



Transit-Oriented Development (TOD) Design Guidelines

Updated: December, 2014



Photo taken near the North/South Line.



Photo taken near Sugar House Streetcar

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Photos taken near the University Line.

Introduction

The Utah Transit Authority (UTA) owns a substantial amount of land adjacent to its high capacity transit system.

While not all of this land was purchased with development in mind, much of it now offers a tremendous opportunity for transit-oriented development (TOD). However, the phrase TOD is rather vague. What exactly makes a development transit-oriented? What does TOD look like along the Wasatch Front? More importantly, what elements are critical to meet the goals and objectives of UTA, while also allowing flexibility for a development partner to build a successful development?

Purpose

The purpose of this guidance document is to provide direction for joint-development partners on the design elements that UTA expects developers to consider and address in development plans, including connectivity and development form. These guidelines will be used by UTA staff in reviewing site plans and will formulate the basis for feedback and final acceptance of these plans. While this document provides guidance on design elements important to UTA, the appropriate local jurisdictional codes should also be consulted and followed when developing plans to ensure they are not in conflict with what is advised here. Designs must also be consistent with the Americans with Disabilities Act (ADA) design standards.



Photo taken near the North/South Line.



Photo taken near the Airport Line.

UTA Goals for TOD

Unlike most land owners, UTA has several expectations and goals in developing property beyond making a profit.

First and foremost, UTA is a public transit provider and while generating the best return possible is clearly an objective, it is only one of the goals that UTA has in relation to its property development activities. This includes

- Increase ridership
- Optimize developable land and support the regional growth vision
- Generate revenue

Goal: Increase Ridership

UTA understands that the real estate market drives development feasibility. Therefore, UTA is flexible in regards to what uses and densities are proposed in joint-development projects. In fact, both residential and employment centers, provided that they are designed appropriately, can generate significant increases in ridership. Vertical and horizontal mixed uses are also strongly encouraged at UTA sites.

However, some land uses simply do not generate the level of ridership UTA



Photo taken near the North/South Line.

expects for TOD. For example, an employment center that houses one employee per 1,000 square feet or where a majority of workers have shift hours that do not allow them to utilize the transit system to commute are not considered transit supportive. UTA's number one objective is to maximize the public transit investment at their station areas.

Goal: Optimize Developable Land and Support the Regional Growth Vision

Meeting the challenges of population growth along the Wasatch Front is a critical goal for UTA. Supporting land uses that reduce the negative impact of this growth is at the heart of the UTA TOD program. This includes supporting the 3% strategy developed by Envision Utah, a goal which accommodates 33% of future development on just 3% of available land. It also includes implementing the Wasatch Choice for 2040 Vision, which calls for the development of higher density “centers” and “corridors” across the Wasatch Front served by high capacity transit.

Both of these strategies were developed through tremendous public input and regional coordination and address issues like poor air quality, traffic congestion, auto dependency, and housing equity. They also support regional economic development and improved access to transit through first and last mile strategies.

Goal: Generate Revenue

Like any development partner, UTA expects to see a suitable return when developing property. While UTA receives most of its operating revenue from local option sales tax, joint-development is seen a new and innovative revenue source to assist with funding future operations.

While meeting these expectations may seem challenging at times, doing so will ensure that UTA continues to fulfill its responsibility to the public as a world-class transit operator. In turn, a highly effective and efficient transit network will make TOD more desirable.

Expectation: Preserve Transit Critical Infrastructure

While proposed development can certainly reconfigure transit infrastructure elements like bus loops or park-and-rides, these elements are critical to effective and efficient UTA operations. Developers need to strike a balance between the development design and the role of a station area in the context of UTA transit system. Transfers between rail lines and bus routes need to continue to be both convenient and safe for UTA patrons.

Photo courtesy of Wasatch Front Regional Council





How to Use these Guidelines

These guidelines should be used in the development of all master planning and site planning activities.

Some guidelines are required, with direct and measurable standards. Others provide more general guidance on design aspects that are highly encouraged or that should be considered and accommodated if feasible. Each guiding section has an overall intent statement, explaining the intent of the guidance on why the issue is important. Required standards are italicized and bold, and is proceeded with a standard number for easy reference. More general guidance is noted in bold, but is not noted with a number.

In reviewing and approving development plans, UTA staff will expect that all standards, general guidance, and highly encouraged design aspects have been addressed. However, in some cases site conditions may not allow some of these to be met fully. In these instances UTA staff will look to the intent statement to see if the general intent of the standard or guidance is still being met. In such cases developers should provide UTA with an explanation of why the standard or guidance is not being met, as well as how they are still meeting the intent.

These guidelines are an important piece of the development process, but do not replace the need for continued coordination and partnership between UTA and a development partner. While this document provides important guidelines and sets expectations for development of UTA property, each site and project is different. Successful development can only occur if there is ongoing communication between the two parties and a commitment to partnership.

Example

Intent

INTENT: Grid-like street networks provide alternative direct routes for pedestrian, bicycle, transit, and automobile traffic which provide better overall circulation and connectivity. A grid-like network combined with short blocks also reduces traffic speeds, creating a safer environment for pedestrians.

Standard

1.2

Street networks shall be designed to create a grid-like street network.

General Design Guideline/Consideration

Four way intersections are encouraged and should be created unless site conditions make doing so infeasible.



Birkhill at Fireclay



Bus Rapid Transit Rendering

Connectivity

Multi-modal connectivity is paramount to successful transit-oriented development.

The auto-centric development patterns of the past sixty years have led to a number of negative externalities both from a regional and local perspective that have been well documented in TOD literature. Designs that cater only to the automobile often lead to a lack of on-street activity, developments with no sense of place, and areas where almost every trip requires the use of an automobile; neglecting populations like the young, elderly, and disabled who are unable to drive. Health issues like rising obesity and diabetes rates as well as air quality issues have also been linked to auto-centric design.

Recent research, including surveys conducted by the National Association of Realtors, suggests that demographic shifts will continue to fuel demand for more walkable, smart growth developments nationwide and that consumer preferences for housing and job locations are shifting to more walkable, urban environments. Studies also suggest that walk, bike, and transit trips have all increased over the past decade, especially for those in the millennial generation. Even today, 25% of workers in the Salt Lake City region commute to work by some other means than driving alone (United States Census Bureau/American Fact Finder, 2013). Each mode needs to be considered and carefully planned for in order to meet these demands and ensure that transit stations are conveniently and safely accessible for all users.



Photo courtesy of John Kaehny via streetsblog.org.

Proposed developments must consider connectivity for the following transportation modes:

- Pedestrians
- Bicyclists
- Transit
- Automobiles

Pedestrians

Walkability is a key ingredient to successful TOD. Every transit trip begins and ends with a walk trip, no matter how short it may be. To provide appropriate connectivity at a pedestrian scale, designs should include the following aspects to ensure that adequate pedestrian connectivity is provided:

- Short to medium block lengths
- Grid-like street networks
- Narrow Streets
- Sidewalks
- Safe crossings
- Limited driveways
- Buffering
- Street trees
- Pedestrian scale lighting
- Street furniture
- Wayfinding Signage

Short to Medium Length Blocks

INTENT: The propensity to walk or use transit is heavily correlated to the size of blocks (Ewing & Bartholomew, 2013). Not only do smaller blocks create more opportunities for pedestrian crossings and more direct routes to and from destinations, they also slow traffic and provide for a more inviting and pleasant walking environment.

1.1.

Blocks lengths shall not be longer than 350' feet in length in any direction and a pedestrian corridor shall be provided no less than every 250'.



300 South in Salt Lake City, Photo by UTA

Grid-Like Street Networks

INTENT: Grid-like street networks provide alternative direct routes for pedestrian, bicycle, transit, and automobile traffic which provide better overall circulation and connectivity. A grid-like network combined with short blocks also reduces traffic speeds, creating a safer environment for pedestrians.

1.2

Street networks shall be designed to create a grid-like street network.

Four way intersections are encouraged and should be created unless site conditions make doing so infeasible.

New development street networks should also connect to existing neighborhoods, so that development access is not isolated from the surrounding area.

Narrow Streets

INTENT: Wide, straight streets induce faster automobile speeds and a less desirable environment for pedestrians and cyclists. Narrow streets allow for safer and more comfortable crossings and reduced traffic speeds. When designing the internal street network, consider a more refined street hierarchy. For example, some secondary streets may function as one-way, low capacity vehicular streets, leaving space for on-street parking.

Primary streets, like those that lead directly to the transit station, will clearly need to accommodate more vehicular and transit traffic. Up to four travel lanes may be appropriate to accommodate this, but should still be designed with pedestrians in mind.

1.3

Four-lane intersections shall be divided with a raised median or island to allow for easier pedestrian crossings.

This way, instead of having to cross all four lanes at once, pedestrians only need to cross two-lanes of traffic at time.



Photo courtesy of John Henaghan via dunwoodynorth.blogspot.com.

1.4

Secondary/Local streets shall be designed with no more than two travel lanes, unless UTA requests an extra lane for transit purposes.

1.5

All Primary Streets shall be designed with a maximum of 12' travel lanes, or the minimum allowed under the appropriate jurisdictional code.

Smaller lane widths serve to further reduce vehicle speeds and reduce land consumed for automobile use.

Sidewalks

INTENT: Clearly, sidewalks are an important element in creating a walkable development. While creating a continuous sidewalk network is beyond the scope of just one project, steps should be taken to ensure that development sidewalk networks are aligned with both the current and planned networks of the local municipality.

1.6

The minimum sidewalk width shall be 5' for Primary Arterial Streets, 10' for Primary Local Streets, and 5' for Secondary Local Streets.

Mid-Block Crosswalk, Photo by UTA



1.7

Sidewalks shall connect to off-site pedestrian infrastructure and to primary entrances of development.

Sidewalks also need to be appropriately scaled to provide a comfortable, safe, and pleasant walking experience.

Sidewalks should be designed to match expected pedestrian activity. Sections where higher volumes of pedestrian activity are either going to be encouraged or anticipated should be wider.

Safe Crossings

INTENT: Areas where pedestrian and automobile traffic intersect need to be carefully designed to provide adequate comfort and safety for the pedestrian.



Photo courtesy of Wasatch Front Regional Council

1.8

Curb bulbouts shall be used to reduce crossing distances for major crossings.

1.9

Crosswalks shall be clearly marked to both serve as a visual cue for drivers and to encourage pedestrians to cross at these areas rather than jaywalking.

1.10

Raised crossing that use either brick or other alternate paving/materials shall be used at major crossings to further differentiate the crossing area.

Limited Driveways

INTENT: Areas where pedestrians and automobile traffic interact should be limited outside of intersections to create safe and pleasant walking environment.

1.11

There shall be no more than one driveway per 100' on all primary streets. Driveways shall be no more than 24' wide and ideally should be sized to accommodate one-way traffic or a yield lane.

An alley system should be considered to handle most vehicular access to and from parking facilities.

Pedestrian Buffering

INTENT: Pedestrian comfort requires at least some kind of buffering between the pedestrian zone and automobile traffic. This kind of buffering can be accomplished through a number of different designs depending on the context of the roadway and development. The following may be used to provide pedestrian buffer zones.

- Parked cars
- Park strips
- Street furniture

Photo courtesy of Wasatch Front Regional Council





Sugarhouse Street Trees. Photo by UTA.

**1.12**

Any combination of the buffer treatments described below shall be used along primary roadways.

Street Trees

INTENT: Street trees provide more than just a buffer between the automobile and pedestrian realms. They also offer shade and visual interest to street, fostering a more pleasant walking environment. Street trees also play an important role in reducing urban heat island effects that typically lead to higher energy consumption and less comfortable walking environments.

1.13

In order to establish an appropriate street canopy, street trees shall be spaced at mature diameter for the species. While particular species of trees are not suggested in this document, street trees shall provide a minimum clear trunk height of 8'.

Pedestrian Scale Lighting

INTENT: Addressing real and perceived safety issues is extremely important in creating a place with great pedestrian connectivity. Street lights that shine down on the sidewalk rather than out onto the roadway make pedestrians feel safer and, according to some studies, reduces the potential for criminal activity (Ewing & Bartholomew, 2013). Pedestrian lighting also allows automobile traffic to see pedestrians more clearly at night, thus reducing the potential for collisions, especially at intersections.

Lighting designed for the pedestrian experience not only creates a safer walking environment at night, it also creates a more human scale environment with more visual interest.

1.14

Development shall include pedestrian scale lighting that is a maximum of 16' in height and spaced to provide adequate and safe lighting through the entire corridor.



Photo courtesy of LandscapeOnline.com



Bicyclist at TRAX station. Photo by UTA.

Street Furniture

INTENT: Street furniture adds additional comfort for pedestrians and emphasizes that the street is more than just a means of getting from point A to point B – it is a public gathering place. Street furniture should be functional and placed to still allow a clear-path-of-travel of at least 36".

Consider adding seating (benches), drinking fountains, and trash receptacles. While street furniture is not required, it is highly encouraged, especially along primary streets.

Pedestrian Wayfinding Signage

INTENT: The development environment around a station should be easy to navigate for visitors. Providing signage that directs pedestrians to businesses, transit stops, and other amenities like parking facilities and bicycle racks ensures that users are able to get from point A to point B easily, even when these locations are not in a straight line of site or are obstructed by buildings, trees or other objects.

1.15

Wayfinding signs shall be provided, directing pedestrians to station platforms, bus stops, bicycle and pedestrian pathways, as well as businesses and other amenities.

Bicycles

INTENT: Designing a TOD project to accommodate bicycles is just as important as designing it for pedestrians. Doing so enhances and encourages non-motorized transportation choices to and within the development while also maintaining critical connections to the transit station. Recent studies suggest that bicycle use has risen roughly 50% over the last decade (Transportation Research Board, 2012), and shifting demographics are likely to continue this upward trend. Furthermore, one of UTA's goals is to support and encourage bicycle use to and from station areas as a method of increasing ridership. UTA provides bicycle parking at every station and also allows partons to bring their bike's aboard. By creating better bicycle connections, the non-motorized catchment area of a station increases by several miles.

Photo courtesy of Salt Lake Tribune



It is important to note that there are many different kinds of bicyclists. While a small percentage is willing to ride in any condition, the large majority of the bicycling population prefers certain kinds of facilities and treatments that



Green Bike and TRAX, Photo by UTA



provide additional safety (Salt Lake County, 2012). Designs should cater to the majority of the population to promote additional bicycle use.

2.1

Plans shall accommodate bicycle traffic in the following ways:

- ***Connect onsite facilities including primary entrance areas, transit platforms, and bicycle parking areas***
- ***Connect to current bike paths and facilities***
- ***Provide clear & direct access to the transit platform for internal and external bicyclists***
- ***Conform to municipal & regional bicycle master plans***

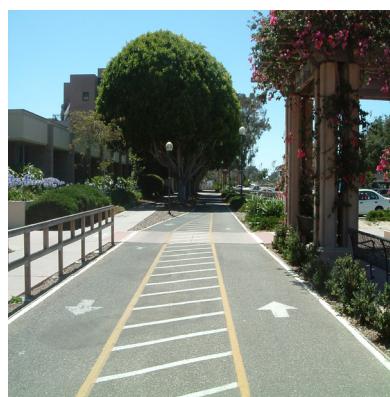
To provide appropriate connectivity for bicyclists, designs shall consider the following elements:

Bikeways

There are several different kinds of bikeways that can be used depending on the context of the road, vehicle speed, and surrounding bicycle infrastructure.

On low speed roadways (25mph or less), riders can operate within the same travel lane as automobile traffic known as a shared roadway facility. The pavement may or may not be marked to further indicate the shared nature of the facility to both bicyclists and drivers.

Photo courtesy of Wasatch Front Regional Council



A bike lane uses signage and striping to separate bicycle and automobile traffic. These facilities are typically used in areas with higher traffic and/or higher vehicle speeds. If a bicycle lane is utilized, the minimum lane width should be no less than 5' on each side of the street. and 6' on roads with on-street parking.

Cycle tracks are bikeways that are separated from the automobile travel lane further by either using parked cars, planters, or curbing between the travel lane and the cycle track. Rather uncommon along the Wasatch Front, this combines elements of a separated path while still providing an on-street



Photo courtesy of Wasatch Front Regional Council



facility.

Shared Use Paths are pathways in rights-of-ways separated completely from the roadway, providing the least amount of interaction between automobile and bicycle traffic. They are typically pathways that accommodate both pedestrians and bicycles. This shared use element makes this particular design less desirable for more experienced bicyclists who want to avoid slower pedestrian traffic.

When designing bicycle facilities, additional information on the different types of bikeways and appropriate design standards can be found at:

- Nat'l Association of Transportation Officials (NACTO) – <http://nacto.org>
- American Association of State Highway and Transportation Officials (AASHTO) – <http://transportation.org>
- Manual on Uniform Traffic Control Devices (MUTCD) – <http://mutcd.fhwa.dot.gov>

Salt Lake County's Bicycle Best Practice document, located at http://cf9.slco.org/cooperativeplan/html/Best_Practices.html, also provides guidance on identifying and selecting appropriate bikeways. Consider the surrounding bicycle infrastructure in designs as well.

Bicycle Parking

INTENT: While UTA provides bicycle parking for transit users, providing adequate bicycle parking for other uses at a TOD site is important to promote bicycle use. This includes providing bicycle racks for office and retail uses as well as more secured bicycle facilities for residential development.

Photo courtesy of <http://confessionsofabikejunkie.blogspot.com/>



2.2

Bicycle parking shall be incorporated into the development to serve residents, employees, and visitors.

Offering bicycle lockers or indoor bicycle parking for residents shall be considered.

Bicycle parking should also be:

- **Conveniently located in relation to the development and major bikeways**



Gallivan Plaza Station, Photo by UTA

- **Placed in well-lit, highly visible areas with high pedestrian flows**
- **Protected from weather via a roof or awning when possible**
- **Easily accessible to all users and typically should not require users to go up or down stairs. If the use of stairs is needed, bike rails should be provided.**

Developers are also encouraged to consider accomodating bike share facilities in areas where bike share organizations operate.

Transit

INTENT: Most UTA station areas provide more than just one mode of public transit. Currently, bus service is provided to rail stations, but future transportation plans often envision future, high capacity, transit connections as well. Accommodating transit connectivity is critical to maintain and expand the UTA system and produce a functioning TOD.

To provide appropriate connectivity for transit, designs shall consider the following elements:

- **Bus access**
- **Future capital project considerations**

Bus Access

35M, Photo by UTA



INTENT: While transit infrastructure, like bus loops, can be reconfigured they must continue to accommodate efficient transit transfers. Additionally, UTA has sized this infrastructure to accommodate current and future transit demand. Therefore, reducing what the infrastructure can accommodate would require additional consideration and analysis by UTA

3.1

Development layouts shall provide direct, convenient, and conflict-free pedestrian access between bus stops and rail stations.

3.2

Site designs should either leave the existing transit



Photo taken near the University Line

infrastructure intact or contemplate full functional replacement.

Design guidelines and standards for bus access, including bus turning radii, stop placement, shelter pads, and loading zones can be found in the UTA Light Rail Design Criteria document available through the UTA website at: <http://www.rideuta.com/mc/?page=DoingBusiness-DesignInformation>

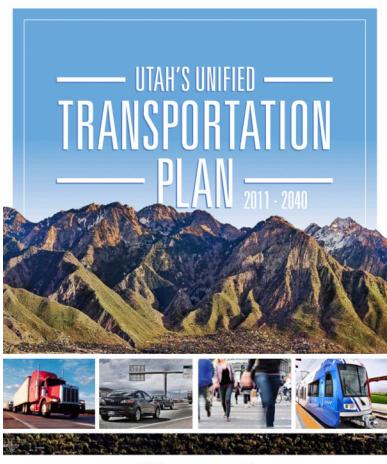
Based on the location of the TOD project, consult chapter five of the Light Rail Design Criteria or chapter five of the Commuter Rail Design Criteria for specific standards for bus facilities (link provided above). These standards must be met to provide appropriate bus access.

UTA may consider alternative designs for these facilities, but additional analysis and review will be required.

Future Capital Project Considerations

INTENT: While future projects do not impact every UTA property, a number of areas prime for development are also areas where UTA may have interest in developing new capital projects. This could include accommodating anything from future bus rapid transit routes to new street car, light rail, or commuter rail lines.

Specific information on the design criteria for these different modes of transit is available through UTA's website at <http://www.rideuta.com/mc/?page=DoingBusiness-DesignInformation>.



Utah's Unified Transportation Plan

The region's long range transportation plans are also available for review through the Wasatch Front Regional Council (WFRC) Metropolitan Planning Organization (MPO) or the Mountainland Association of Government (MAG) MPO. The Wasatch Front MPO is responsible for Salt Lake, Davis, Weber, Tooele, Morgan, and Box Elder Counties while MAG is responsible for Summit, Utah, and Wasatch Counties.

www.wfrc.org

www.mountainland.org

3.3

Developers shall consult UTA about future capital projects and accommodate projects identified in the region's long



range transportation plans

Automobiles

While designs should not be solely focused on automobile use, they remain a very important mode of transportation, especially as a means of access to the transit system. At a TOD location there are three general types of automobile users that should be addressed. These include:

- Kiss-and-ride
- Park-and-ride
- Other automobiles

Kiss-and-ride

INTENT: Kiss-and-ride users drop off and/or pick up passengers from the transit station. Average wait times at station areas for kiss-and-ride automobiles are typically under ten minutes. Automobile access to kiss-and-ride locations needs to be easily accessible through the development and as direct as possible.

Like the transit facilities addressed in the previous section, UTA has sized this infrastructure to accommodate current and future transit demand. Therefore, reducing what the infrastructure can accommodate requires additional consideration and analysis by UTA.

4.1

Site designs should either leave kiss-and-ride facilities intact or contemplate full replacement, unless otherwise directed by UTA staff.

If kiss-and-ride facilities are being moved, access shall not exceed 400' walking distance from the center of the platform. Pedestrian crossings from kiss and ride locations also need to be appropriately signed and include a crosswalk.

Additional kiss-and-ride design standards can be found in the UTA Light Rail Design Criteria document or the Commuter Rail Design Criteria available through the UTA website at: <http://www.rideuta.com/mc/?page=DoingBusiness-DesignInformation>





Jordan Valley Park-and-ride



Consult chapter eight for specific standards. These standards must be met to provide appropriate kiss-and-ride access.

Park-and-ride

INTENT: Park-and-ride users drive to a transit station and leave their automobile in a parking stall for an extended period of time. Outside of downtown Salt Lake City, park-and-ride boardings make up a large percentage of UTA's ridership and are an important component of the UTA system.

4.2

Site designs shall preserve or contemplate full replacement of park-and-ride stalls, unless otherwise directed by UTA staff.

Like bus and kiss-and-ride facilities, UTA has sized this infrastructure to accommodate current and future transit demand. Therefore, reducing what the infrastructure can accommodate requires additional consideration and analysis by UTA.

UTA may consider a reduction in the number of transit parking stalls that must be replaced following a comprehensive parking study at the expense of the developer. For example, if the demand for transit stalls can be accommodated through a shared arrangement within the development, a neighboring property, or another development along the transit corridor, UTA may consider reducing its parking requirement.

Additionally, since many park-and-ride facilities are sized for future parking demand, not all of the parking needs to be constructed in the first phase of development. UTA may also consider allowing some parking to be accommodated in future phases, designing parking structures to be expanded in future phases, or leaving adjacent property for staging and/or expansion of additional parking represent two possibilities for meeting parking demand in future phases.

4.3

Parking structures are highly encouraged and shall be used whenever feasible.

Unlike bus and kiss-and-ride facilities, which make up a small percentage

Jordan Valley Park-and-ride





Photo courtesy of Wasatch Front Regional Council

of UTA property, park-and-ride facilities will likely need to be removed and reconstructed to accommodate any new development and may require parking to be structured. Structured parking is highly encouraged because it leaves more land for development, creates a more walkable environment by removing large surface lots, and also encourages ridership by offering covered parking to park-and-ride users.

4.4

The location of park-and-ride stalls shall not exceed 1000' walking distance from the center of the platform to the closest stall.

Additional park-and-ride design standards can be found in the UTA Light Rail Design Criteria document or Commuter Rail Design Criteria document available through the UTA website at: <http://www.rideuta.com/mc/?page=DoingBusiness-DesignInformation>

Consult chapter eight for specific standards, however, these standards may be adjusted depending on the type of park-and-ride facility contemplated.

Access to park-and-ride stalls should also be clearly signed, however, parking, especially surface parking, should be adequately screened and accessed off of non-primary streets (see Parking Location and Sighting on page 27).

Other automobiles

Specific design guidelines for other automobiles are covered under the Development Form section of this guide, including parking considerations and streetscapes. These elements coupled with the small block sizes and limited street widths discussed in previous sections largely define the appropriate automobile connectivity for a TOD area.



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Murray Fireclay Area, Photo by UTA

Development Form

Creating a pleasant and inviting public space is a crucial component of TOD.

While connectivity plays a significant role in creating an excellent pedestrian experience, the form that the development takes is just as important.

Good TOD requires pedestrian scale design that creates a sense of place, feels comfortable and safe, limits dead space, and provides visual interest to an area.

Proposed developments shall address the following aspects of development form:

- Density
- Building orientation and setbacks
- Articulation, fenestration, and transparency
- Location and screening of parking
- Streetscapes

Density

INTENT: More intense the land use around the station leads to higher potential for ridership gains from surrounding development. Since one of UTA's primary goals is the increasing ridership for TOD, development should go beyond minimum transit supportive thresholds.

To understand the minimum densities that UTA expects, use the Wasatch Choice for 2040 vision map found on page 23 (also available at www.wasatchchoice2040.com), determine the type of center where the project is located, and use the density table on the following page (page 22).

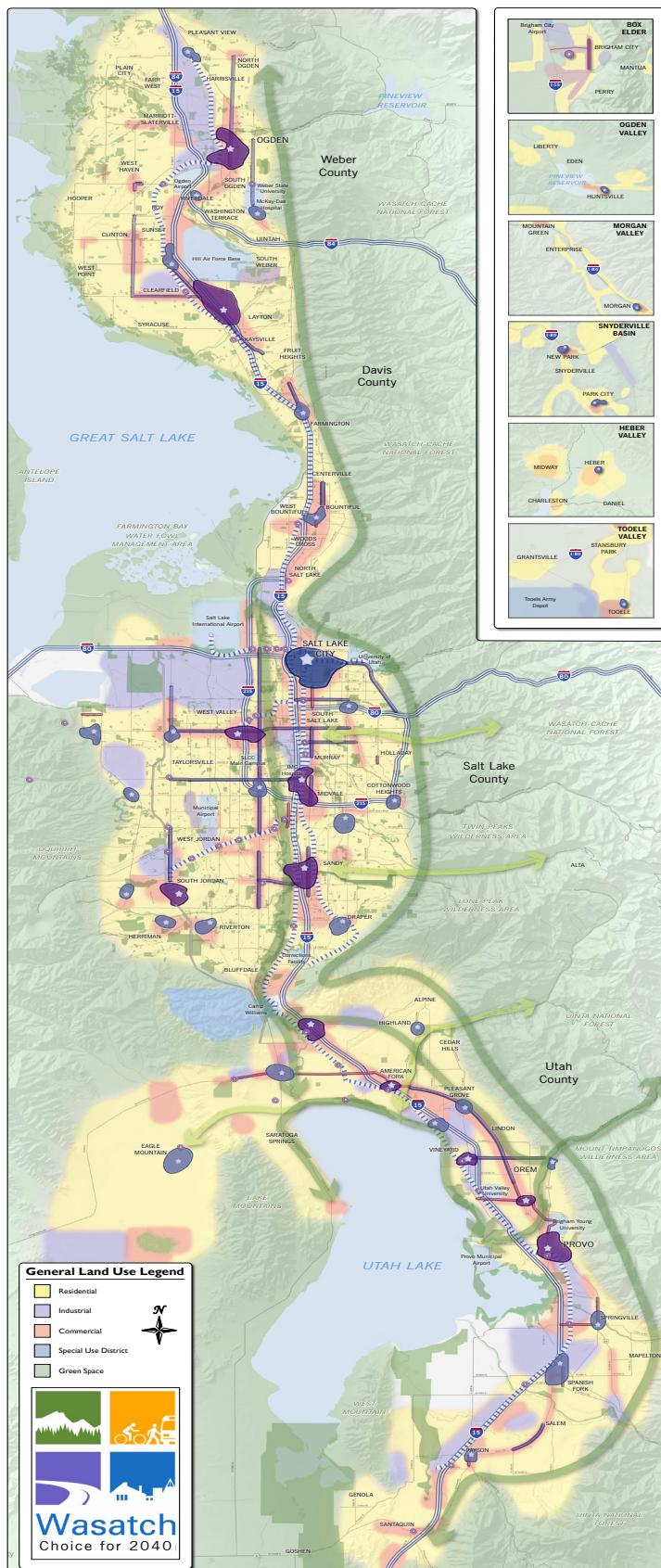


Rendering courtesy of West Valley City

5.1

Wasatch Choice for 2040 Center Type	Minimum Residential Units per Acre	Employees per Acre
Metropolitan Center	50 du/ac	100/ac
Urban Center	40 du/ac	80/ac
Town Center	30 du/ac	60/ac
Station Community	25 du/ac	40/ac

Density calculations are based on developable land and does not include transit critical elements of the site, roads, and open space.



Centers

Centers are historical and emerging regional destinations of economic activity. The vision suggests that these centers should expand to provide ever-broadening choices for residents to live, work, shop and play; a mix of all of these activities is welcome. Centers should work with the long-term market, helping to provide opportunities for residents who want to live close to work, walk or bike to shop, and have both great transit and road access – desperately needed as our population ages, gas prices and congestion increase, and housing prices inch upward.

Metropolitan Center



Downtown Salt Lake City is the metropolitan center, serving as the hub of business and cultural activity in the region. It has the most intensive form of development

Floor Area Ratio 1 to 10
20 to 200 Housing units per acre



for both employment and housing, with high-rise development common in the central business district. It will continue to serve as the finance, commerce, government, retail, tourism, arts, and entertainment center for the region. The metropolitan center benefits from pedestrian friendly streetscapes and an urban style grid network. Downtown Salt Lake is the central hub for public transportation in the region. Auto access is prevalent with access to several major highways and thoroughfares.

Urban Center



Urban Centers are the focus of commerce and local government services benefiting a market area of a few hundred thousand people. Urban

Centers will be served by high-capacity transit and major streets. They are characterized by two- to four-story employment and housing options.

Floor Area Ratio 0.75 to 4
20 to 100 Housing units per acre



Town Center



Town centers provide localized services to tens of thousands of people within a two to three mile radius. One- to three-story buildings for employment and housing are characteristic. Town centers have a strong sense of community identity and are well served by transit and streets.

Floor Area Ratio 0.5 to 1.5
10 to 50 Housing units per acre



Station Community

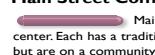


Station Communities are geographically small, high-intensity centers surrounding high capacity transit stations. Each helps pedestrians and bicyclists access transit without a car. Station Communities vary in their land use: some feature employment, others focus on housing, and many will include a variety of shops and services.

Floor Area Ratio 0.5 to 2.5
20 to 100 Housing units per acre



Main Street Community



Main Streets are a linear town center. Each has a traditional commercial identity but are on a community scale with a strong sense of the immediate neighborhood. Main streets prioritize pedestrian-friendly features, but also benefit from good auto access and often transit.

Floor Area Ratio 0.5 to 1.5
10 to 50 Housing units per acre



Boulevard Community



A Boulevard Community is a linear center coupled with a transit route. Unlike a Main Street, a Boulevard Community may not necessarily have a commercial identity, but may vary between housing, employment, and retail along any given stretch. Boulevard Communities create a positive sense of place for adjacent neighborhoods by ensuring that walking and bicycling are safe and comfortable even as traffic flow is maintained.

Floor Area Ratio 0.35 to 1.0
0 to 50 Housing units per acre





Parking Ratios

INTENT: Providing adequate parking is critical to the success of a development. If not enough parking is provided surrounding developments and neighborhood could be negatively impacted from parking spillover, creating a burden on the larger community. Additionally tenants may be less attracted to developments with inadequate parking, leading to high turnover rates or difficulty leasing space. However, if too much parking is provided it disincentives the use of public transportation, takes up valuable developable land, adds considerable cost to development and in some cases hinders walkability and connectivity.

Finding the right parking ratio for proposed development land uses is a critical concern. The following table provide basic guidelines for acceptable parking ratios for types of land uses. UTA understands that a ‘one-size fits all’ approach does not work in determining parking needs. Therefore these ratios are meant to provide a rough estimate and be used as a starting place for determining the appropriate parking ratios for each individual project. Like density, these guidelines are based on the Wasatch Choice for 2040 vision map locations.

6.1

	Metropolitan Center	Urban Center	Town Center	Station Community
Land Use Type				
Residential Multi-Family (1 bedroom)	0.5 stalls/dwelling unit	1 stall/dwelling unit	1 stall/dwelling unit	1.5 stalls/dwelling unit
Residential Multi-Family (2 and 3 bedrooms)	1.25 stalls/dwelling unit	1.5 stalls/dwelling unit	1.5 stalls/dwelling unit	2 stall/dwelling unit
Office	3 stalls/1000 sqft	4 stalls/1000 sqft	4 stalls/1000 sqft	4 stalls/1000 sqft
Retail	1 stall/1000 sqft	2 stalls/1000sqft	3.5 stalls/1000 sqft	4 stall/1000 sqft

Again, this table is meant to serve as a starting place for discussions between UTA and development partners on appropriate parking ratios. Site specific information, particularly the type of transit and frequency of service, as well as detailed development information should inform a final parking ratio.

Developers shall also consider using the following methods to further reduce parking demand.

- ***Transit pass programs***
- ***Unbundling parking***
- ***Providing on-street parking***
- ***Car Share program***
- ***Bike Share program***
- ***Charging for parking***



Photo courtesy of Wasatch Front Regional Council

Building Orientation and Setbacks

INTENT: Buildings should frame the pedestrian environment and help create a sense of enclosure for public space. This simply cannot be achieved in areas with large setbacks or where there is significant space between buildings. Street oriented buildings provide a consistent “street wall” while also providing a functional relationship between public space (the street) and private space (building interiors). To achieve this form the following design elements shall be followed.

7.1

All street corners shall be occupied by a building unless the corner is set aside for open space.

7.2

Building setbacks shall be between 0' and 5' feet from the sidewalk on primary streets and 0' to 10' on secondary streets. A larger setback may be allowed if fronting a major corridor with more than 4 lanes of traffic.

7.3

Side yard setbacks between buildings shall be no more than 5' unless there is a major pedestrian/bicycle connection requiring additional space or vehicular access to parking facilities is needed . Side yard parking may be allowed on secondary/local streets provided that they appropriately screened.

7.4

Vehicular access (driveways) shall be limited to one between streets, especially on primary streets.

7.5

Driveways shall be no more than 24' wide and ideally should be sized to accommodate one-way traffic or a yield lane.

7.6

Principal entrances shall be located on the front or corner façade .

Front entrance at corner rendering





Photo courtesy of Wasatch Front Regional Council

7.7

One on-street entrance shall be provided for every 100' of façade.

7.8

Residential units on a ground floor should have direct access to public rights of way.

7.9

Loading and unloading areas, open storage, refuse areas, and utility appurtenances shall be screened from view from all streets.

Building heights should be appropriately sized to maintain a human scale.

Designs should acknowledge the context of the project area and the street right-of-way.

Building widths should not be out of proportion with building heights. Additionally, consider using a 6' to 12' setback for floors higher than four stories to maintain a pedestrian scale on the street .

Articulation, Fenestration, and Transparency

INTENT: While the creation of an uninterrupted street wall is encouraged, the intended pedestrian friendly environment cannot be created if structures are barren and architecturally uninteresting. Building facades need to have both vertical and horizontal façade divisions as well as windows with an appropriate level of transparency. Not only does this create more visually interesting environment for the pedestrian, it also addresses safety concerns by providing more opportunities to have “eyes on the street”.

Building facades shall be designed with vertical and horizontal façade divisions as well as windows with an appropriate level of transparency.

To provide an appropriate level of articulation, fenestration, and transparency the following design elements shall be followed on all street facing facades.

Photo courtesy of Wasatch Choice 2040 Template Form Based Code





Photo courtesy of Wasatch Choice 2040
Template Form Based Code

8.1

A vertical façade division shall be incorporated into the building design every 30' of façade width (as measured along the base of the façade). Elements may include a column, pilaster, or other continuous vertical ornamentation a minimum of 2" in depth.

8.2

A horizontal façade division shall be incorporated into the building design within 3' of the top of any visible basement or ground story and every fourth floor above the first floor. Elements may include a cornice, belt course, molding, string courses, or other continuous horizontal ornamentation a minimum of 2" in depth.

8.3

A minimum ground story transparency of 65% (measured between 2' and 8' above grade) for retail and office uses and a minimum ground story transparency of 15% (measured between 2' and 8' above grade) for residential uses.

8.4

A minimum transparency for all other floors of 15% (measured from floor to floor).

8.5

No rectangular area greater than 20% of a story's façade may be windowless (measured from floor to floor).

8.6

No horizontal segment of a story's façade greater than 15' in width may be windowless.

Location and Screening of Parking

INTENT: Both surface and structured parking facilities detract from an active pedestrian environment. If not properly located, these facilities create unattractive auto-oriented dead space. While providing parking is a critical





Locate parking behind buildings

component to support both a development and a transit station, where that parking is located and how it is screened from pedestrian realm is important in maintaining appropriate TOD design. The following design elements should be followed.

9.1

Accommodating parking demand through on-street parking is highly encouraged, especially for retail land uses.

9.2

Surface parking shall be placed in the rear of buildings.

9.3

Parking area entrances shall be adequately signed for both pedestrians and automobiles.

9.4

Limited side yard surface lots may be allowed on non-primary streets if the lot is screened with walls, hedges, or berms. These landscape buffers shall have a minimum depth of 7'. A medium or large shade tree shall be required at least every 40'.

9.5

Internal pedestrian pathways within the parking area and outside of the parking drive isles shall be provided in surface parking lots with two or more double-loaded isles.

9.6

Parking structures are highly encouraged and shall be used whenever feasible to accommodate transit parking needs.

9.7

Above-ground parking structures should be wrapped with retail, residential or office uses to limit the amount of the structure visible from primary and secondary streets.

9.8

Where parking structures are visible, they shall be





Photo courtesy of Wasatch Front Regional Council

designed to conceal the view of all parked vehicles and ramps.

Streetscapes

Many aspects of appropriate streetscape design have already been covered in previous sections of this guidebook. However, the following section outlines design elements for each street type.

For the purposes of this document, three types of streets are defined.

- Primary Arterial Street - A high-capacity urban road. The primary function of this road type is to deliver vehicular traffic from local roads to freeways or expressways. Pedestrians and bicycles should be accommodated, but facilities may be more limited as vehicle speeds are likely higher than 35 mph. Typically these streets are four lanes or wider.
- Primary Local Street - The principal thoroughfare through a development for both motorized and non-motorized traffic. In most cases the primary local street will connect to the closest primary arterial street outside of the development. Primary entrances to businesses and residential development are oriented to these streets. Vehicle speeds are typically lower than 30 mph and generally two to four travel lanes are provided with a turning lane provided at intersections.
- Secondary Street/Local Street - A minor street that is primarily used to provide access within a development, especially to parking facilities. Secondary access to businesses and residential development are often provided. Typically vehicle speeds are 25 mph or lower and generally only two lanes are provided.

INTENT: Streetscapes should be clearly indicated on all plans and design elements should be appropriate to the street classification, vehicle speeds, number of lanes, and other associated attributes.

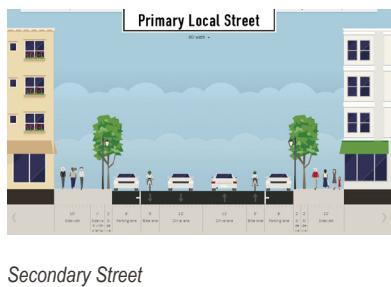
10.1

All plans shall clearly indicate the street type.

Primary Arterials Street

10.2

Minimum 5' wide sidewalk.

**10.3**

Shade trees spaced at mature diameter for the species. While particular species of trees are not suggested in this document, street trees shall provide a minimum clear trunk height of 8'.

10.4

Pedestrian scale lighting that is a maximum of 16' in height and spaced approximately 60' apart. Light shall direct downward to the sidewalk.

10.5

A planting or street furnishing zone (4' maximum).

10.6

For intersections with more than 2 travel lanes a 12' median shall be required.

On street parking is not required, but is highly encouraged

Primary Local Street

10.7

Minimum 10' wide sidewalk.

10.8

Shade trees spaced at mature diameter for the species. While particular species of trees are not suggested in this document, street trees shall provide a minimum clear trunk height of 8'.

10.9

Pedestrian scale lighting that is a maximum of 16' in height and spaced approximately 60' apart. Light shall direct downward to the sidewalk.

10.10

Photo courtesy of Wasatch Front Regional Council





A planting or street furnishing zone (4' maximum).

10.11

Minimum 8' wide on-street parking.

10.12

An appropriate bikeway facility (this may be located off of the street if using a multi-use pathway).

10.13

No more than 4 travel lanes with a width no wider than 12' each.

10.14

For intersections with more than 2 travel lanes a 12' median shall be required.

Secondary/Local Streets

10.15

Minimum 5' wide sidewalk (10' if on a major pedestrian corridor).

10.16

Shade trees spaced at mature diameter for the species. While particular species of trees are not suggested in this document, street trees shall provide a minimum clear trunk height of 8'.

10.17

Pedestrian scale lighting that is a maximum of 16' in height and spaced approximately 60' apart. Light shall direct downward to the sidewalk.

10.18

No more than 2 travel lanes with a width no wider than 11' each.

On street parking is not required, but is highly encouraged



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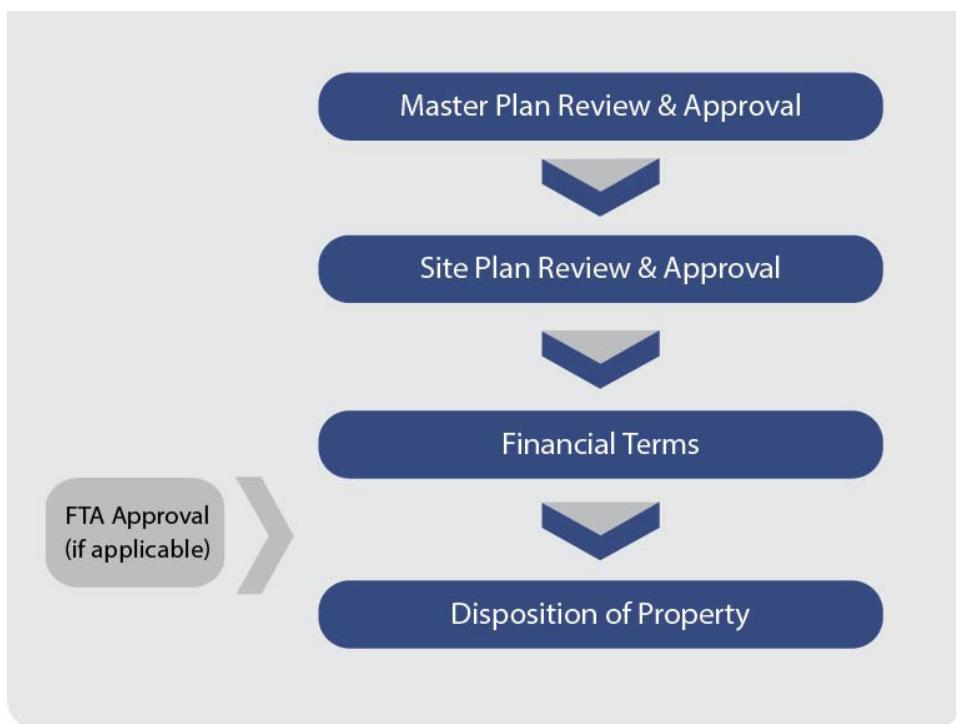


TOD Review Processes

The UTA process is designed to ensure that each department within the organization, as well as the UTA Board, has reviewed, understands, and has approved each TOD project.

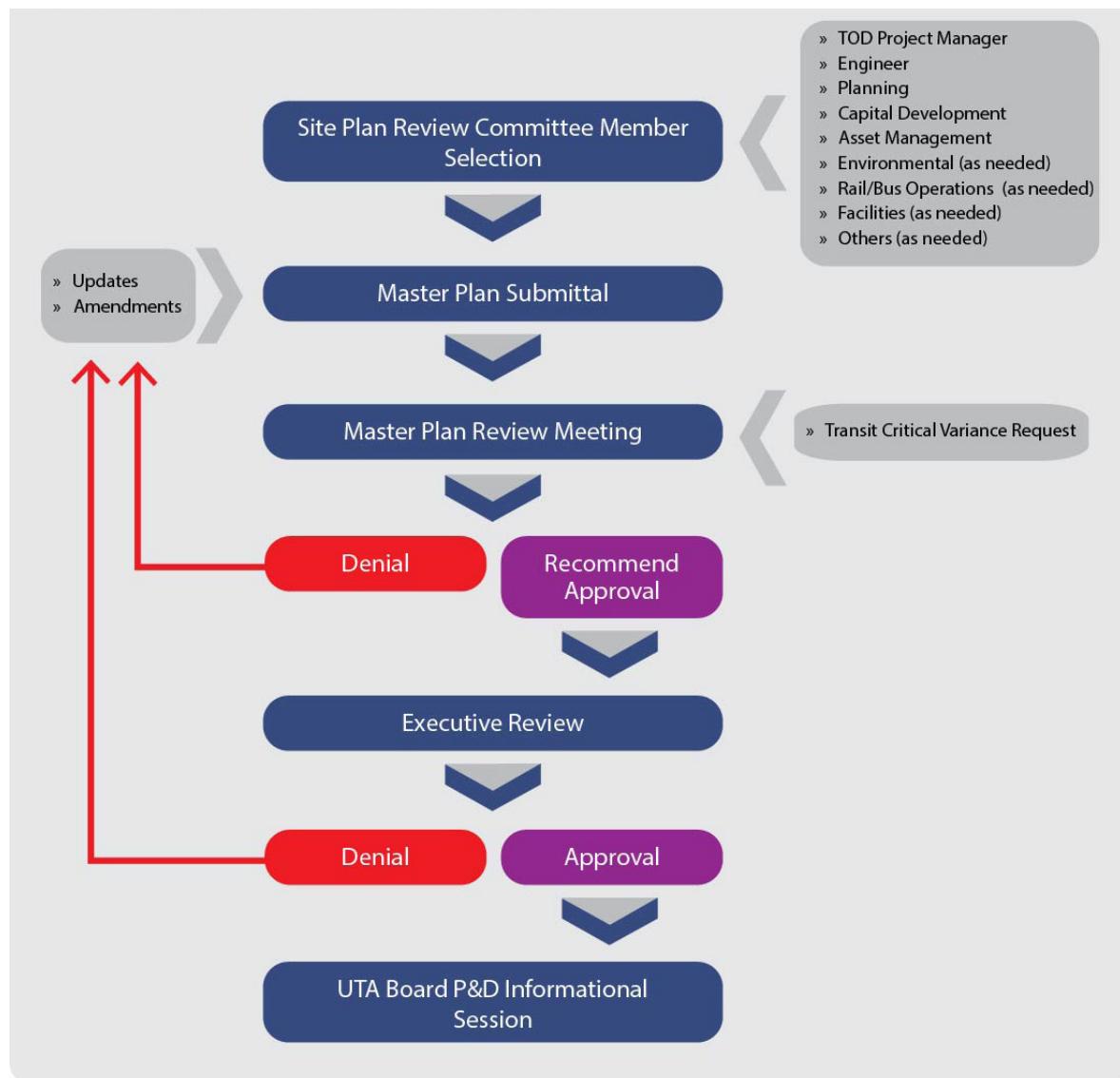
While every effort has been made to streamline this process, often times, multiple reviews may be required, especially for projects on land purchased with Federal Transit Administration (FTA) funds. The diagram below lays out the overall TOD approval process.

Overall TOD Review/Approval Process



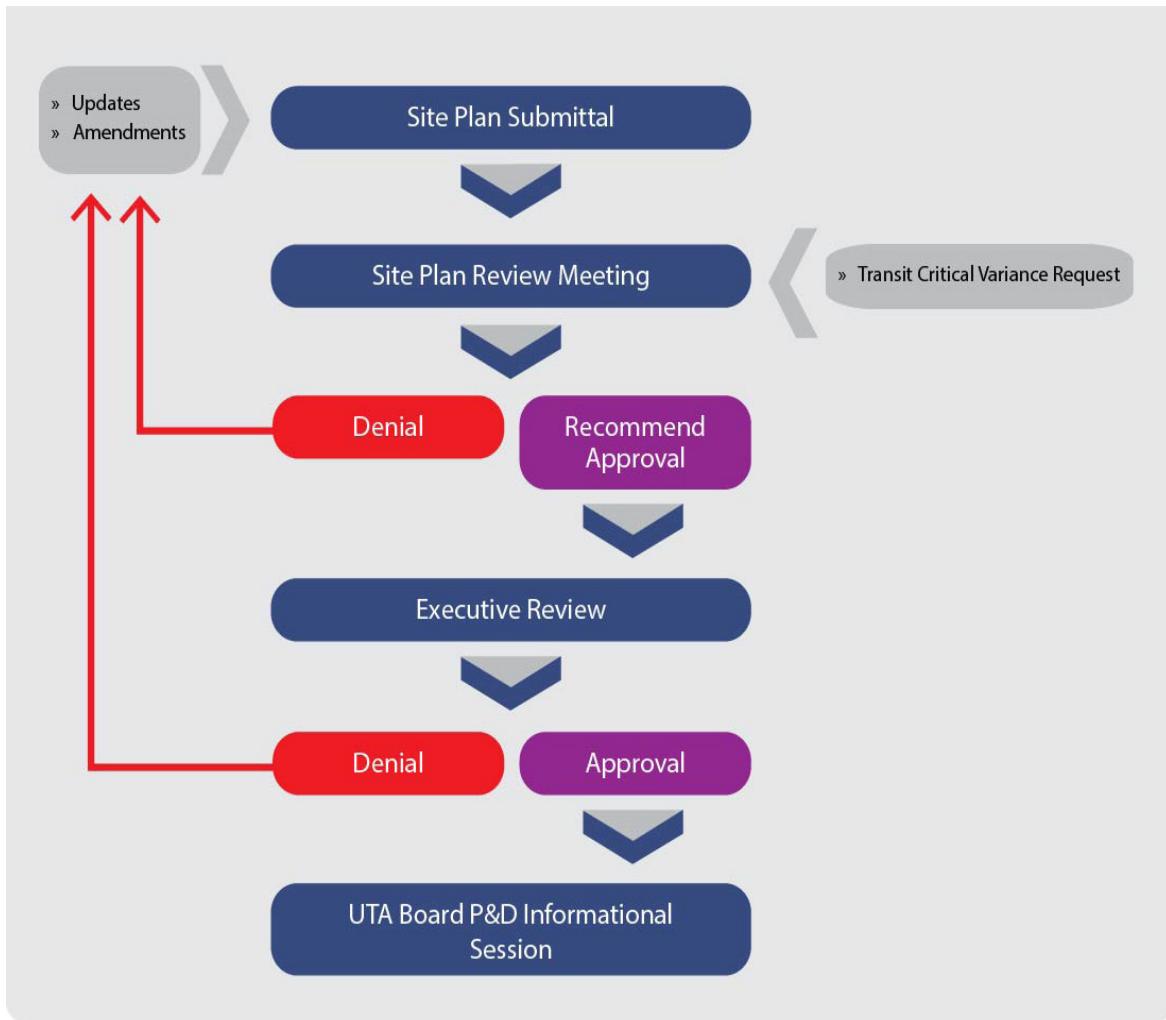


Master Plan Review Process





Site Plan Review Process





Definitions

Block: The aggregate of lots, passages, lanes, and alleys bounded on all sides by streets.

Block Length: A block measurement that is the horizontal distance along the front property lines of the lots comprising the block.

Bus Loop: A facility where buses load and unload passengers, where buses change directions, and where buses may stop and park for end of line purposes (EOL).

Capital Project: A future transit project which purchase or construct capital assets. Typically a capital project encompasses land purchases and the construction of rail or bus infrastructure.

Density: The number of units located in an area of land.

Disposition of Property: The transfer of title to property from UTA by deed or other long-term instrument.

Dwelling Unit: A room or group of rooms connected together that include facilities for living, sleeping, cooking, and eating that are arranged, designed, or intended to be used as living quarters for one family, whether owner occupied, rented, or leased.

Expression Line: An architectural feature. A decorative, three dimensional, linear element, horizontal or vertical, protruding or indented at from the exterior facade or a building typically utilized to delineate floors or stories of a building.

Facade: The exterior face of a building, including but not limited to the wall, windows, windowsills, doorways, and design elements such as expression lines.

Kiss-and-ride: A passenger drop-off area near a transit station.

Park-and-ride: Facilities where transit passengers drive to meet a bus or train. The size of these lots vary, but are generally built to accommodate future projected demand.

Pedestrianway: A pathway designed for use by pedestrians; it can be located mid-block allowing pedestrian movement from one street to another without traveling along the block's perimeter.

Primary Street: The principal thoroughfare through a development for both motorized and non-motorized traffic. In most cases the primary street will connect to the closest major arterial street outside of the development.



Saw-tooth: A facility used by buses for parking, typically part of a bus loop configuration.

Scale: The relative size of a building, street, sign, or other element of the built environment.

Secondary Street: A street that is primarily used to provide access within a development with less vehicular traffic

Setback: The horizontal distance from a property line inward, beyond which a structure may be placed.

Site Plan Review Committee: A committee made up of UTA staff from various departments who review both master plans and site plans and recommend approval to the executive committee.

Story: A habitable level within a building measured from finished floor to finished floor.

Story, Ground: Also referred to as ground floor. The first floor of a building that is level to or elevated above the finished grade on the front and corner facades, excluding basements or cellars.

Story, Half: A story either in the base of the building, partially below grade and partially above grade, or a story fully within the roof structure with transparency facing the street.

Story, Upper: Also referred to as upper floor. The floors located above the ground story of a building.

Streetwall: The vertical plane created by building facades along a street. A continuous streetwall occurs when buildings are located in a row next to the sidewalk without vacant lots or significant setbacks.

Transit Critical Infrastructure: Infrastructure that is needed for the operation of the transit system. This includes but is not limited to, rail, bus loops, saw teeths, rail station platforms, crossings, kiss-and-ride facilities, and park and ride facilities

Transit Critical Variance Request: A formal written request submitted to the UTA TOD Department Project Manager requesting a variance on the requirements of a full replacement of transit critical infrastructure.

Tree Canopy: The uppermost area of spreading branches and leaves of a tree.

Tree Canopy Coverage: The area of ground covered or shaded by a tree's canopy, measured in square feet.

Wayfinding Sign: A sign enabling a pedestrian to find his or her way to nearby destination or destinations.



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