Fort Worth to Dallas Regional Trail Branding & Wayfinding

BEST PRACTICES | NOVEMBER 2021

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01 **Wayfinding Best Practices**

A cohesive, attractive wayfinding system can greatly contribute to a place's legibility and identity

Wayfinding Principles

The built environment should be designed so that people can quickly orient themselves, recognize areas of different character, and intuitively locate and navigate to destinations. The degree to which a place accomplishes these things determines its legibility, or how easily both locals and visitors can understand where they are and where they're going. A cohesive, attractive wayfinding system can greatly contribute to a place's legibility and identity by better enabling individuals to:

• Easily and successfully find their destination

• Understand where they are with respect to other key locations

• Orient themselves in an appropriate direction with little misunderstanding or stress

• Discover new places and services

The following guiding principles, based on best practices from around North America, will help create an effective wayfinding system for the Fort Worth to Dallas Regional Trail.

CONNECT PLACES

An effective wayfinding system should directly connect to places locals and visitors want to go and enable them to confidently discover new destinations that can be reached by walking or bicycling. Wayfinding connects neighborhoods and provides navigational assistance to both local and regional destinations, and is an extension to the bicycling and walking network, providing a seamless travel experience for non-motorized users. Wayfinding provides benefits that go beyond physical signage. It can create a deeper connection to a place, cultivate a sense of pride by reflecting community values, and support local economic development by encouraging residents and visitors to use local services.

KEEP INFORMATION SIMPLE

Wayfinding should provide clear information in a logical succession, and not overburden users with excess information. Information should be presented in as clear and simple format as possible. Wayfinding signage should be both universal and usable for the widest possible demographic and with special consideration for those without high educational attainment, English language proficiency, or spatial reasoning skills. It is important to provide information in manageable amounts. Too much information can be difficult to process quickly; too little, and decision-making becomes impossible. Information should be provided in advance of where major changes in direction are required, repeated as necessary, and confirmed when the maneuver is complete.

CONNECT PLACES

Facilitate travel between destinations and provide guidance to new destinations and transit.

KEEP INFORMATION SIMPLE

Present information simply, using clear fonts and simple designs, so that it can be understood quickly.

MAINTAIN MOTION

Be legible and visible for people moving so that they can read the signage without stopping.
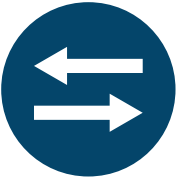
BE PREDICTABLE

Standardize the placement and design of signs so that signage patterns become predictable.

PROMOTE ACTIVE TRAVEL

Encourage increased rates of active transportation by helping people to realize they can walk and roll to the places they want to go.

MAINTAIN MOTION

Wayfinding information should be presented in a way that is quickly understood. Walking and bicycling require physical effort, and frequent stopping and starting to check directions may lead to frustration and discourage use. Wayfinding information that can be quickly and easily grasped contributes to a more enjoyable environment for walking and bicycling. Consistent, clear, and visible wayfinding elements allow active transportation users to navigate while maintaining movement.

BE PREDICTABLE

Wayfinding should be predictable and consistent. When information is predictable, it can be recognized and quickly understood. Predictability should relate to all aspects of wayfinding placement and design (i.e., sign materials, dimensions, colors, forms, and placement). Design consistency also contributes to a continuity of experience as landscapes and context change along bicycling and walking routes. Once users trust that they will encounter consistent and predictable information, their level of comfort is raised and new journeys become easier to attempt and complete, thereby promoting an experience that is welcoming and friendly. Similarly, maps should employ consistent symbology, fonts, colors, and style.

PROMOTE ACTIVE TRAVEL

Wayfinding should encourage active transportation by creating an accessible, clear, and attractive system that is intuitive to navigate by walking and bicycling. Whether directed towards people walking and bicycling or indirectly seen by passing vehicles, the system should integrate into the cultural environment and should be easy to understand. An effective wayfinding system has the potential to validate walking and bicycling as viable transportation options by communicating network connectivity and addressing perceived barriers such as time and distance to destinations.

Wayfinding should also expand the awareness and use of bicycle and pedestrian facilities by the whole community. The installation of wayfinding has the potential to increase walking and bicycling on existing facilities with low levels of use. This is an efficient use of active transportation investments on infrastructure already in place. Wayfinding also helps expand the use of the existing transportation network without costly infrastructure improvements.

Wayfinding Elements

The goal of a wayfinding system is to simplify navigation in urban environments. This section describes the spectrum of elements that may be used in the Fort Worth to Dallas Regional Trail Signage Plan. These elements are listed below and outlined in further detail on subsequent pages.

ACCESS ELEMENTS
• Gateway/Identity monuments

• Information kiosk
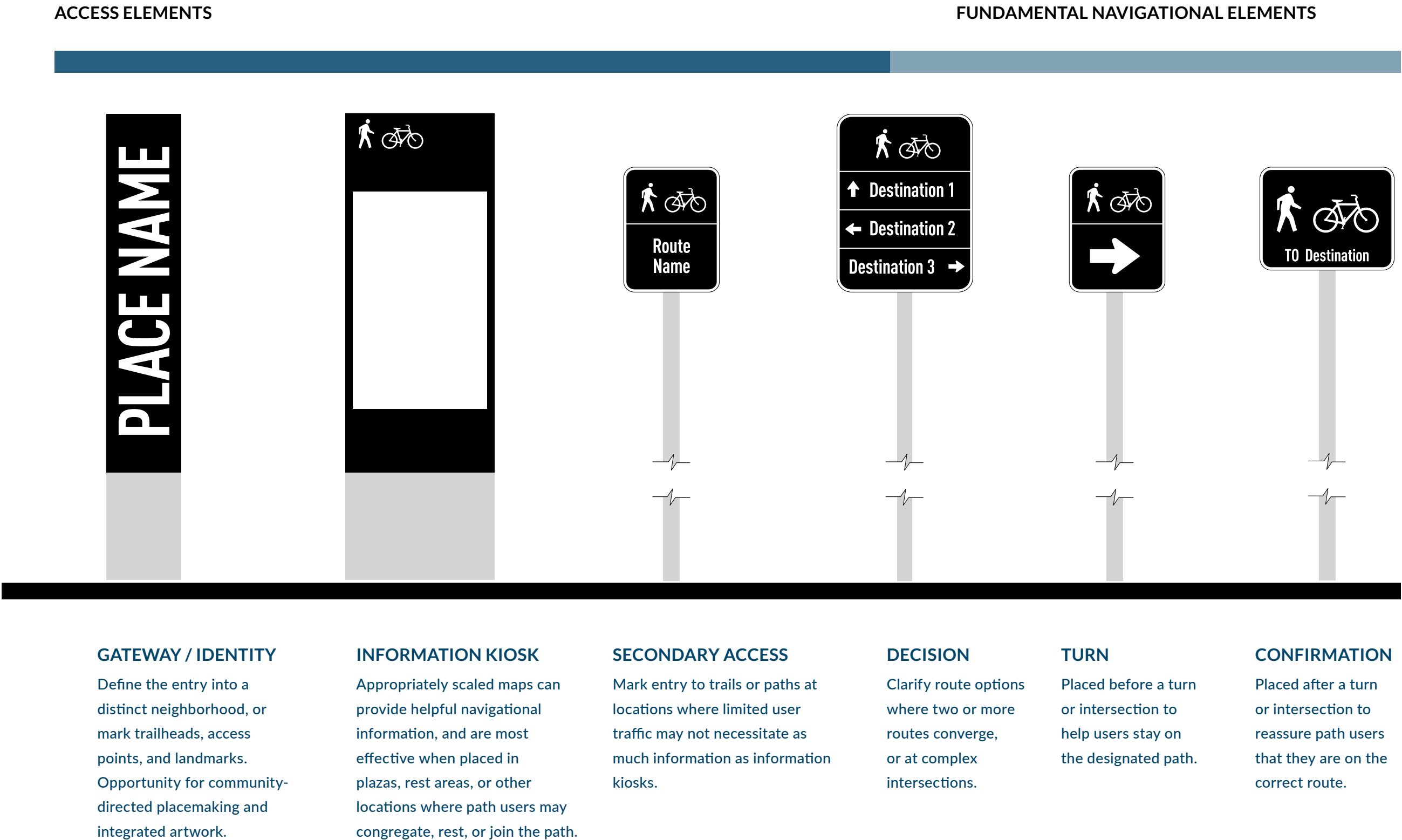
• Secondary access signage

FUNDAMENTAL NAVIGATIONAL ELEMENTS
• Decision signs

• Turn signs

• Confirmation signs

ENHANCED NAVIGATIONAL ELEMENTS
• Pavement markers

• Mile markers

• Street/trail intersection signs

• Fingerboard signs

Figure 1. Spectrum of Signs: Wayfinding Elements

ACCESS ELEMENTS

FUNDAMENTAL NAVIGATIONAL ELEMENTS

GATEWAY / IDENTITY

Define the entry into a distinct neighborhood, or mark trailheads, access points, and landmarks. Opportunity for community-directed placemaking and integrated artwork.

INFORMATION KIOSK

Appropriately scaled maps can provide helpful navigational information, and are most effective when placed in plazas, rest areas, or other locations where path users may congregate, rest, or join the path.

SECONDARY ACCESS

Mark entry to trails or paths at locations where limited user traffic may not necessitate as much information as information kiosks.

DECISION

Clarify route options where two or more routes converge, or at complex intersections.

TURN

Placed before a turn or intersection to help users stay on the designated path.

CONFIRMATION

Placed after a turn or intersection to reassure path users that they are on the correct route.

ENHANCED NAVIGATIONAL ELEMENTS

PAVEMENT MARKER

Reinforce path branding and designate lanes for different modes, speeds or uses.

MILE MARKER / EMERGENCY RESPONSE ID

Provide trail users a sense of distance and/or serve as a waypoint for emergency response or maintenance activities.

STREET/TRAIL INTERSECTION

Orient off-street trail users at street crossings and inform vehicular traffic of trail crossings.

FINGERBOARD

Clarify route options where two or more routes converge, or at complex intersections.

Access Elements

Access elements guide users into the network served by the wayfinding system either by marking physical entry to trails, pathways, or other facilities, or by providing information to new or potential users in a clear and understandable way that encourages participation in active travel. The most common application of access elements is for off-street trails and paths, but are also effective in downtown areas or in conjunction with transit hubs, or other multimodal transfer locations. Access elements can include gateway monuments, information kiosks, and secondary access signage. Note that it may be possible to combine multiple access elements in some cases; or, for instance, kiosks may serve the purpose of gateway monuments, and vice versa.

GATEWAY/IDENTITY MONUMENTS

Gateways define the entry into a distinct place with a defined identity. They are the first communication and introduction to a physical place, issuing a feeling of arrival. Gateways can be scaled for pedestrian and bicyclist experiences or vehicular experiences.

INFORMATION KIOSKS

Kiosks that include area or regional maps provide helpful navigational information, especially where users may be stopping long enough to digest more information (i.e., transit stations or stops, busy intersections, trailheads). Kiosks should be located in conspicuous areas along the primary route from parking areas to the trail. Sufficient space should be provided around the kiosk to allow people to observe the information without obstructing adjacent walkways, and to meet ADA clear zone requirements.

Typical elements to include on information kiosks are:

- City or regional map, including bicycle and pedestrian facilities, transit stations, bus stops, bike share or micromobility stations, and common destinations

- Community branding

- Regulations, etiquette, and safety information

- Trail name (if applied to a specific trail)

Additionally, per the Americans with Disabilities Act (ADA) standards, trailhead facilities built with federal funds shall include the following information:

- Length of the trail or trail segment

- Surface type/firmness/stability

- Typical and minimum width

- Typical and maximum running slope

- Typical and maximum cross slope

SECONDARY ACCESS SIGNAGE

Secondary access points with limited parking, services, or user traffic may not necessitate the same level of information and signage as formal access points with greater use. Signage at these locations may vary from a simple confirmation sign stating the name of the trail to a scaled down trailhead kiosk complete with user map, rules and regulations, permitted and restricted uses, and destination information.

Bold gateway elements give visitors a sense of arrival

Trail gateway monument

Information kiosk

Secondary access signs can be simple, branded confirmation signs

Information kiosk

Secondary access signage (scaled down kiosk)

Fundamental Navigational Elements

Fundamental navigational elements are the foundation of a wayfinding system to guide bicyclists and pedestrians to their destinations along designated facilities. These fundamental elements as they pertain to on-street bicycling are found in the Manual of Uniform and Traffic Control Devices (MUTCD) (Section 9B.20) and include decision signs, confirmation signs, and turn signs. While MUTCD standards relate directly to on-street bicycle networks, the same sign types and design considerations apply to off-street shared use paths. Fundamental navigation elements for off-street facilities differ from on-street, MUTCD-regulated facilities in that they consider multiple modes beyond just bicycles (e.g. pedestrians, skateboards, scooters, etc.) and opportunities exist for more flexible sign design and branding.

DECISION SIGNS

Decision signs mark and are placed prior to the junction of two or more bikeways. These signs also inform users how to access nearby destinations. These signs include destinations that can be paired with distances in time and/or mileage, and arrows. Users can orient themselves within the bikeway system based on key destinations including culturally significant landmarks, shopping districts, and other recreational facilities. These signs provide direction and distance to key destinations.
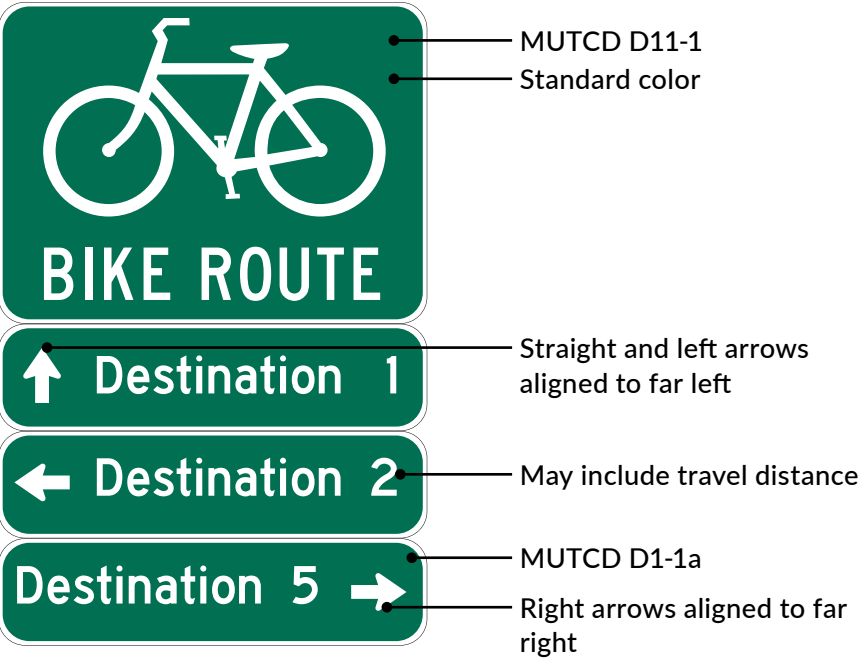
CHARACTERISTICS OF DECISION SIGNS

• Mark the junction of two or more bikeways

• Inform users of designated routes to access key destinations

• Provide direction and distance to destinations

• May include travel times to destinations

PLACEMENT CRITERIA FOR DECISION SIGNS

• For on-street applications, place 50-100 feet prior to a decision point; for off-street: 25-50 feet. These are adequate distances for bicyclists and pedestrians to see and respond to sign messaging. Exact distances will vary depending on context.

• Placed at key junctions alongside a bike route to indicate nearby destinations.

• Left turns for bicyclists require special consideration. The decision sign should be located within various distances before the intersection based on the number of lanes the bicyclist must merge across in order to make a legal left turn. The following distances should be used to allow adequate notification of left turns:

  · Zero lane merge: 50'

  · One lane merge: 100'

  · Two lane merge: 200'

• Signs should have a maximum of three destinations

• Signs should have a 2-foot minimum lateral offset from edge of path or curb to edge of sign to prevent clipping from traffic.

Figure 2. MUTCD standard decision sign

MUTCD D11-1
Standard color

Straight and left arrows aligned to far left

May include travel distance

MUTCD D1-1a
Right arrows aligned to far right

BIKE ROUTE

Destination 1

Destination 2

Destination 5

Figure 3. MUTCD standard confirmation signs

CONFIRMATION SIGNS

Confirmation signs identify designated bike routes. This builds confidence that the user is on the correct path or route. In addition, these signs increase awareness of bicyclists by informing motorists of their presence. Confirmation signs are an integral component of any trail or bike system that crosses roads, changes direction, and has intermediate access points between trail or route beginning or end.

CHARACTERISTICS OF CONFIRMATION SIGNS

- Placed after access points along a trail or on-street bikeway, as well as after decision or turn signs

- Spaced periodically along a route or trail to maintain a consistent level of confidence that users are still traveling along the same route

- Do not indicate a change in direction

- May have informational or branding content such as the name of the route

- May include up to one directional destination (e.g. downtown)
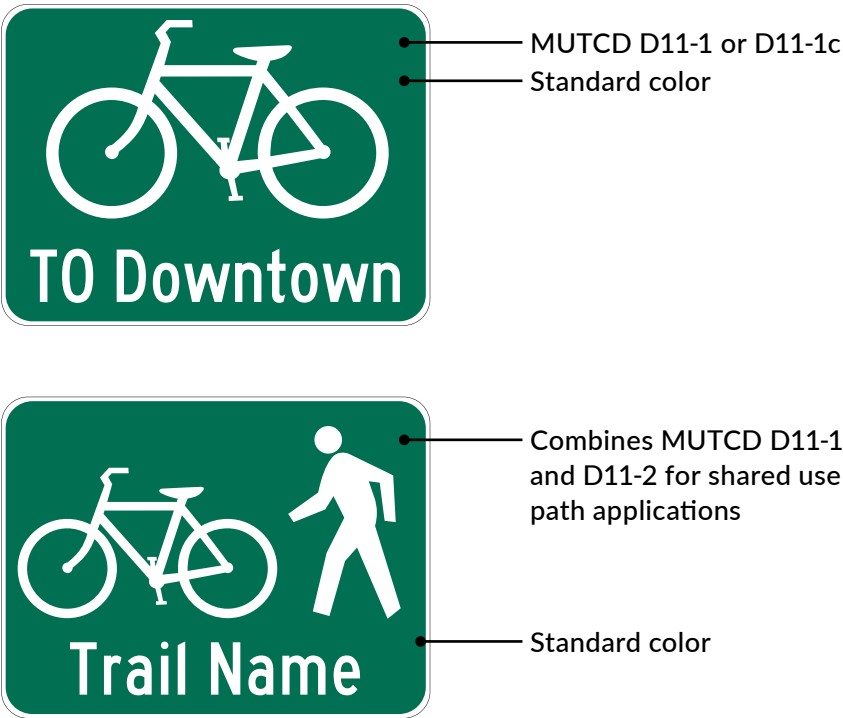
PLACEMENT CRITERIA FOR CONFIRMATION SIGNS

- After decision signs and decision points

- Locations where a designated route is not linear as well as after complex intersections (e.g. intersections with more than four approaches, roundabouts, or indirect routing)

- Approximately every 1-2 miles on off-street facilities, unless another type of bicycle-specific sign (such as a turn, decision,

or other bicycle regulatory sign) or pavement marking is present within the 1-2 mile interval.

- Within 50-100 feet immediately following turns to confirm designated bicycle route.

- Signs should have a 2-foot minimum lateral offset of from edge of path or curb to edge of sign to prevent clipping from traffic

- Mounting height should be a minimum of 7' from the bottom of the sign to finished grade for on-street signs and a minimum of 4' for signs along off-street facilities

- If the signed route is approaching a turn, turn signs or decision signs should be used instead of confirmation signs

MUTCD D11-1 or D11-1c
Standard color

Combines MUTCD D11-1 and D11-2 for shared use path applications

Standard color

Figure 4. MUTCD standard turn signs

TURN SIGNS

Turn signs indicate where a bikeway turns from one street onto another street, and only one route option is available. Turn signs are at key points of navigation for bikeway users. Turn signs direct the cyclist where to turn to remain on the designated route, allowing the cyclist to dedicate most of his or her attention to riding safely and responsibly.

CHARACTERISTICS OF TURN SIGNS

- Clear direction for bicyclists and pedestrians to turn when a route transitions from one roadway or trail to another.

- May be a combination of a confirmation sign (MUTCD D11-1) and directional arrow (MUTCD M6-1) or a stand-alone decision plaque (MUTCD D1-1, D1-1b)

- May include travel distance to destination (MUTCD D1-1a, D1-1c)

PLACEMENT CRITERIA FOR TURN SIGNS

- The turn sign should be located in the block immediately preceding the turn.

- When a bikeway turns, a turn sign will be located at 50-100 feet (on-street) or 25-50 feet (off-street) in advance of the turn, or near side of the intersection).

- Left turns for bicyclists require special consideration. The turn sign should be located within various distances before the intersection based on the number of lanes the bicyclist must merge across in order to make a legal left turn. The following distances should be used to allow adequate notification of left turns:

  · Zero lane merge: 50'

  · One lane merge: 100'

  · Two lane merge: 200'

- Signs should have a 2-foot minimum lateral offset from edge of path or curb to edge of sign to prevent clipping from traffic.

- Mounting height should be a minimum of 7' from the bottom of the sign to finished grade for on-street signs and a minimum of 4' for signs along off-street facilities

- In locations where there are two or more bike routes, a decision sign, rather than two turn signs, should be used.

MUTCD D11-1 or D11-1c
Standard color
MUTCD M6-1

Indicates bicycle route
MUTCD D1-1c or D1-1b
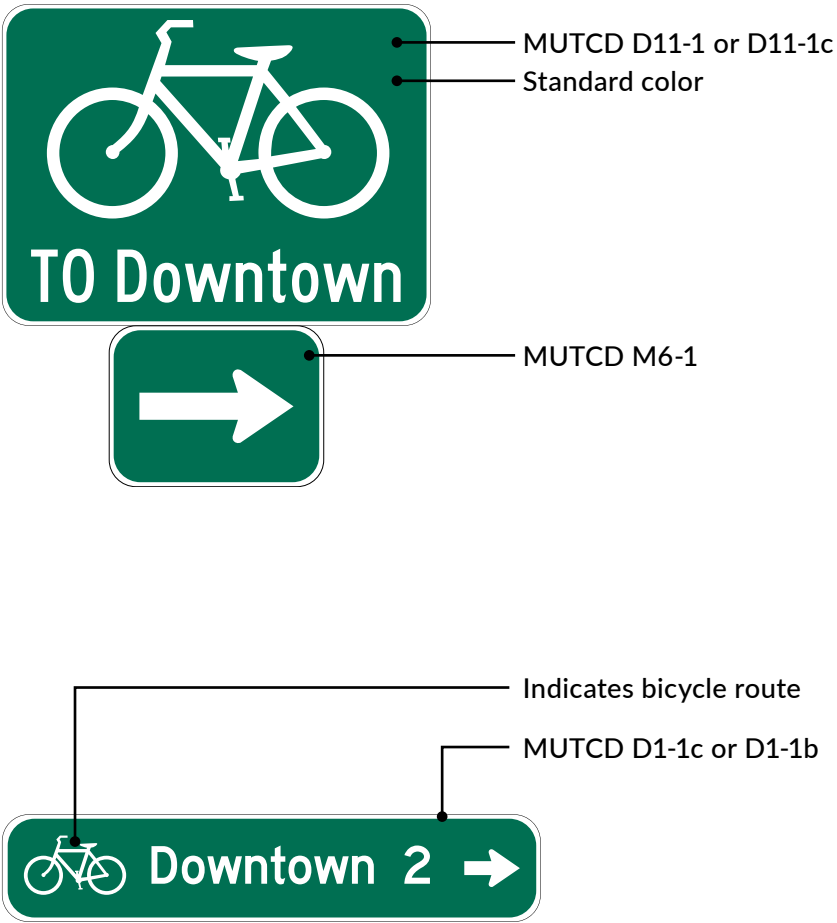
Enhanced Navigational Elements

Enhanced navigational elements provide additional wayfinding assistance beyond fundamental signage, improving the user experience and providing more opportunities for system branding and identity. Enhanced navigational elements could include pavement markings, mile markers, street/trail intersection signs, and fingerboard signs.

PAVEMENT MARKINGS

Pavement markings can serve a variety of wayfinding purposes along off-street bikeways and trails. They can often be utilized to communicate direction, route name, community branding, mile markers, and street crossings. Pavement markings may be provided in lieu of, or in addition to standard signs, thus limiting sign clutter. Common materials used for pavement markings include pre-formed thermoplastic, paint, stamped concrete, or embedded metal.

MILE MARKERS & EMERGENCY RESPONSE SIGNAGE

Mile markers are a series of numbered markers that may be placed alongside a trail at defined intervals to help users understand how far they have gone, and how far they have to go to their next destination. Furthermore, mile markers provide pathway managers and emergency response personnel points of reference to identify field issues such as maintenance needs or locations of emergency events. Mile marker locations should be geo-located and supplied to emergency responders so that responders can efficiently respond to incidents on the trail. System brand mark, path name, and distance information in miles may be included as well as jurisdiction identification.

It is important that mile markers are spaced at consistent intervals, such as every 1/4 to 1/2 mile, along a pathway network. Point zero should begin at the southernmost and/or westernmost terminus points of a pathway. Mile markers on regional trails should be coordinated to continue across municipal boundaries when possible. Pavement marking mile markers can also be used in lieu of post-style mile markers.

STREET/TRAIL INTERSECTION SIGNS

There are several benefits to including signage at trail and street intersections. The primary reason is to orient the trail user to which street the user is crossing. Additionally, trail signage at these locations facing motorists (in addition to standard regulatory signage) can help bring attention to the trail crossing. Decision signage should be present if needed to communicate directions to destinations accessible from the cross-street. Street/trail intersection signage should also be included where trails cross over or under streets via grade-separated intersections. Riparian trails, rail trails, or other trails with infrequent connections to the street network make it difficult for trail users to orient themselves. Simple street signage on overcrossing or undercrossing structures can help trail users determine their location.

FINGERBOARD SIGNS

Fingerboard signs serve a purpose similar to decision signs in that they provide wayfinding to multiple destinations located in multiple directions from the junction at which the sign is located. They provide an efficient way to give direction at a junction that is approached from multiple angles, and are not as limited in the amount of destinations that can be included. Because they are not standard MUTCD wayfinding assemblies and can contain more than three destinations, fingerboards are better applied in pedestrian or off-street trail contexts where people have time and space to process more information.

Pavement marking / mile marker

Fingerboard sign

Motor vehicle-oriented signage indicating trail crossing

Mile marker

Trail/street undercrossing

Destination Selection and Programming

Following the principle of "connect places," this section describes an approach for selecting potential destinations to which people traveling along the North Central Texas bicycle and pedestrian network may want to go. Wayfinding signs typically only allow for a limited number of destinations per sign. Thus, a consistent approach to selecting destinations for inclusion on wayfinding elements is necessary, given the multitude of potential destinations possible. Signs should follow the same approach throughout the North Central Texas area so that the system is clear and predictable. Destinations and their names should be referred to consistently on all relevant wayfinding signs. As a general rule, only destinations that are open and accessible to the public should be signed.

DESTINATION HIERARCHY

Due to the number of destinations in the North Central Texas region that are accessible by bicycle and walking, it is best to organize these destinations into a hierarchy. A hierarchy of destinations is necessary in order to determine which destinations to include when there are too many possible destinations. Such a hierarchy allows information to be layered through a series of decision points as a visitor enters the City and makes his or her way to destinations. The concept is simple—it is giving the right information at the right time.

Prioritizing and categorizing destinations into hierarchies also helps determine the physical distance from which the locations are signed. Note there is flexibility in these hierarchies as locations may not fit neatly into each.

PRIMARY DESTINATIONS

Destinations in this category are of primary importance and receive directional information to their locations on directional signs from a large radius throughout the City. They serve as "pull through" destinations because they draw visitors through the City from longer distances. These destinations serve a primary visitor function, such as a visitor center or convention center. Examples of destinations that fall into this category are downtowns, statewide or regional trails, districts (of regional significance), major and regional parks, arenas and stadiums, culturally significant landmarks, major institutions, universities, and other municipalities. To be categorized into this tier, a destination will meet two or more of the following criteria:

- Nationally recognized destination

- Governmental, historical, or cultural institution

- Not-for-profit or publicly-owned institution

- Includes a visitor information center or kiosk with personnel

SECONDARY DESTINATIONS

Destinations in this category are of major importance and receive directional information to their locations on signs from a smaller radius surrounding their locations. Typically this is limited to the decision points located closest to the point of interest. These are generally recognized destinations that have access to the bikeway or trail system nearby. Examples of destinations that fall into this category are transit stations, community parks, secondary schools, and neighborhood shopping districts. To be categorized into this tier, a destination will meet two or more of the following criteria:
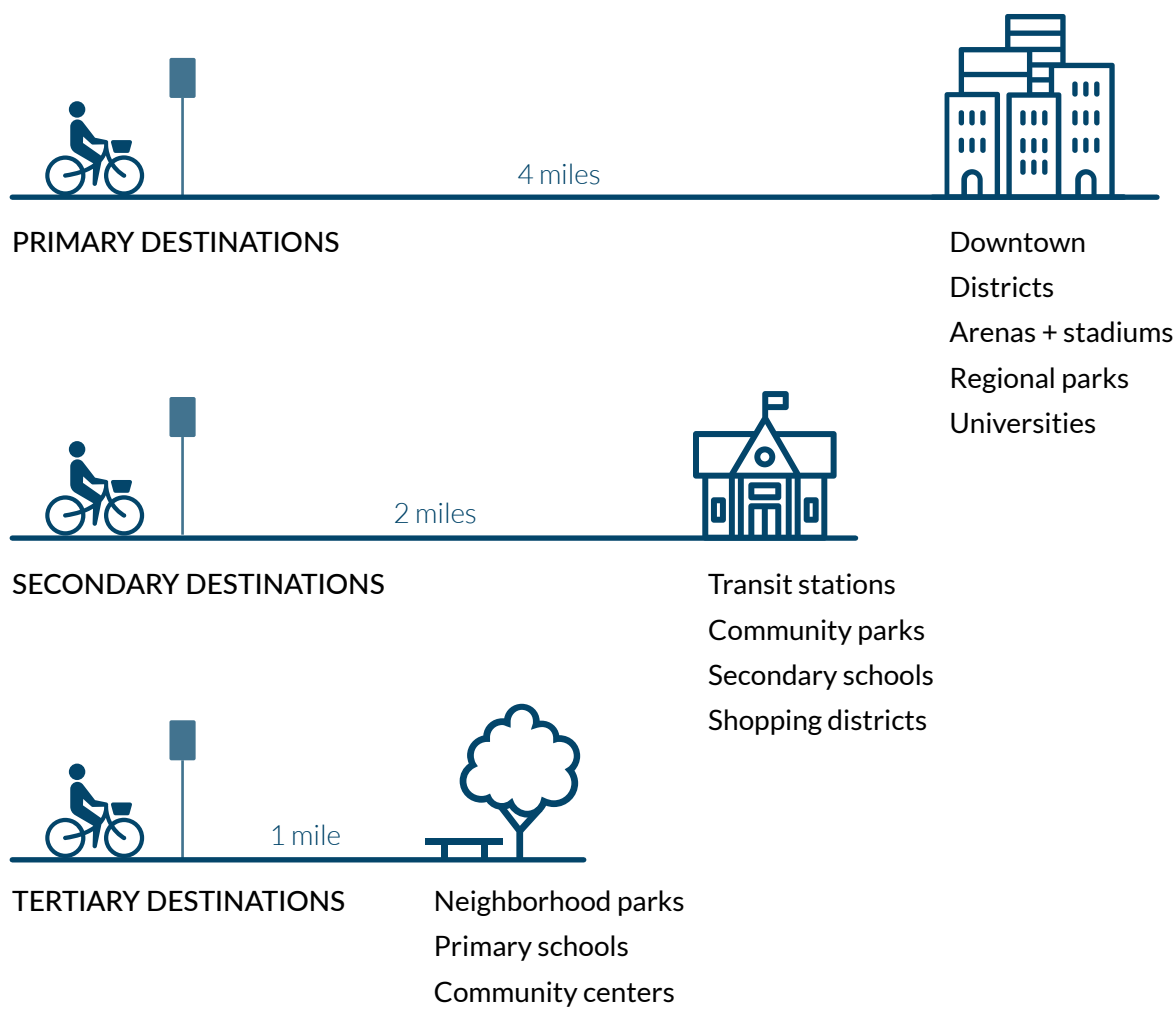
- Regionally recognized destination

- Open at least 40 hours per week

- Open at least 9 months out of the year

TERTIARY DESTINATIONS

Destinations in this category are minor, or exclusively civic destinations, and are primarily accessed by pedestrians, non-motorized vehicles or offer non-motorized activity such as trails, skate park, and water activities. These destinations are generally local attractions or activities such as community and recreation centers. To be categorized into this tier, a destination will meet one or both of the following criteria:

- Locally recognized destination

- Primarily accessed via non-motorized vehicle

Figure 5. Destination hierarchy and signing distances

PRIMARY DESTINATIONS

Downtown
Districts
Arenas + stadiums
Regional parks
Universities

SECONDARY DESTINATIONS

Transit stations
Community parks
Secondary schools
Shopping districts

TERTIARY DESTINATIONS

Neighborhood parks
Primary schools
Community centers

SIGNING DISTANCES

Signing distances suggest the maximum distance that destinations should appear on directional signs. This process ensures that information is spread along the journey in manageable amounts according to users' immediate needs.

Distances may be measured either to a destination boundary or center, as long as the approach is consistent throughout the region. Cities typically have a well-defined edge and thus should be measured to boundary lines. Districts are less defined in terms of their boundaries and thus should be measured to their centers. Parks, schools, are other specific destinations typically have a street address and thus distances should be measured to the main entrance of the specific location. If a destination is large or has several access points, distance should be measured to the point at which the bicyclist or pedestrian will most likely arrive.

PRIMARY DESTINATION SIGNING DISTANCE

Primary destinations provide navigational guidance to the widest spectrum of system users and thus should be prioritized on signs. As general rule, primary destinations should appear on signs up to five miles away, but may be signed for distances longer than five miles if they have a strong regional pull.

SECONDARY DESTINATION SIGNING DISTANCE

Secondary destinations appeal to a broad spectrum of users and should be included on signs up to two miles away.

TERTIARY DESTINATION SIGNING DISTANCE

Tertiary destinations are typically places of local or neighborhood interest and should be signed up to one mile away.

DESTINATION ORDER

Decision signs should be limited to no more than three lines of destinations, which include place names, route numbers, street names, and cardinal directions.

A straight-ahead location should always be placed in the top slot followed by the destination to the left and then the right, even if destinations to the right or left are closer. If two destinations occur in the same direction, the closer destination should be listed first followed by the farther destination.

Arrows should be placed for glance recognition, meaning straight and left arrows are located to the left of the destination name, while a right arrows are placed to the right of the destination name.
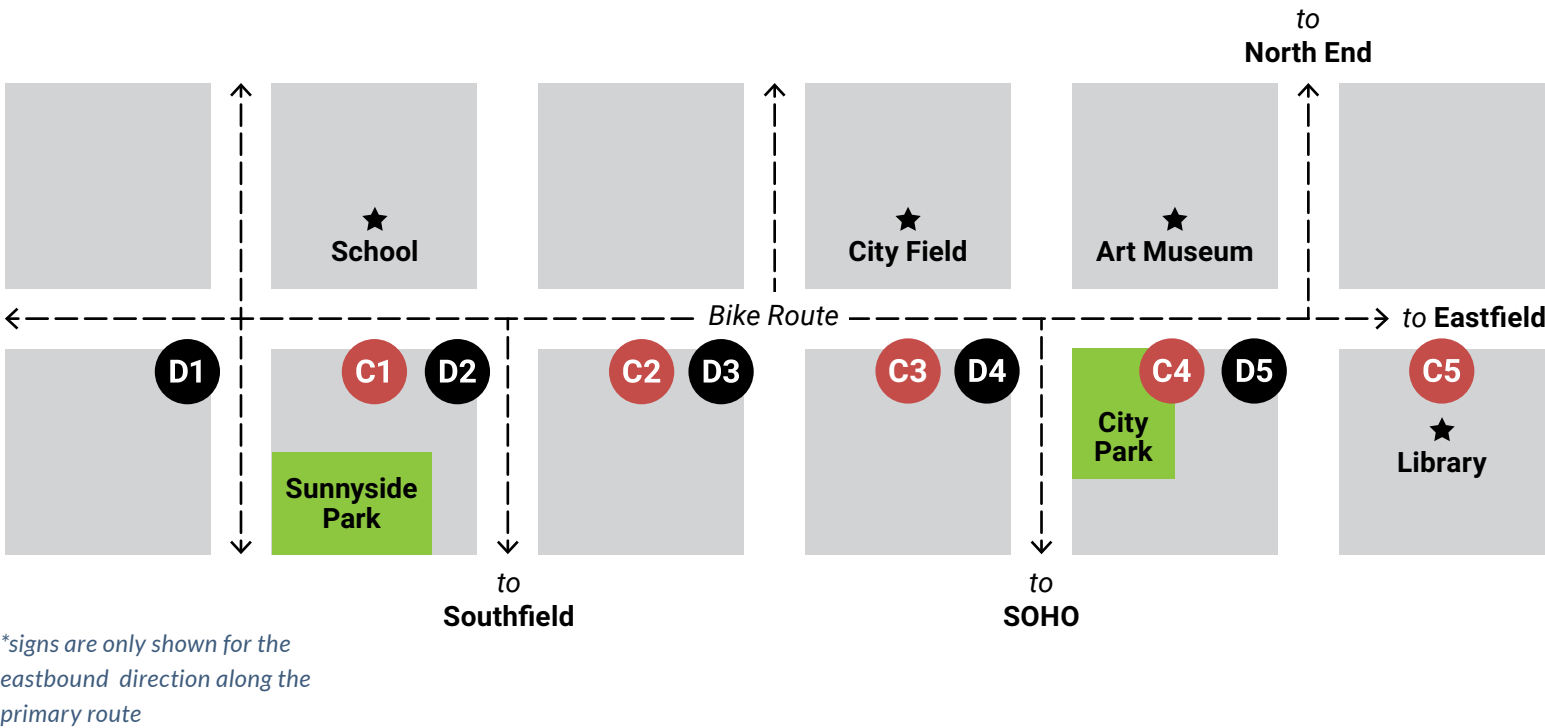
ABBREVIATIONS

When placing destination names on signs, names and routes should not exceed a maximum of 19 characters (including spaces and icons). When insufficient space is available for full wording, abbreviations may be used. Unless necessary to avoid confusion, periods, commas, apostrophes, question marks, ampersands, and other punctuation marks or characters that are not letters or numerals should be avoided.

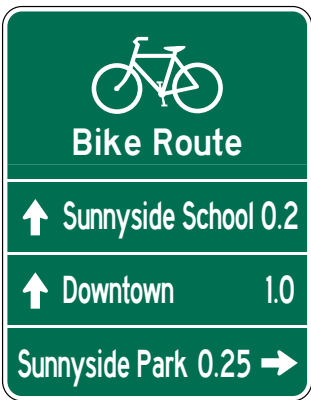*Figure 6.* Process for destination programming and general sign placement

This diagram displays how destinations are applied to decision and confirmation signs along a hypothetical route.*

It displays how:

- Destinations are selected by distance and hierarchy
- How destinations are ordered according to direction and distance
- How destinations are added and removed from west to east

to
North End

★
School

★
City Field

★
Art Museum

Bike Route → *to* **Eastfield**

D1 **C1** **D2** **C2** **D3** **C3** **D4** **C4** **D5** **C5**

Sunnyside Park

City Park

★
Library

to
Southfield

to
SOHO

*signs are only shown for the eastbound direction along the primary route

Decision Signs

D1
Bike Route
↑ Sunnyside School 0.2
↑ Downtown 1.0
Sunnyside Park 0.25 →
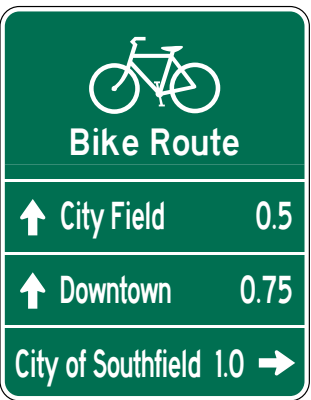
Three miles west of Downtown, there are few Tier 1 and 2 destinations.

Due to this, two local (Tier 3) destinations appear on the sign.

Even though Downtown is a Tier 1 Destination, it is placed below Sunnyside School because the school is closer.

D2
Bike Route
↑ City Field 0.5
↑ Downtown 0.75
City of Southfield 1.0 →

Downtown is the pull through destination.

Sunnyside School and Park drop from the sign, because the bicyclist has past them.

City of Southfield (Tier 1) and City Field (Tier 2) replace these destinations.

D3
Bike Route
↑ Downtown 0.5
↑ Art Museum 0.5
← City Field 0.1

Since City Field has been reached, it is dropped from the sign, replaced by the Art Museum (Tier 2)

City Field, which is directly off the Bike Route is signed to using a left arrow.

Downtown being the closest straight destination, moves to the top of the sign.

D4
Bike Route
↑ Downtown
↑ City Park
↑ Art Museum 0.5

Downtown remains on the sign, but no mileage is given since downtown is reached.

City Park (Tier 2) is included on the sign, even though SOHO District (Tier 1) is within the signing threshold; This shows planner discretion in determining destinations.

The Art Museum remains.

D5
Bike Route
↑ Eastside Library 0.5
↑ City of Eastfield 1.0
← North End 1.0

Since Downtown has been reached, Downtown is replaced by City of Eastfield as the pull through destination for the bike route.

Fewer destinations exist east of Downtown, so a Tier 2 (North End District) and a Tier 3 (Eastside Library) make the sign.

Confirmation Signs

C1-C4
Bike Route
To Downtown

Downtown is the pull through destination, remaining on each sign until Downtown is reached.

C5
Bike Route
To Eastfield

Eastfield replaces Downtown as the pull through destination.

Table 2. MUTCD compliant abbreviations

Message	Abbreviation
Alternate	ALT
Avenue	Ave, Av
Bicycle	BIKE
Boulevard	BLVD
Bridge	BR
Center (as part of a place name)	CTR
Circle	CIR
Court	CT
Crossing (other than highway)	X-ING
Drive	DR
East	E
Hospital	HOSP
Information	INFO
International	INTL
Junction / Intersection	JCT
Mile(s)	MI
Miles Per Hour	MPH
Minute(s)	MIN

Message	Abbreviation
Mount	MT
Mountain	MTN
National	NATL
North	N
Parkway	PKWY
Pedestrian	PED
Place	PL
Road	RD
South	S
Street	ST
Telephone	PHONE
Terrace	TER
Trail	TR
West	W

For a comprehensive list, standards, and guidelines for MUTCD compliant abbreviations, refer to MUTCD Section 1A.15 (Abbreviations Used on Traffic Control Devices)

ICONS AND SYMBOLS

Icons and symbols can be beneficial additions to a wayfinding signage design toolkit because they help to communicate information simply and expand comprehension beyond those with English language proficiency. Where proficiency is low, icons and symbols can substitute for words or concepts that are hard to explain or translate, like trailhead, transit, school, etc.

Universal symbology and iconography that have been developed by the American Institute of Graphic Arts (AIGA) and the National Park Service (NPS) are familiar to most people and translate across most languages and cultures. Use of symbols and icons on wayfinding signage, especially within names of destinations, can save space and improve legibility and comprehension.

Figure 7. Examples of NPS icons and symbols

General Placement Guidance

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Consistent and appropriate placement of wayfinding elements helps to provide a legible wayfinding system while ensuring the signage elements do not create undue safety hazards. The Guide for the Development of Bicycle Facilities by the American Association of State Highway Transportation Officials (AASHTO) provides information on the physical infrastructure needed to support bicycling facilities. Most of this guidance applies to off-street, shared-use paths as well. The AASHTO Guide largely defers to Part 9 of the MUTCD for basic guidelines related to the design of wayfinding systems. Additional information provided by AASHTO regarding sign placement is as follows:

- Wayfinding guidance may be used to provide connectivity between two or more major facilities, such as a street with bike lanes and/or sidewalks and a shared-use path

- Wayfinding may be used to provide guidance and continuity in a gap between existing sections of a facility, such as a bike lane or shared-use path

- Road/path name signs should be placed at all path-roadway crossings to help users track their locations

- Reference location signs (mile markers) assist path users in estimating their progress, provide a means for identifying the location of emergency incidents, and are beneficial during maintenance activities

- On a shared-use path, obstacles, including signs, shall be placed no closer than 24" from the near edge of the travel way and no more than 6' away. For pole-mounted signs, the lowest edge of the sign shall be 4' above the existing ground plane

ACCESSIBILITY STANDARDS

As wayfinding systems often relate to accessible routes or pedestrian circulation, it is important to consider technical guidance from the Americans with Disabilities ACT (ADA) in order to implement wayfinding signs and other elements that do not impede travel or create unsafe situations for pedestrians, bicyclists, and/or those with disabilities. The Architectural and Transportation Barriers Compliance Board and the AASHTO Guide for the Development of Bicycle Facilities also provide guidance for safe and accessible design for the built environment. The following are standards that should be considered when designing and placing wayfinding signs.

VERTICAL CLEARANCE

On-Street: Vertical clearance shall be a minimum of 84" when adjacent to a sidewalk or on-street environment.

Off-Street: Vertical clearance shall be 96" high maximum (when overhanging the path), or 48" minimum from the grade of the path to the bottom of the sign and 24" from the edge of the path tread to the edge of the sign when the sign is mounted adjacent to the trail.

POST-MOUNTED OBJECTS

Where a sign or other obstruction is mounted between posts or pylons and the clear distance between the posts or pylons is greater than 12", the lowest edge of such sign or obstruction shall be 27" minimum or 80" maximum above the finished floor or ground.

PROTRUDING OBJECTS

Objects with leading edges more than 27" and not more than 80" above the finished floor or ground shall protrude 4" maximum horizontally into the circulation path.

REQUIRED CLEAR WIDTH

Protruding objects may not, in any case, reduce the clear width required for accessible routes. Generally, this requirement is met by maintaining 4' minimum clear width for people maneuvering mobility devices. This requirement applies to sidewalks and other pedestrian circulation paths.

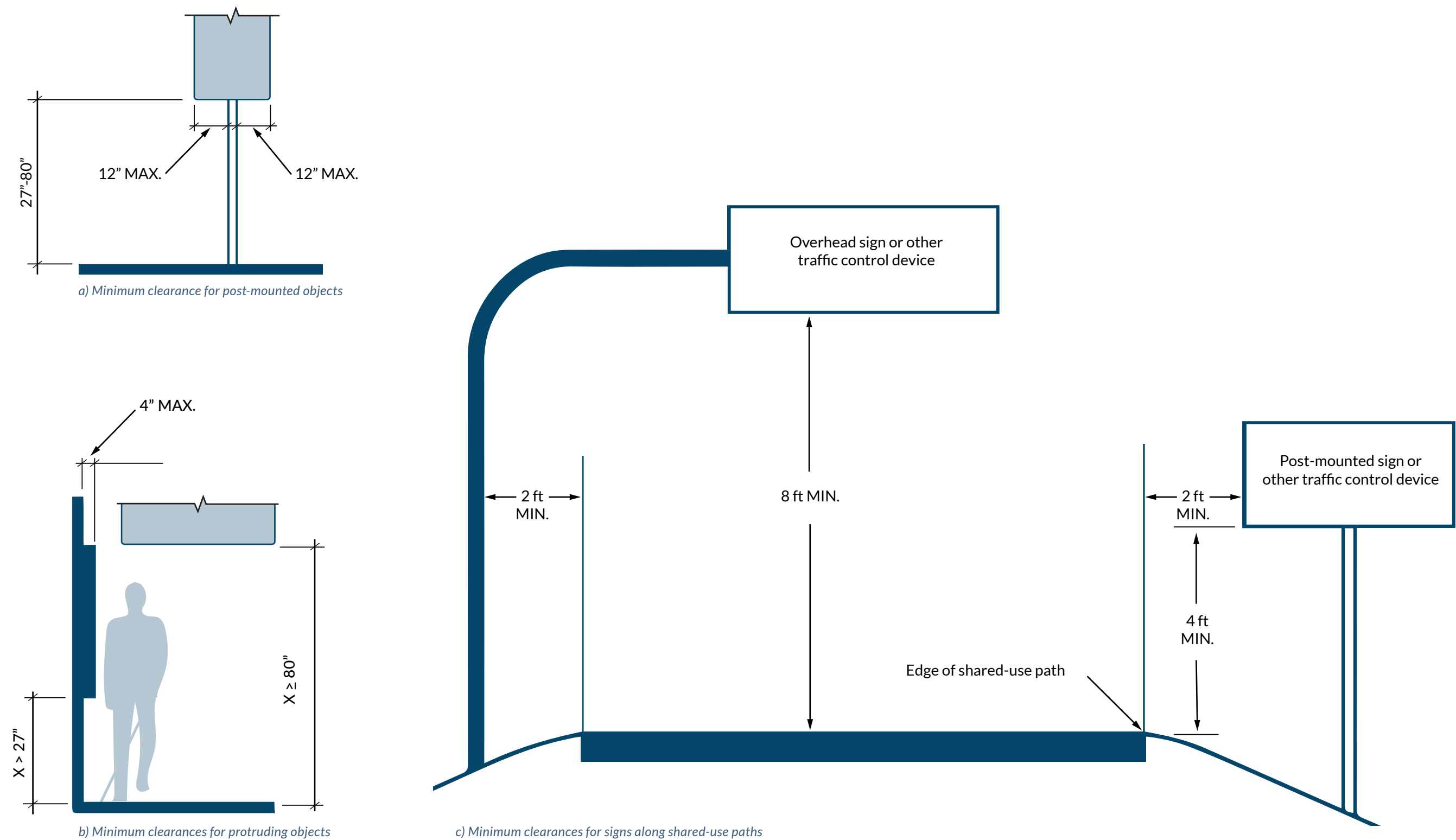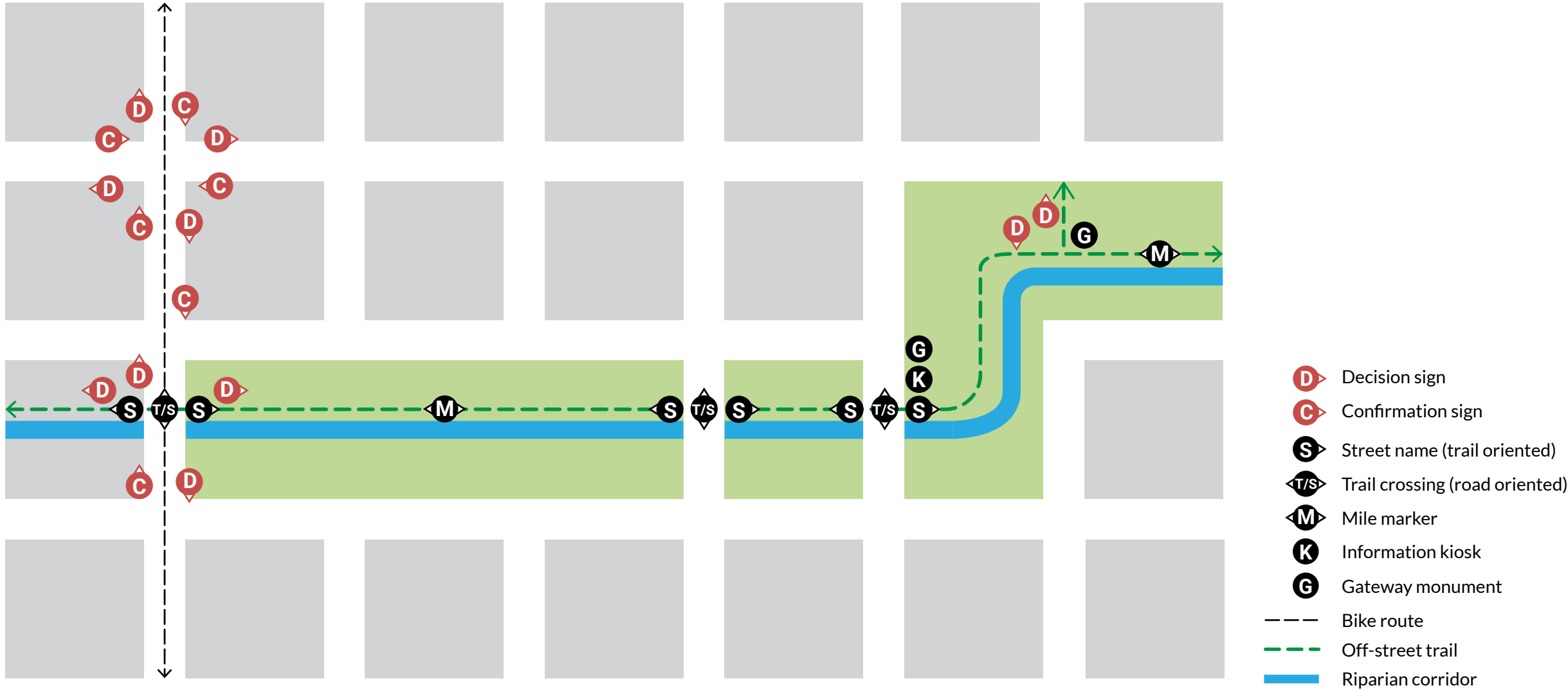*Figure 8.* AASHTO guidance for sign placement

27"-80"

12" MAX.   12" MAX.

a) Minimum clearance for post-mounted objects

4" MAX.

X ≥ 80"

X > 27"

b) Minimum clearances for protruding objects

Overhead sign or other traffic control device

Post-mounted sign or other traffic control device

2 ft MIN.

8 ft MIN.

2 ft MIN.

4 ft MIN.

Edge of shared-use path

c) Minimum clearances for signs along shared-use paths

Figure 9. General sign placement guidance

Legend:
- **D** Decision sign
- **C** Confirmation sign
- **S** Street name (trail oriented)
- **T/S** Trail crossing (road oriented)
- **M** Mile marker
- **K** Information kiosk
- **G** Gateway monument
- – – – Bike route
- – – – Off-street trail
- ——— Riparian corridor

Conformance with MUTCD Standards

The Manual on Uniform Traffic Control Devices, or MUTCD, is a document issued by the Federal Highway Administration (FHWA) of United States Department of Transportation. The MUTCD specifies the standard for all traffic control devices installed on any street, highway, bikeway, or private road open to public travel. The MUTCD was established in order to achieve uniformity and consistency in traffic control devices (wayfinding signage is considered a traffic control device) so that information would be readily recognized and understood by travelers.

BICYCLE SIGN STANDARDS

The fundamental navigational elements in this plan, as well as pavement markings on public streets, are the only wayfinding elements whose standards are dictated by the MUTCD. Access elements, enhanced navigational elements, and interpretive elements allow for more flexibility and customization. However, trail and on-street wayfinding and signage elements that are not strictly compliant or not addressed by the MUTCD may be implemented at the local jurisdiction's discretion. In extreme circumstances state DOTs have required removal of non-compliant signage as a condition for federal funding. Coordination with local jurisdictions on flexible approaches to bikeway wayfinding is encouraged. Per the MUTCD, devices should be designed so that:

- Size, shape, color, composition, lighting or retro-reflection, and contrast are combined to draw attention to the devices; simplicity of message combine to produce a clear meaning

- Legibility and size combine with placement to permit adequate time for response

- Uniformity, size, legibility, and reasonableness of the message combine to command respect

The MUTCD also recommends the arrangement and amount of text, or legend, on each section of each sign:

- Guide signs should be limited to no more than three lines of destinations, which include place names, route numbers, street names, and cardinal directions

- A straight ahead location should always be placed in the top slot followed by the destination to the left and then the right. If two destinations occur in the same direction, the closer destination should be listed first followed by the farther destination

- Arrows shall be depicted as shown in Figures 2 and 4 for glance recognition, meaning straight and left arrows are to be located to the left of the destination name, while an arrow indicating a destination to the right shall be placed to the right of the destination name. The approved arrow style must be used

- 19 characters (including spaces) in title case should be considered a maximum length for a single destination title. 10-14 characters (including spaces) in title case should be considered an ideal maximum length for a single destination title

- In situations where two destinations of equal significance and distance may be properly designated and the two destinations cannot appear on the same sign, the two names may be alternated on successive signs

- Approved fonts include the Federal Series (series B, C, or D), also known as Highway Gothic. Clearview is also currently approved for use.

- A contrast level of 70% needs to be achieved between foreground (text and graphics) and background
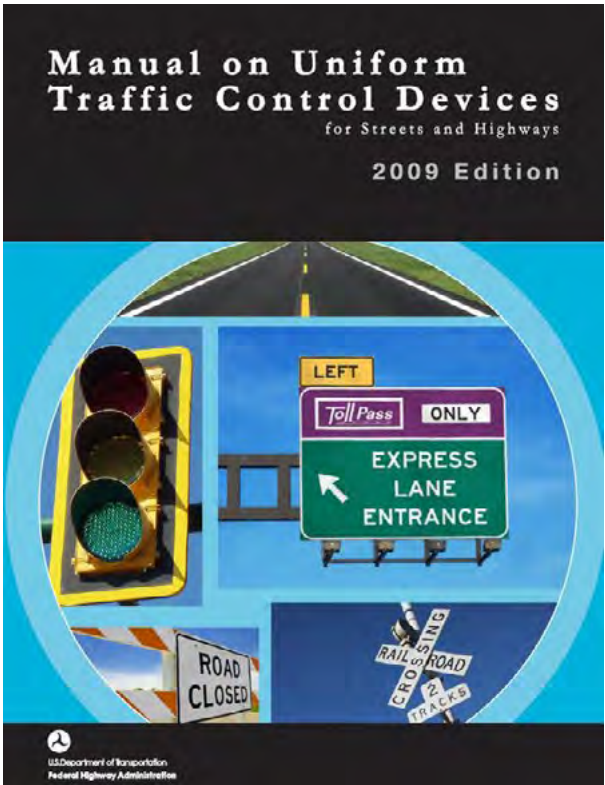
Cover of the Manual on Uniform Traffic Control Devices

Figure 10. MUTCD color standards

FLEXIBILITY IN COMMUNITY WAYFINDING

Section 2D.50 (Community Wayfinding Signs) of the MUTCD recognizes the desire of some communities to incorporate supplemental information and/or community branding in addition to the minimum standards outlined for bicycle signs in Section 9B. The Community Wayfinding Sign standards allow for customization by permitting the use of enhancement markers, a common color other than the standard MUTCD green, and color coding of destinations.

COLOR

Per the community wayfinding standards, color coding may be used on wayfinding guide signs to help users distinguish between multiple potentially confusing traffic generator destinations located in different neighborhoods or subareas within a community or area. Community wayfinding guide signs may use background colors other than green in order to provide a color identification for the wayfinding destinations by geographical area within the overall wayfinding guide signing system.

The MUTCD prohibits the use of some colors for wayfinding signs, these colors are known as "assigned colors". The "assigned colors" consist of the standard colors of red, orange, yellow, purple, or the fluorescent versions thereof, fluorescent yellow-green, and fluorescent pink. They cannot be used as background colors for community wayfinding guide signs, in order to minimize possible confusion with critical, higher-priority regulatory and warning sign color meanings readily understood by road users.

The color wheel diagram in Figure 5 depicts colors which are already assigned specific meanings and thus shall not be used on community wayfinding signs. Green is the standard color for guide signs. Blue and brown are also used for traveler information including destination and street name signs. The remaining colors are eligible for use on community wayfinding signs as long as they are sufficiently different from the "assigned colors".

## SUPPLEMENTAL INFORMATION

DISTANCE AND TIME

The addition of measuring distance in terms of miles and minutes has been employed by a number of cities in the United States and has been explicitly allowed by the Oregon state supplement to the MUTCD. Although this strategy is not explicitly permitted in Texas, adding distance in familiar units has been found to be an effective encouragement tool. For some, two miles may sound like a daunting distance to ride a bike, while twelve minutes sounds approachable. A pace of 10 miles per hour or 6 minutes per mile is the typical pace used for bicyclists, which is lower than typical bicycle design speed in order to best reflect and encourage the riding speed of the casual rider and to take into account traffic signals and other delays.
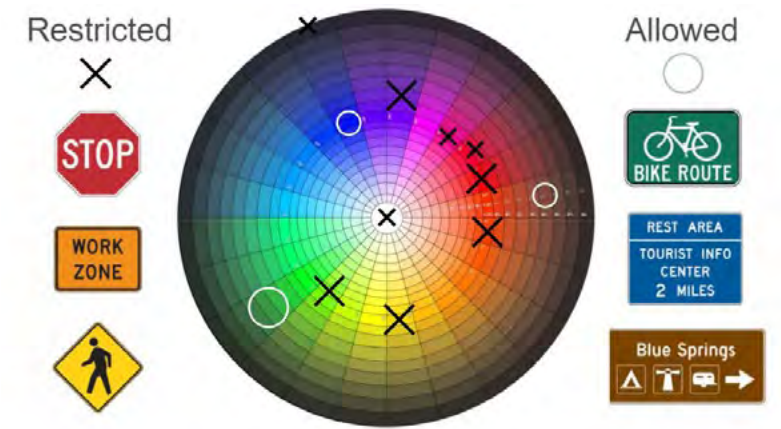
Decision sign with distance and time information (source: nacto.org)

Figure 11. MUTCD compliance spectrum
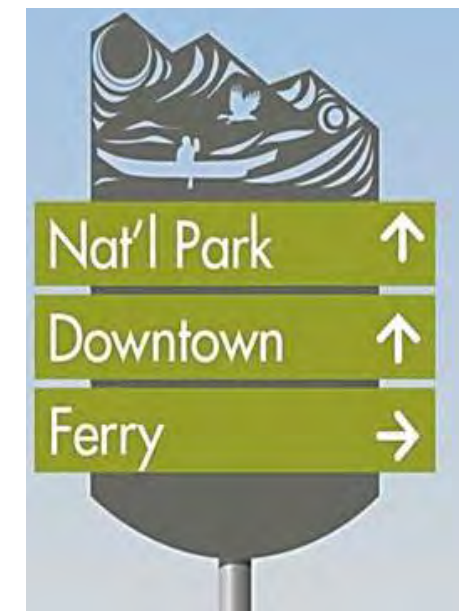
- MUTCD standard
- Information is clear and consistent
- No regional or local identity modifications
- Some variation in size and shape
- No encouragement information

- Information consolidated into a single sign
- Variation in size and shape
- Travel times included

- Unique system or municipality identifiers or enhancement markers
- Custom color variations as allowed by MUTCD Community Wayfinding standards

- Custom sign post
- Variation in size and shape
- Decorative elements
- Arrows are not MUTCD standard

- Custom framing and support structures
- Unique sign shapes
- Non-standard colors and layout

SUCCESSFUL LOGOS ARE:

- *A unique mark that represents a brand or an organization*
- *Simple*
- *Distinctive & memorable*
- *Timeless*

SUCCESSFUL LOGOS ARE NOT:

- *Responsible for telling the entire brand story*
- *Overly complex & complicated*
- *Generic*
- *Trendy*

Common trail logo styles:

Text-based

Emblem

Lock-up / Combination

Lettermark

Branding Best Practices

—

An attractive, cohesive, branded wayfinding system can greatly contribute to a place's legibility and identity.

BRANDING OVERVIEW

A **brand** is the full set of assumptions, expectations, and experiences that a user associates with a product, place, or service. The logo is the most obvious visual component, but branding also includes the name, internet presence (websites and social media), "voice", use of imagery and photography, and the impact that the product/place/service has on their community.

LOGO STYLES

Four of the most common trail logo styles are shown at left. Different logo styles perform better in different contexts, but generally: a logo should be recognizable at small scales, and in black-and-white/grayscale. Complicated or detailed illustrations can pose problems in both of those contexts, and if the illustration dominates or compresses the text, it can impact legibility too.

COLOR

Low-contrast signs with a glossy finish are difficult to read at a distance as the colors can visually blur together and may create glare. For this reason it is important to choose high contrast colors for logos, messaging, and other sign elements. Do not place text on a patterned or heavily textured background.

The color combinations shown above are generally considered to have good contrast; note that other factors, including font style, text height, surface reflectivity, and available light should be considered together when designing accessible signs.

Representational Art in the LA River Master Plan logo

Abstract art in the Charlotte Rail Trail (right) and Singing River Trail (below) logos

Trail Network Name/Logo

Local Trail Segment Name/Logo

Tertiary Logo

Cobranding option 1: Think Long-Term

Local Trail Segment Name

A Segment of Trail Network Name/Logo

Tertiary Logo

Cobranding option 2: Celebrate the Local

ART

Art can be very powerful, especially if it's simple and meaningful to the community, such as the crane as a symbol for the LA River path (above).

HUMAN FIGURES/PEOPLE

Icons, illustrations, and symbols of people, though they are usually designed to be generic, still send subtle messages about the type of person who is welcome on the path; at the same time, their very generic-ness has a dulling effect on the art, making the logo look predictable and bland. This can hold true for images (icons, illustrations, etc) of trails and mountains: in general these just look generic (consider the original Razorback Greenway logo, in the Peer Brands section).

ABSTRACT ART

Abstract, geometric, and non-representational art can add a great deal of interest to a simple text-based logo, while avoiding some of the pitfalls of representational art outlined above (see the Charlotte Rail Trail logo, above center).

COMMUNITY PARTICIPATION

Community buy-in is essential for a successful branding of any large public amenity. The Singing River Trail logo (above, right) was developed in close collaboration with stakeholders, who identified a desire to recognize and uplift the region's indigenous people. Alta worked with a local indigenous artist to adapt a traditional pattern into a bold, distinctive logo which straddles the lines between representational and abstract, and historic and modern.

Art can be an essential element of a brand when it's in balance with the message, and appropriate for the community. Art should not dominate the design at the expense of legibility, especially when one of the primary uses of the logo is for wayfinding. Most communities want the name of the trail to be legible on signs, which is difficult when the art dominates the design or when the name is encircled in or wrapped around a badge. Bicycle / pedestrian symbols may be included on the signs as necessary, and do a better job of conveying those modes (and provide more flexibility) than a tiny icon or set of icons on the logo itself.

COBRANDING

Different trail networks handle cobranding in their own way. The history and cultural importance of individual trail segments should play a major role in deciding which brand will occupy the primary position on signs and which will take secondary or tertiary positions.

The diagrams above show two typical approaches: the first sign gives the larger trail network name/logo the primary position on the sign (see Atlanta Beltline). A strong, regional brand can confer long-term benefits, increase access to funding, and contribute to a sense of regional belonging.

The second sign above gives the local trail segment name the primary position on the sign. This can be a powerful tool for reaching consensus and buy-in from partner brands, and can help the public navigate the system by preserving the names that they're used to (see The Circuit Trails).

Many regional trails provide tertiary cobranding opportunities for local municipalities and funding partners. Both of the signs above show tertiary logos below the signs' main branding and messaging.
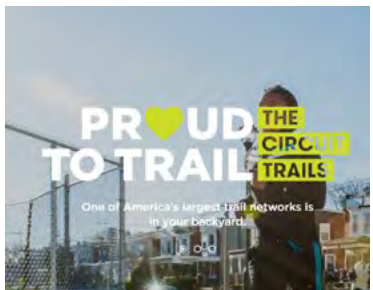
THE CIRCUIT TRAILS

The Circuit Trails logo is approachable and sophisticated in its simplicity. The distinctive shape is eye-catching and looks good in a wide variety of contexts and scales. Clearly designed with co-branding in mind, the logo proudly takes second position on signage and successfully unites formerly competing trails into a more powerful and harmonious system.

OVERVIEW

The Circuit Trails is a large regional network of more than 350 miles of multi-use trails connecting communities in and around Greater Philadelphia.

COLOR

The bright green and white of the logo create a distinctive mark, but don't provide much contrast, so the text can easily become faded, washed out, and illegible. The darker purple is a good choice for the signage background, allowing the local trail name to stand out as the primary message.

DESIGN

The segmented lines in the logo are essentially abstract, but they nod to the history of the trail as three disconnected "spines" that were brought together under The Circuit Trails umbrella brand—a move which unlocked regional and federal funding, raised the profile of the regional trails, and helped local cities and towns to build access trails to link in to the larger system.

This is a text-based logo; the absence of representational art helps to minimize clutter—especially important in a cobranded environment—and allows the logo to function at a variety of scales.

SIGN FABRICATION

Signs have a distinctive arced top and bottom, which distinguishes them from other signs in the environment. Custom shaping may incur additional costs.

COBRANDING

The Circuit Trails logo occupies a secondary position on signage, with the primary focus on the local trail name. It works within a system that offers personalization opportunities for the trails and their respective partners, which translates into a powerful "strength in numbers" approach. Tertiary logos on signs include funding partners, overlapping trails, and managing municipalities.

BRAND DEVELOPMENT

The development of the Circuit Trails regional identity was funded by the William Penn Foundation, with a goal to unite multiple trail systems under one mega-brand which could negotiate more effectively with municipalities, promote itself and the region more efficiently, and combine funding sources to benefit the entire network. The brand was developed in close collaboration with a group of committed, empowered stakeholders.

Based on a Georgia-Tech student's thesis project, the Atlanta BeltLine is transforming an abandoned loop of rail corridor into a multi-use trail connecting neighborhoods, communities, and activity centers. The logo, a loop composed of many separate and overlapping entities, reflects the physical shape and connecting function of the trail.

OVERVIEW

The Atlanta BeltLine is a sustainable redevelopment project that will ultimately connect 45 in-town neighborhoods via a 22-mile loop of multi-use trails, modern streetcar, and parks, based on railroad corridors that formerly encircled Atlanta.

COLOR

Cool colors on a white or steel gray background create a chilly, even corporate visual impact. Because the signs don't "blend in" with their natural context, they are highly visible and recognizable.

DESIGN

An elegant metaphor for connection, the loose composition of colored squares helps to balance the cold, corporate colors and materials palettes. The mark is essentially abstract, which allows it to read well at multiple scales. This style of logo is called a "lockup", which means the art and the text are divisible, and their relationship is defined in the brand guidelines. As seen on this page, multiple lockups are possible, allowing a great deal of flexibility when applying the logo to signs, documents, and collateral.

SIGN FABRICATION

A variety of sign styles are in the ground. All share a distinctive, custom look and feel, metal construction, and dimensionality.

COBRANDING

The Atlanta Beltline's primary loop was conceived and branded as a whole early on in its development. The cobranding strategy reflects that singular vision: signs are heavily branded with Atlanta Beltline taking the primary position—even dwarfing the directional and regulatory messaging in some instances. Secondary logos may appear on a lower panel.

The original Razorback Greenway logo was intended for use in the planning documents, and not necessarily designed or well-suited for trail signage. A proposed re-brand is explored on the following page.

OVERVIEW

The Razorback Greenway is a 36-mile long trail spanning a large portion of Northwest Arkansas, linking together dozens of popular community destinations, six downtowns, and scenic lakes.

COLOR

A muddy palette of muted earth tones provides limited contrast on signs, and can get lost in the environment.

DESIGN

This is a badge-style logo featuring a very detailed illustration. The text is pushed to the edges, making it difficult to read at any scale, and impossible at small scales (see top image, this page). The buildings represented in the logo have specific meaning for this trail, and yet the overall impression is more busy than specific.

SIGN FABRICATION

Signs have distinctive shapes (two custom shapes are shown on this page, top and bottom), which distinguishes them from other signs in the environment. Custom shaping may incur additional costs.

COBRANDING

The Razorback Trail occupies the primary position on signs, with local trail names highlighted at the top of directional signs (unfortunately, the beige highlight actually reduces legibility). Tertiary logos, including municipalities and funding partners, appear in a band at the bottom of signs.

BRAND DEVELOPMENT

The logo featured on this page was developed as part of the planning process (intended to create an identity for planning documents) and not intended for signage or as a permanent identity for the greenway. There was therefore no public outreach or engagement component to the design process.

PEER BRAND STUDY:

The Northwest Arkansas Razorback Regional Greenway rebranded logo is clean and direct. It is easy to read and nicely contained within a vivid green circle.

OVERVIEW

This proposed re-brand contrasts starkly with the existing identity. The proposal includes bright, transit-inspired updates to all signs, graphics, and maps, but retains the shape and structure of most existing sign types.

COLOR

A simple palette of green and white has some advantages: good contrast can be achieved on signs and with the surrounding landscape; the combination of green and white is reminiscent of highway signs, which are designed for high visibility and legibility; with a name like "greenway", the color green is an obvious choice that may boost name recognition.

DESIGN

This is a badge-style logo featuring a very simple, text-based design. The designers included text-only versions that are not confined to the circle, which may work better at smaller scales or in compressed contexts. The proposed re-brand includes a small suite of icons (chevron/arrows, cyclist, tools, water, etc) that can be used throughout the region to extend the brand into the environment and improve access to trailside amenities.

SIGN FABRICATION

Signs have distinctive shapes (two custom shapes are shown on this page, top and bottom), which distinguishes them from other signs in the environment. Custom shaping may incur additional costs.

COBRANDING

Exactly mirroring the original branded signs, The Razorback Trail occupies the primary position on signs, with local trail names highlighted at the top of directional signs. Tertiary logos, including municipalities and funding partners, appear in a band at the bottom of signs.