

Transit Strategies – Basic Improvements

Complete Streets

Complete Streets ensure safe and convenient access to public transit for all people.

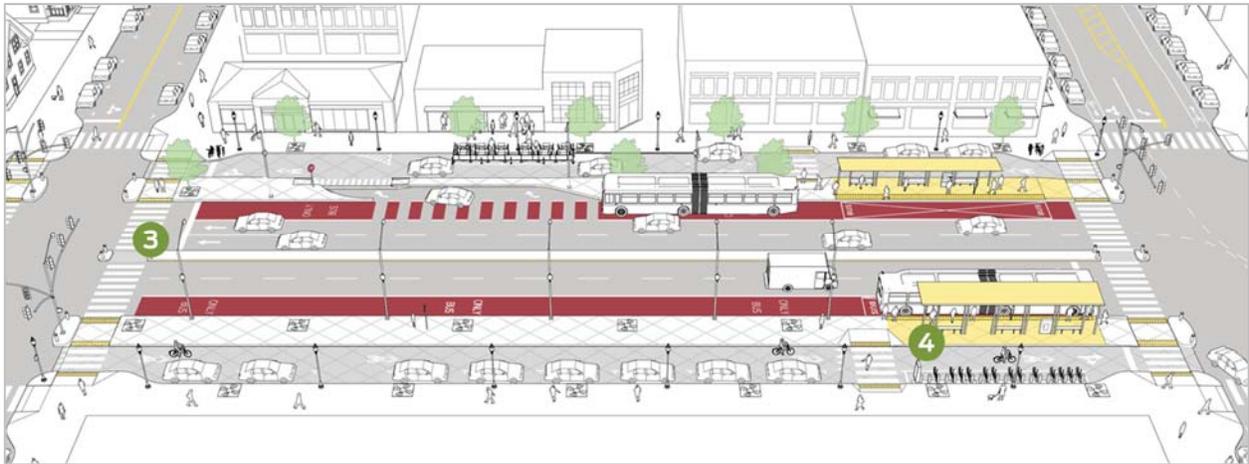
Cities design and operate “Complete Streets” in order to safely accommodate all users, including people of all ages and abilities walking, bicycling, or riding transit; passengers and drivers of private and ride-hail vehicles; and operators of freight and delivery vehicles. Complete Streets especially support transit access and operations, since every transit trip starts and ends with some other mode—usually by walking, but also by biking, getting dropped off, or parking a car nearby. These street designs:

- **Provide safe walking and bicycling facilities**
- **Support the safe and efficient operation of transit**
- **Prioritize moving people over moving cars**

Road planning and transit planning are often disconnected. Poorly-designed, “incomplete” streets lead to slower transit service and discourage people from riding transit. This disconnect often leaves the riders waiting next to a bus stop sign on a high traffic street with no sidewalks or safe crossings.

Cities around the United States, including Fort Worth, have put in place Complete Streets guidelines and implementation strategies in order to make walking, biking, and riding transit safer, more convenient, and comfortable. Beyond having safer streets, cities have seen benefits of increased ridership and economic development as well.

Complete Streets Example



Source: National Association of City Transportation Officials

Benefits of Complete Streets

Although the addition or improvement of sidewalks and bikeways are often the biggest physical changes necessary to build a Complete Street, the best projects also enhance transit service. The major benefits of Complete Streets for transit are that they:

- Improve transit speed and **on-time performance** by reducing the amount of time buses are stuck in traffic
- Improve access and safety for riders **by enhancing first mile/last mile connections** to transit services
- Provide space along the street for **comfortable transit stops** or stations with amenities



- Encourage mixed-use, transit-oriented development that can **increase the demand for transit**
- Promote **economic development** by making it easy to cross the street, walk to shops, and bicycle to work
- Improve **safety for all people** by reducing motor vehicle speeds, intersection crossing distances, and potential conflicts and collisions

Transit Operations

Putting in place Complete Streets can increase the speed and reliability of public transportation operations. Involving transit agencies in street design decisions from the very beginning can ensure better bus stop placement; space along the street for shelters, benches, and signs; and consistent street crossings for riders to access transit stops. For example, in Roanoke, VA and Seattle, WA, the transit agencies are involved in street design review from the first meetings. Louisville, KY's transit agency participated actively in the rewrite of the city's street manual.

Streets that are well designed for transit can encourage people to get out of their cars and onto buses. These streets provide accessible bus stops and assist buses in moving through traffic. Cities have seen ridership increases with implementation of these designs.

Economic Development

Walking, biking, and taking transit are all modes that expose people to the surrounding built environment, especially when compared to travelling inside private vehicles. This exposure promotes economic development, since more people are out and about perusing neighborhood shops. Businesses often see an increase in sales after streets are reconfigured to better designs.

Fort Worth Complete Streets Policy (2016)

The City of Fort Worth adopted a Complete Streets Policy in 2016, with Complete Streets defined as "transportation infrastructure within public access ways that is designed, operated, and maintained to enable safe, accessible, comfortable, and convenient access for all people and travel modes. This includes people traveling as pedestrians, by bicycle, by transit, and by motor vehicle such that people of all ages and abilities are able to safely move along and across a street."

By way of this policy, the City has committed to adopting the best and latest design standards available based on Texas Accessibility Standards, Americans with Disabilities Act, ITE, AASHTO, and NACTO. The policy applies to all development and redevelopment in the public domain within the City of Fort Worth and extraterritorial jurisdiction. Not all roadways and routes need to be optimized for all modes; however, a network of safe, convenient travel routes and crossings is required for people using each mode.

Fort Worth Master Thoroughfare Plan

The Master Thoroughfare Plan (MTP) is the city's long-range plan for major transportation facilities and is intended to accommodate the ultimate development of the city's thoroughfare network. It is essentially a right-of-way preservation document, allowing the orderly development of a network necessary to support the City's growth plans. Future thoroughfare alignments are conceptual, long-term and general in nature.

Each thoroughfare is categorized, and appropriate right-of-way widths are determined according to street type, number of lanes, transit facilities, median type, parking type, and bicycle facilities. Additional inputs include average daily traffic, target speed, and trail connectivity. Roadways with existing built infrastructure and limited ability to expand right-of-way due to surrounding development are recognized as 'Established Thoroughfares.

The MTP specifically includes provision for transit priority on most roads, which include a combination of exclusive transit lanes, share parking/peak period transit lanes, and shared transit and bicycle lanes.

Types of Bus Lanes Included in MTP

<p>Transit Median</p>	<p>Transit medians, discussed more fully under Median / Center Treatments, are intended to accommodate one transit vehicle in each direction. Additional width is included for potential passenger platform areas and to accommodate left-turn lanes at intersections. See the transit discussion in Section V for further transit options and linkages to transit plans.</p>	
<p>Dedicated Transit Lane</p>	<p>Dedicated transit lanes are reserved for exclusive, continuous use by transit vehicles at all times of the day. They are also potentially available for use by bicycles, since (1) bus traffic is fairly infrequent, and (2) bus operators are professional drivers who are (or can be) trained to correctly share the lane with bicyclists. All five Street Types include sections with dedicated transit lanes.</p>	
<p>Transit + Parking</p>	<p>Some transit lanes are only needed for certain peak periods of the day. During the remainder of the day, they can be used for on-street parking. Only Activity Streets and Commerce/Mixed-Use Streets include this section element, because they are the only Street Types that allow on-street parking.</p>	

Developing Complete Streets

The following four steps outline the process for successful implementation of Complete Streets.

Step 1: Policy Development

Complete Streets start with a strong, locally-driven policy statement that explicitly states the intent to accommodate all people in decisions related to street design and operation. A clear policy statement provides guidance and momentum for planners, engineers, and community members. According to the National Complete Streets Coalition, a comprehensive policy includes the following:

- Specifies that **“all users”** includes pedestrians, bicyclists, and transit passengers of all ages and abilities, as well as trucks, buses, and automobiles
- Applies to **new and retrofit projects**, including design, planning, maintenance, and operations, for **all roads**
- Makes **any exceptions specific** with clear procedures requiring high-level approval
- Encourages **street connectivity** and aims to create a comprehensive, integrated, connected network for all modes
- Directs the use of the **latest and best design criteria** and guidelines while recognizing the need for **flexibility**
- Directs that solutions will **complement the context** of the community
- Establishes **performance standards**
- Includes specific next steps for **implementation** of the policy

Fort Worth’s Complete Streets Policy and Master Thoroughfare Plan encompasses all of these elements.

Step 2: Implementation Plan

Once a strong Complete Streets policy is put in place, an implementation plan is necessary to identify documents and processes that must be changed, assign responsibilities for making such changes, and define specific desired outcomes of policy implementation.

Once of the biggest challenges is changing “business as usual” practices in transportation budgeting, planning, and operations. Implementation plans can help guide planners and engineers through new procedures and ways of thinking. Procedural training can also empower agency staff and ensure that they understand how to apply the new policies, practices, and procedures in their work.

Fort Worth is in the process of developing a Complete Streets Implementation Plan.

Step 3: Designing Complete Streets

A variety of design treatments and street operations can be put in place to accommodate safe access along and across all streets for people travelling by all modes of transportation. An effective Complete Streets design is sensitive to community context, and clear guidance can allay fears that these new designs will inappropriately widen roads in quiet neighborhoods or build miles of costly, little-used sidewalks in rural areas. Ultimately, a context-sensitive approach can create a comprehensive, integrated, and connected network for all people on all modes of transportation.

Transit-Supportive Complete Streets Design Treatments

Right Sizing Streets	Median Refuge	Curb Extensions
 <ul style="list-style-type: none"> ▪ Conversion from 4 to 3 lanes; allows for center turn lane, bikeways ▪ Improves safety by reducing pedestrian crossing distance ▪ Can maintain vehicle capacity on streets up to 25,000 vehicles per day 	 <ul style="list-style-type: none"> ▪ Enables safer pedestrian crossing by shortening crossing distances 	 <ul style="list-style-type: none"> ▪ Supports safer pedestrian crossings through increasing visibility ▪ Provides space for high capacity bus stops ▪ Enables more efficient in-lane bus stops
High Quality Bus Stops	Transit Dedicated Lanes	Transit Stop Islands
 <ul style="list-style-type: none"> ▪ Spacious and set back from sidewalks to maintain pedestrian walkways ▪ Wide range of amenities 	 <ul style="list-style-type: none"> ▪ Maintains speed and reliability on corridors with high frequency service and transit priority ▪ High Occupancy Vehicle (HOV) are also viable on some arterials 	 <ul style="list-style-type: none"> ▪ Transit stop and waiting area located in travelway, with bikeway located between the stop and curb ▪ Eliminates bus/bike conflict near stops

Step 4: Monitoring Progress

Progress monitoring and adaptation are necessary to ensure effective and consistent implementation of Complete Streets policies across all agencies and all types of streets. Some communities use quantitative

and qualitative performance indicators to evaluate streets, segments, or systems. There are several approaches:

- A **needs assessment** uses performance measures to identify problems in the system and to assess their relative severity.
- A **classification system** can assess a street’s appropriateness for various Complete Streets treatments.
- A **comprehensive monitoring system** tracks a suite of performance indicators for the entire transportation system on a regular basis.

Complete Streets Examples in Other Cities

Complete Streets Chicago, Chicago, IL

The City of Chicago has a Complete Streets policy that incorporates training and implementation.

The City of Chicago adopted a Complete Streets policy in 2006. To help staff understand and implement the policy, the Chicago Department of Transportation worked with the Chicago Metropolitan Agency for Planning to sponsor a series of training sessions for city planners, engineers, and project managers. Several hundred people participated in the four two-day workshops, resulting in greater awareness of Complete Streets issues and design considerations.

In 2013, Chicago published its Complete Streets Design Guidelines to help staff operationalize Complete Streets in all phases of a project, including planning, design, construction, and maintenance.



Design Guidelines for Chicago

Complete Streets Ordinance, Redmond, WA

The City of Redmond evaluates its Complete Streets through a mobility report card.

In 2007, Redmond became the third city in the Central Puget Sound region to adopt a complete streets ordinance, which codified the steps Redmond had already taken in its transportation master plan (TMP) to create a balanced, multimodal transportation network.

In the TMP, Redmond created a mobility report card measuring a variety of indicators: concurrency between development and transportation system capacity; AM mode share; school bus ridership; transit travel time and frequency; average weekday boardings; percentage of pedestrian environmental designed to standards; and many other indicators. The information is used to evaluate the performance of each mode, including transit.

GO figure		
Numbers at your fingertips		
How Much/Many?	Of What?	Trend
9,200	Students riding the bus to school (2009)	↔
767	Traffic collisions not involving pedestrians or bicyclists	↔
22	Collisions involving pedestrians or bicyclists <small>(improving: fewer collisions)</small>	↓
7.6%	Traffic growth for selected intersections since 1996 (2008) <small>(worsening: more traffic)</small>	↑
36%	AM commuters traveling by non-single occupancy vehicle (2009)	↑

Data for 2010 unless otherwise noted. Visit www.redmond.gov/communityindicators for more information about the above figures.

Redmond’s Mobility Report Card
Source: City of Redmond

Before and After Examples

Cities around the country—small and large, rural and urban—have been building Complete Streets to improve comfort, convenience, and safety and increase people’s ability to travel by a variety of modes. The photos below illustrate Complete Streets projects in various contexts.

Dearborn Avenue in Chicago, IL, Before (Left) and After (Right)



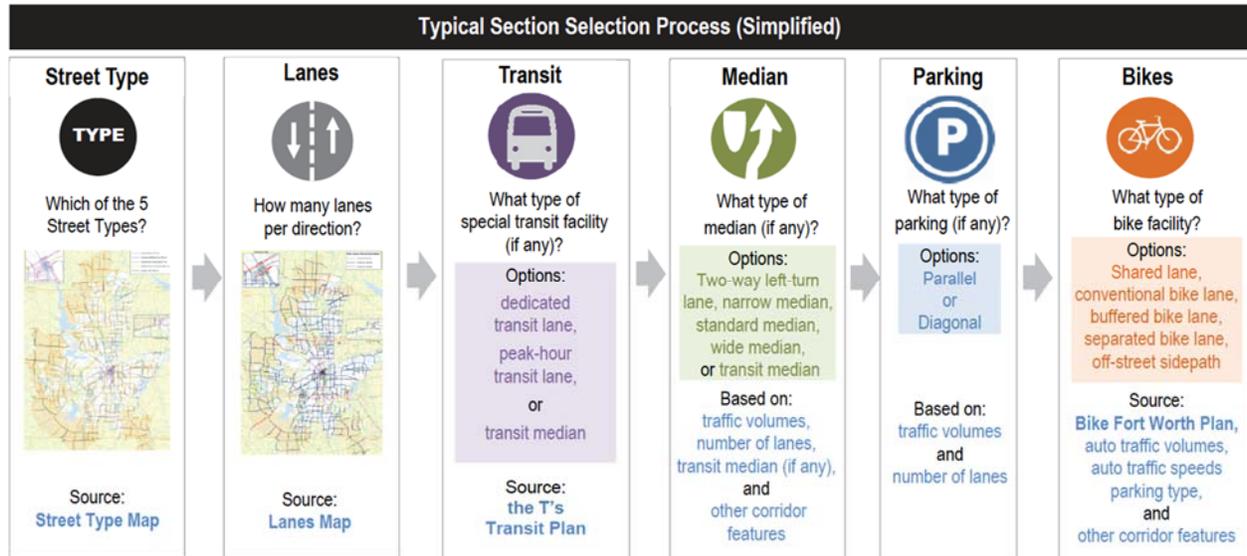
University Place, WA, Before (Left) and After (Right)



Development of Transit-Friendly Complete Streets in Fort Worth

Fort Worth’s Complete Streets Policy and Master Thoroughfare Plan provide a framework for the development for transit-friendly complete streets in Fort Worth that could make transit service and the use of transit much more appealing. Trinity Metro, through the development of its 2016 Transit Master Plan, identified important transit corridors. This effort will likely refine those findings and add additional corridors. The next step would be the implementation of the finalized Complete Streets Implementation Plan.

Fort Worth Master Thoroughfare Plan Typical Roadways Section Selection Process



These efforts will require collaboration between the city and Trinity Metro. The following table shows the potential breakdown of responsibilities:

Joint	Trinity Metro	City of Fort Worth
<ul style="list-style-type: none"> ▪ Prioritization of improvements ▪ Conceptual design of improvements 	<ul style="list-style-type: none"> ▪ Design and construction of High Capacity Transit services (rail, BRT, and Rapid Bus) ▪ Improvements to bus stops and stations 	<ul style="list-style-type: none"> ▪ Design and construction of improvement in non-HCT corridors