or cultural districts. These arrows usually include mileage to help pedestrians and cyclists gauge the length of their trips. This example is found on the Indianapolis Cultural Trail.

3 Informational Wayfinding
Informational Wayfinding usually contains more detailed information, including maps of particular areas of interest. This example is part of Legible London, the citywide wayfinding program for London, United Kingdom.

4 Identification Wayfinding
Oftentimes the simplest form of signage, this example of in-pavement signage in Indianapolis’ Wholesale District was designed to improve the pedestrian-scale of the streetscape while labeling the cross street at an intersection.
3.19 Green Infrastructure

Integrating green infrastructure into public streetscape design provides several ecological and aesthetic benefits. Although implementation of green infrastructure usually comes with higher upfront capital costs, regular maintenance typically translates to cost savings over a project’s lifetime and lessens the burden on a city’s larger infrastructure system.

Materials like permeable pavement and/or strips helps mitigate stormwater runoff and flooding during heavy rainfall or snowmelt, replacing standard impervious surfaces that can easily overwhelm aging stormwater collection systems. Similarly, bioswales and/or flow-through planters with native plantings allow stormwater to percolate through soil and root systems, filtering pollutants before entering the watershed. Street trees have numerous benefits. Tree roots can help prevent serious soil erosion. Above ground, canopies offer shade and help fight the urban heat island effect. Additionally, urban street trees help absorb air pollutants and act as natural buffers between a street’s vehicular and pedestrian zones.

For ease of maintenance and maximizing benefits, it’s important to consider planting details. It is recommended that bioswale plantings be drought-resistant and street trees be road salt-tolerant. Native plantings can also help enhance the natural habitat by providing for urban wildlife. For additional information, see NACTO’s Transit Street Design Guide.

Case Study: Georgia Street and Indianapolis Cultural Trail

Stormwater Detention

This cross-section of the stormwater detention system installed as part of the Georgia Street reconstruction in downtown Indianapolis, identifies the elements engineered to help collect and treat stormwater runoff. According to RATIO Architects, the project was expected to reduce stormwater runoff by more than 50% during a 10-year rain event and 40% during a 100-year storm. The system is notable for its seamless design, contributing to an interesting and aesthetically-pleasing public streetscape. The Georgia Street project helps reinforce appropriate pedestrian-scale and complements the existing urban streetwall.

Native Plants and Bioswales

More than 25,000 square-feet of bioswales were constructed as part of the Indianapolis Cultural Trail (pictured). The trail’s bioswales divert about four-million gallons of rainwater per year from the city’s stormwater system. An extensive mix of native perennials, accents, trees, shrubs, and evergreen ground cover help filter stormwater, enliven landscape in the public realm, and provide habitat for urban wildlife, like honey bees and butterflies.
3.20 Public Art and Water Features

Though not essential streetscape elements, public art and water features are additional considerations for providing interactive elements to the public. Strategically-positioned public art or well-designed water features have the ability to become focal points within a district or neighborhood. As celebrated landmarks, these components can become branding opportunities to generate interest and better define a district or neighborhood’s character.

1 Interactive Water Feature

Interactive water features come in all forms: waterfalls, waterwalls, rapids, reflecting pools, fountains, and more. These invite the public to directly touch and experience water as a part of the urban streetscape. This example is located at Jamison Square in the Pearl District of Portland, OR.

2 White Noise Water Feature

More formal water features may exclude direct interaction, but can be useful in improving a public space’s comfort level with users. Water is frequently used as a source of white noise in cities, helping drown out the honking horns or construction in surrounding streets. This example is found in New York City’s Paley Park.

3 Public Art

Public art, highly-flexible in form and content, is already a staple throughout Indianapolis. Mosaics, sculptures, and/or murals are just a few types, but each category varies greatly in size, scale, color, and medium. This example shows a mural integrated into the Overlook at the Fairgrounds affordable housing development in Indianapolis. The piece was commissioned by Reconnecting To Our Waterways and was created by artist Will Watson in 2016.
3.21 Immediate Station Area

**Design Guideline 12**

Immediate station area buildings are those which will be directly by a BRT station. Many building uses are good for TOD, but immediate station areas should be even more specific, offering quick, high volume business services. These businesses should service the day to day needs of BRT commuters.

**Tips on Design**

- Awnings and overhangs protrude over sidewalks and create a place under neath the awning, keeping people out of rain or the sun.
- Effective use of glazing on building corners promotes visual connection to the activity within.
- All storefronts established near BRT stations should contain windows to create lines of sight to BRT stations.

<table>
<thead>
<tr>
<th>High Performing Station Facing Storefront Uses</th>
<th>Lower Performing Station Facing Storefront Uses</th>
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</thead>
<tbody>
<tr>
<td>- Bike service stations</td>
<td>- Professional offices</td>
</tr>
<tr>
<td>- YMCA</td>
<td>- Tech companies</td>
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<tr>
<td>- Quick diners</td>
<td>- Fine dining</td>
</tr>
<tr>
<td></td>
<td>- Large appliance sales</td>
</tr>
<tr>
<td></td>
<td>- Automotive storefronts</td>
</tr>
</tbody>
</table>

Design Guidelines
Seattle, Washington

West Lake Station in Seattle offers great land uses surrounding a TOD route. Surrounding businesses make use of shopping centers, food stations, coffee houses, and small urban public places.

Charlotte, North Carolina

The Lynx light rail in Charlotte runs directly through multiple residential blocks of apartments and townhomes. Ground floors are optimized for storefronts, lounges, outdoor eating, and other entertainment uses.
US 36 Broomfield Station is a stop on the Boulder, Colorado-bound Flatiron Flyer Bus Rapid Transit (BRT) line. Components include ample seating, awnings, bike parking, and trash receptacles.

Source: Taylor Firestine

Clear and concise signage at transit stations allows visitors and commuters alike to orient themselves, especially in dense districts like downtown Denver (pictured).

Source: Taylor Firestine
3.22 Structured Parking

**Design Guideline 13**

Structured parking (also called parking garages) is preferred when parking is necessary in TOD. Structured parking allows for the most efficient use of limited space and should be integrated into a development to minimize its visibility in the streetwall. When structured parking must front the street, it should be wrapped with active uses or appropriately screened in a way that engages with and adds value to the public realm.

Due to the significant costs associated with building structured parking and limited land availability, TOD parking facilities should be shared among more than one use to the extent possible. This strategy, known as “shared parking,” involves two or more complimentary uses utilizing the same parking spaces but at different times of day, maximizing limited space and sharing the burden of cost and maintenance. For example, in a mixed-use TOD, the parking required for office uses will be busier during the day but empty at night and could accommodate weekend and evening traffic to restaurants in the same or nearby space. In the most high-dense areas, underground structured parking is most preferred, where feasible.

**Median Parking Structure Construction Costs 2017**

<table>
<thead>
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<th>Index</th>
<th>Cost/Space</th>
<th>Cost/SF</th>
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<tbody>
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<td>Atlanta</td>
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**National Average**

| National Average | 100 | $19,700 | $59.06 |

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**Quick Lesson on Parking Dimensions**

The average parking lot is between 8’6” to 8’9” in width and usually around 18’ in length. A half drive lane is usually included in parking design which is 9’ so effectively, each space actually requires a surface area of 8’6” by 27’.

Often this is referred to as the 9x27 which is a common measuring unit for apartments and buildings built over underground garages. Usually garages define the proportions of the entire building it serves.

The average structured parking space in Indianapolis costs $18,041 and occupies 229.5 square feet of space!
**Construction**

Construction of structured parking should consider current and future personal mobility trends as to be resilient to evolving consumer habits and new technologies. For example, minimizing the use of parking garage ramps allows for greater flexibility. Structures can be more easily retrofitted and converted to office space later. With the projected growth of autonomous and shared vehicles, structured parking should be planned for a life that extends past its current single use.

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**Tips on Design**

- Green spaces adjacent to a parking garage improve air quality and trees help to reduce noise pollution.
- Internal garages are available but neatly tucked away from the main roads.
- Garages which adjoin to buildings can be hidden behind art and other features to improve the often “cold” atmosphere around concrete parking garages.
- Rooftop gardens are often very expensive, but can be offset by renting sections to apartment tenants. Tenants could then have their own customizable gardens whilst still enjoying the benefits of apartment/condo living.

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Design Guidelines
Placement and Positioning

Parking garages should be designed to be as internal as possible, keeping the pedestrian experience to the exterior of the block. Garages should be alleyway accessible and cars should enter from this point. Placing large border walls on a side opposite the building can create a backdrop for greenery, banners, artwork, movie projectors, and loads of other options which can be more engaging than the open face of a garage.
Hierarchy of Streets
Each block should have a visually distinguishable feel when one is inside the block and outside the block. Inside the block should be free from cars driving through, and only contain the necessary infrastructure to allow vehicles to travel to the parking garage, and also for city systems such as trash and delivery.

Define Internal Routes
Three access points to minor roads which then channel into major roads provide safe access for those coming and going by vehicle while occupying the least amount of land within. Curb cuts are left to a minimum and this model gets vehicles to the garage and out without interrupting the streetwall.

Keep Garages Flexible
Since population and transit are always changing, it is good to keep options flexible in parking garage design. Keep the ramp of the garage on the exterior of the structure, and provide ample building height (about 12’) and a garage has the possibility to be transformed into a residential or commercial building in the future. Other cities such as Seattle and Boston have been toying with the idea of a adaptable parking garages.
The CityWay development in Indianapolis provides a useful case study in hiding utilitarian parking garages behind active commercial and residential uses fronting the street.

Phase one of Artistry involved the larger structure to the left to the south of Market Street. The existing parking garage maintained occupied the lot to the north.

A later phase included a buildout on the front of an existing parking garage which allowed Artistry to contain a complete streetwall which relegated the parking garage behind the active apartment uses.

Cosmopolitan on the Canal

This apartment fronted both the canal, Michigan Street, and Senate Avenue. The building incorporated an internal parking structure accessible through with one entrance, while still engaging three streetwalls.

CityWay

The CityWay development in Indianapolis provides a useful case study in hiding utilitarian parking garages behind active commercial and residential uses fronting the street.

Photos pulled from Google Maps.
Eskenazi Health partnered with artist Rob Ley to create an interactive sculpture, “May - September,” that covers the medical center’s parking garage facade in Indianapolis.
Source: Rob Ley

The City of Fort Wayne partnered with Ash Brokerage to build a parking garage with a programmable LED light display. This investment helped create an aesthetically-pleasing facade while protecting vehicles from the elements.
Source: Gail Herendeen, Baldus Company
3.23 Surface Parking

Design Guideline 14

Though efforts should be made to limit surface parking within TOD station areas, some lower density areas may require this arrangement. Surface parking should not conflict with pedestrian flow or transit circulation. No new surface parking should be allowed between the front of a building and the street. As covered in 3.10 on page 40, surface parking is not conducive to a safe and appealing streetwall.

Surface parking needs can be lessened by accommodating alternative options for transportation that compliment BRT, allowing for so-called “last mile” trips. These modes could include bike sharing or car sharing programs, providing residents and visitors affordable, on-demand transportation to achieve shorter trips that may be unreasonably short by bus, yet unreasonably far by foot. This strategy discourages the need for personal vehicle ownership within TOD station areas.

Case Study: East Liberty Innovative Parking Management in Pittsburgh, Pennsylvania

Transitioning developers and retailers who are used to suburban parking layouts is a challenge faced by transit-rich urban locations across the country. But by allowing the first few new investors in a neighborhood to build at suburban parking ratios, with a transition plan in place, East Liberty has been able to catalyze development while keeping the vision of fewer surface lots alive as the neighborhood changes.

One example of this flexible parking policy is in the works today. In the late 1990s, Home Depot was recruited to the neighborhood and built a store closely resembling its more suburban counterparts, complete with a large surface parking lot. As the market has demonstrated a demand for less parking that was thought needed when the Home Depot was built, its parking annex is now becoming a key new site for development.

By encouraging East Liberty developers to keep their parking separate from their units or suites and working with existing developers with large lots so that the parking can be repurposed if not used, the City and East Liberty Development are able to continue following this model of enticing new investment, and changing parking standards and expectations along the way.21
Parking Design

Surface parking lots should be just as carefully designed as structured parking. Design a surface lot by first considering how it will affect the pedestrian, cyclist, bus rider, and lastly automobile and in that order. Think through how to unite surface lots to building frontages and BRT stations through use of pedestrian pathways. Refer to the guide below for elements on sidewalks, alley entry, back door entry, and trees.

1. Keeping the sidewalk consistent throughout the development gives people a designated way to access both the buildings and the parking lot. Consistency in materiality draws people naturally to the storefronts.

2. Back door entries allow business owners and others to enter from the parking side door. This can also work as a drop-off zone for food deliveries, or possibly be space for decks and other outdoor options.

3. 8+ wide pathways between buildings create pleasant pedestrian walkways from the parking lots to the storefront entrances. These spaces provide access points which tie the frontages of the development together.

4. Keep surface parking available through alleyways and not directly off of main roads. This reduces curb cuts, excessive road travel on the main roads, and keeps noise levels down.

5. There should be only one or two entry points into the surface lot. This keeps the borders of the lot well defined.

6. Trees placed around the lot provide a sense of visual enclosure. Trees help reduce noise pollution and urban heat island effect while also improving air quality and overall aesthetic.

7. Parking should be compliant with the Americans with Disabilities Act (ADA) and the Standards for Accessible Design. ADA considerations and design must be well-thought out for shared parking with varying final destinations.
Importance of On-Street Parking

On-street parking could be provided in lower density TOD when necessary. A psychological association with seeing on-street parking encourages visitors to meander around the site to find the parking located in the back or nearby. This lane of parked cars can also create a level of privacy between the sidewalk and the cars passing by on the road. On-street parking can also be utilized for package service deliveries and other drop-offs. It is important to note that on-street parking near BRT station areas should be managed in coordination with the transit provider and jurisdiction to limit daytime usage and discourage transit riders from parking all day.

Use of Better Materials

The surface parking lot at Indiana Landmarks in Indianapolis’ Old North Side neighborhood.
Image source: Taylor Firestine

Unite the Parking Lot to the Pathways

This surface lot, designed by Lynn Capouya Fullerton College in California. The surface lot features a swale which allows natural growth, greenery, and a pathway for connecting the surface lot to the sidewalks around the campus.
Image source: Lynn Capouya Landscape Architects
3.24 Curb Cuts

Design Guideline 15

A curb cut exists any time the pedestrian sidewalk is intersected by an auto-oriented path and the paved path changes in height. This severely alters a continuous streetwall and increases the likelihood of collisions between automobiles and pedestrians. Reducing curb cuts improves the aesthetic, pedestrian friendliness of a site, and promotes safety by keeping pedestrian and automobile interactions to a minimum.

<table>
<thead>
<tr>
<th>Minimal Curb Cuts</th>
<th>Excessive Curb Cuts</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Minimal Curb Cuts Diagram" /></td>
<td><img src="image2" alt="Excessive Curb Cuts Diagram" /></td>
</tr>
<tr>
<td>Blocks with minimal curb cuts have strong streetwalls and offer a dense, complete city block. Pedestrians have the safest travel throughout the block. Minimal curb cuts are like a healthy set of teeth.</td>
<td>Blocks with excessive curb cuts are choppy and unsightly. The streetwalls are ineffective. Pedestrians often come into contact with cars pulling in and out of garages. Excessive curb cuts are like a mouth missing many teeth.</td>
</tr>
</tbody>
</table>
When many buildings have inlet access to parking garages, surface parking behind the building, or multiple delivery and pickup roads, the pedestrian access becomes choppy.

Curb cuts create elevation changes along the pedestrian walkway. These create areas of potential tripping, water puddling, dirt collection, and make wheelchair and stroller accessibility more difficult. Each new curb cut creates a new potential zone of a vehicular-pedestrian collision.

The best curbs have continuous sidewalks which remain the same elevation for the entire city block. Designing parking structures to utilize one alleyway block provides the least curb cuts and the safest city blocks for pedestrians.

Just a block away on the 200 block of N. Alabama St., this stretch of the Indianapolis Cultural Trail provides an excellent example of safe pedestrian design. Varied materials, colors, and textures reinforce the pedestrian space and allow for maximum visibility.
Pedestrians (yellow) have significantly more intersections with auto traffic (blue) on a typical city block, having to walk through multiple intersections where left and right turning vehicles consistently travel. Curb cuts should be reduced and parking garage access relegated to under-used alleyways rather than connecting to the main roads.
Reference Material

Documents, websites, and files

**Indy ReZone: Fundamentals**

information on the mixed use zoning (MU-3 & MU-4). Refer to pages 21-28 for specifics on classifications, land use, and frontages.


**Red Line Transit Oriented Development Strategic Plan, 2015**

a comprehensive document detailing more information on the Red Line, history, implementation, economic studies, etc.


**Indy Go Red**

a website providing all of the latest updates, project overview, interaction station maps, construction information, routes, phasing, community support, contacts, and more

[https://www.indygored.com/project-overview/](https://www.indygored.com/project-overview/)

**MapIndy**

an interactive map which contains historical maps all the way back to 1937. Layers of zoning, parcels, building footprints, right of ways, land ownership, and purchase history can be found here

[http://maps.indy.gov/MapIndy/index.html](http://maps.indy.gov/MapIndy/index.html)

**Indianapolis City Model Files**

a downloadable link which contains all DWG and SKP files for Marion County. The layers include BRT routes, building footprints, parcels, zoning, sidewalks, and right of ways.

[https://drive.google.com/drive/folders/1Ldxa9F5Tw5zkEu-GJ1E5DFNaK0XeC3JJ?usp=sharing](https://drive.google.com/drive/folders/1Ldxa9F5Tw5zkEu-GJ1E5DFNaK0XeC3JJ?usp=sharing)

**NACTO Transit Street Design Guide**

provides design guidance for the development of transit facilities on city streets, and for the design and engineering of city streets to prioritize transit, improve transit service quality, and support other goals related to transit.

Checklist for Workflow

1. Is my proposed site within 400’ of a BRT corridor or 2500’ of a BRT Station? [ ] [ ]
2. I have checked my sites current zoning at maps.indy.gov/MapIndy? [ ] [ ]
3. I have determined my sites most accurate TOD typology from the TOD Typology Matrix on page 24? [ ] [ ]
4. I have established appropriate setbacks that account for sidewalk width to promote a pedestrian oriented neighborhood? [ ] [ ]
5. I have designed combinations of public, private, semi-public, and semi-private spaces within the design to create buffer zones? [ ] [ ]
6. I have set consistent standards within the project (building height, materiality, entrances) yet have also allowed users to create unique adaptations to their units (gardens, doors, facade variations, trim colors, etc)? [ ] [ ] N/A
7. I have designated spaces around the site which can be utilized for public art? [ ] [ ]
8. I have provided spaces for greenery within the project site (parks, gardens, courtyards)? [ ] [ ] N/A
9. I have established signage standards? [ ] [ ] N/A
10. I have established a streetwall throughout the site through appropriate building setbacks, height, and street tree implementation? [ ] [ ] N/A
11. I have furnished the street with selected lamp posts, benches, outdoor furniture, bicycle parking, wayfinding signs, planters, water features, etc? [ ] [ ]
12. I have procured the best tenants for to successfully utilize immediate BRT station adjacent proximity? [ ] [ ] N/A
13. I have designed structured parking to be internal to the block and accessible primarily through alleys? [ ] [ ] N/A
14. If my garage must be more visible, I have considered unique facades or characteristics to create a space for art? [ ] [ ] N/A
15. My surface lot (if needed) is well defined around the edges with curbs, pathways, grass, and trees? [ ] [ ] N/A
16. My surface lot (if needed) is primarily accessible through alleys and requires minimal curb cuts? [ ] [ ] N/A
17. I have considered on-street parking for select locations which would most benefit from the buffer zone between the sidewalks and the road? [ ] [ ] N/A
18. I have designed my project so the block will have the least amount of curb cuts necessary to provide a quality pedestrian environment? [ ] [ ]

References
Sources

2. Federal Transit Administration
7. The Encyclopedia of Indianapolis, Interurbans (pg 824-829).
8. The Encyclopedia of Indianapolis, Parkways an Boulevards (pg 1080-1081).
10. Encyclopedia of Indianapolis, Union Station (pg 1363).

Transit Oriented Development Design Guidelines

2018