APPENDIX 13: TABLE OF CONTENTS

Appendix 13.A: Missing Links In 2025 Primary Network   A13-3
Appendix 13.B: Highest Priority Action Items          A13-11
Appendix 13.C: Trail Amenity Specifications          A13-13
MISSING LINKS IN 2025 PRIMARY NETWORK

The following trail routing descriptions summarize the 17 primary corridors identified to complete a primary network that will provide a bicycle/trail facility every 1-2 miles throughout the city of Thornton by 2025, as mapped in Exhibit 6.3 on page 6-8.

These corridors utilize existing facilities and partially completed routes. Missing links in the system represent a short-list of on-street and off-road projects to be prioritized for implementation. Additional trail projects may simultaneously move forward as land development and roadway resurfacing projects come on line, but the following action items are recommended for targeted funding allocation in an effort to overcome existing gaps and barriers to cross-town travel. Some are easy projects to implement, i.e. signing and pavement marking; others represent large-ticket items such as underpasses, signalized crossings, and new miles of trail construction that may require budgeting projects as multiple phases of work to design and complete the missing links.

The Community Services Department staff and Traffic Engineering division staff, together with the Parks and Open Space Advisory Committee (POSAC), shall revisit this list annually to evaluate current needs and opportunities, and determine which remaining missing links should move forward onto the five-year Capital Improvement Program (CIP).

EAST/WEST PRIMARY CORRIDORS

Corridor #1: On-Road

Highway 7

Highway 7 serves as a regional bicycling corridor, connecting Thornton to Broomfield to the west and Brighton to the east. The route has existing paved shoulders that are currently used by cyclists. Additions of signage and intersection restriping will complete this primary east/west bicycle corridor for 5 miles across the northern part of Thornton, between Washington Street and Yosemite Street.

Action Items Needed:

- Post Share-the-Road warning signs along E. 160th Avenue, between Washington Street and York Street, as an alternative route to Highway 7. Future improvements/realignment of this roadway segment should include adding bike lanes or a paved shoulder bikeway.
- Add directional signage at Washington Street to indicate that continuing travel westward on 160th Avenue will connect with the city of Broomfield trail system.
- Coordinate with CDOT to designate the existing Highway 7 paved shoulders as a shoulder bikeway.
- Restripe intersections where the shoulder gives way to vehicular turn lanes to provide bike lane pockets and/or dashed bicycle lane markings to indicate merge areas through the intersection to minimize conflicts with right-turning traffic.
Corridor #2: On-Road

**E. 136th Avenue / Cottonwood Lakes Boulevard / Summit Grove Parkway**

The city of Westminster is planning to provide on-street bicycle lanes on both E. 136th Avenue and E. 128th Avenue, with bike lanes currently striped on 136th east of Kalmath Street. The city of Thornton currently has both corridors targeted for long-term roadway restriping improvements to provide complete street corridors for east/west bicycle travel.

However, to provide connectivity across north Thornton, it is recommended to advance restriping on E. 136th Avenue from I-25 to Holly Street within the 2025 timeframe. Most critical is the segment from I-25 to Cottonwood Lakes Boulevard, where Corridor #2 may branch off and utilize existing bike lanes on Cottonwood Lakes Boulevard and Summit Grove Parkway to link to Corridors #3 and #14.

**Action Items Needed:**

- Restripe 3.5 miles of E. 136th Avenue to include on-street bicycle lanes from I-25 to Holly Street. (Most critical is restriping of the 2-mile segment between I-25 and Cottonwood Lakes Boulevard.)
- Add directional signage at Washington Street to indicate westward connection to the city of Westminster’s on-street bicycle lane system and off-road trail network.
- Also add directional signage at Cottonwood Lakes Boulevard and Summit Grove Parkway for easterly continuation of this on-road route to the Lee Lateral Trail, following existing bike lane facilities.

Corridor #3: Off-Road

**Farmers’ High Line Canal Trail / Lee Lateral Trail / Horizon Tributary**

This primary corridor offers 6.5 miles of continuous travel within the city of Thornton, and continues through both Northglenn and Westminster, ultimately connecting to Standley Lake. In Thornton, the corridor is comprised of the Farmers’ High Line Canal Trail, the Lee Lateral Trail, and a local trail that traverses Springvale Park and Marshall Lake Park and Open space to connect into the Brantner Gulch Trail (Corridor #4) at city’s eastern border.

**Action Items Needed:**

- Mark all at-grade street crossings along this route with ladder-style crosswalk markings.
- Clearly sign and designate all connections between various trail facilities for wayfinding purposes.
- Where multiple local and regional trails converge within parks, consider trail widening and/or use of special pavements to additionally identify primary travel routes vs. neighborhood feeder trail systems.
- Develop proposed trailhead at the convergence of trail corridors at 128th Avenue and Riverdale Road.

Corridor #4: Off-Road

**Brantner Gulch Trail**

Corridor #4 provides an additional east/west travel route located approximately a mile south of Corridor #3, and will connect the Farmers’ High Line Canal Trail (Corridor #3) with the Horizon Tributary. At 4 miles in total length, the Brantner Gulch Trail is largely complete, with an undeveloped gap located east of Holly Street. A proposed spur to the southeast will provide additional connection to next phase of the South Platte River Trail extension (Corridor #17) via an existing trail along E. 120th Avenue.
**Action Items Needed:**

- Complete approximately 1 mile of missing trail segment between Brantner Gulch Trail and 120th Avenue to make connection to the future South Platte River Trail extension in Adams County.
- Mark all at-grade street crossings along this route with ladder-style crosswalk markings and provide directional signage where needed.

**Corridor #5: Off-Road  
Northglenn trail connections**

While not technically located within the city of Thornton, Primary Corridor #5 is a critical circulation component to Thornton’s overall bike/trail network. This existing 2-mile trail connects the Farmers’ High Line Canal Trail (Corridor #3) with the Grange Hall Creek Trail (Corridor #6), as well as a proposed on-street route beginning on Marion Street (Corridor #16).

**Action Items Needed:**

- Mark all at-grade street crossings along this existing route with ladder-style crosswalk markings and provide directional signage where needed.

**Corridor #6: Off-Road  
Grange Hall Creek Trail**

This greenway corridor begins at the Niver Creek Trail (Corridor #9) and will terminate at the South Platte River Greenway Trail (Corridor #17). Completing gaps and connecting to the Grange Hall Creek Trail were identified as top priorities in the 2009 Parks and Open Space Master Plan. One gap remains east of Riverdale Road, with a 1-mile missing trail segment located within Thornton city limits.

**Action Items Needed:**

- Extend existing Grange Hall Creek trail east of Riverdale Road for 1 mile.
- Coordinate with Adams County to make last .5-mile link to connect with the current terminus of the South Platte River Trail.
- Mark all at-grade street crossings along this existing route with ladder-style crosswalk markings and provide directional signage where needed.

**Corridor #7: On-Road  
E. 100th Avenue**

The city of Thornton has started to implement its complete streets policy within this corridor by striping bicycle lanes on portions of E. 100th Avenue. This treatment should continue along the entire 3-mile route, beginning at Downing Street (Corridor #16) and ending at east of Riverdale Road (connection to Corridor #14). An additional .5-mile off-road trail around West Sprat Platte Lake provides connection to the South Platte River Trail (Corridor #17).

**Action Items Needed:**

- Continue bike lane striping on E. 100th Avenue from Race Street east to Steele Street.
- Ensure continuous path of travel from Jackson Street across railroad tracks and Colorado Boulevard. Stripe pedestrian crossing of Colorado Boulevard.
• Continue bicycle corridor from Colorado Boulevard to the trail crossing east of Hudson Street by implementing a combination of sharrow treatments, bike lanes and/or designated paved shoulders.

• Sign trail crossing as a connection to the South Platte River Greenway Trail to the south, and Thornton Sports Complex and the Grange Hall Creek Trail to the north.

• At minimum, as an interim measure, sign roadway segments between existing designated bicycle lanes with Share the Road warning signs.

• Design all intersections with vehicular turn lanes to provide bike lane pockets and/or dashed bicycle lane markings to indicate merge areas through the intersection to minimize conflicts with right-turning traffic.

Corridor #8: On-Road

**E. 88th Avenue**

The city of Westminster is providing on-street bike lanes on E. 88th Avenue west of Federal Boulevard. A partial trail network exists through Hyland Hills Parks and Recreation District, which offers potential to connect with new bike lanes located east of Pecos Street on E. 88th Avenue. The city of Thornton is currently in the process of restriping 2.5-miles of E. 88th Avenue as part of implementation of its complete streets program.

Completion of bike lane striping along E. 88th Avenue is critical to provide city employees and other workers in south Thornton to commute from Denver via the South Platte River Trail, and then have a designated route to access major employers located in the Washington/Grant Street area by connecting to Hoffman Way (Corridor #16).

**Action Items Needed:**

• Continue striping bicycle lanes between Washington Street and Colorado Boulevard.

• Design all intersections with vehicular turn lanes to provide bike lane pockets and/or dashed bicycle lane markings to indicate merge areas through the intersection to minimize conflicts with right-turning traffic.

• Work with Hyland Hills Parks and Recreation District and Westminster to complete trail connection across park district property.

Corridor #9: Off-Road

**Niver Creek Trail / Coronado Parkway Trail**

The Niver Creek open space system provides a unique gateway and neighborhood open space amenity for Thornton residents living on the west side of I-25. This 4.5-mile corridor runs from Pecos Park southeast through open space and along the Coronado Parkway, linking regionally with the South Platte River Greenway Trail (Corridor #17). The missing link between Grant and Washington Streets was commonly cited during the Parks and Open Space Master Plan update process as a priority gap to be completed.

**Action Items Needed:**

• Complete missing link at the western end to connect with city of Westminster’s bikeway on E. 96th Avenue by striping bicycle lanes on 96th Avenue beginning at Pecos.

• An enhanced 8’-10’ wide sidewalk connection is needed between the two existing trail projects, for a distance of approx. .3-mile. Additional study and cooperation with adjacent land owners is required to determine exact route.

• A proposed connection to consider begins at the Niver Creek trailhead, routing south along the west side of Grant Street, then east along the south side of 84th Avenue and the first block of Essex Drive to Clarkson Street. Continue south for 2 blocks as striped, on-street bike lanes or bike route with sharrow markings on Clarkson Street.
to Coronado Parkway.

- Sidewalks should be detached from curb wherever possible. The existing detached sidewalk along 84th Avenue should be widened away from the street to maintain a separation buffer from heavy traffic.
- All street and driveway crossings along the route should be marked with ladder-style crosswalks.
- Colored pavement treatments and/or raised speed tables may additionally be used across commercial drive entrances.

**NORTH/SOUTH PRIMARY CORRIDORS**

**Corridor #10: On-Road**

**Washington Street**

A current roadway restriping project is making complete streets enhancements to Washington Street from E. 124th Avenue/Farmers’ High Line Canal Trail (Corridor #3) up to E. 136th Avenue (Corridor #2). Future road work will extend the on-street bicycle lane treatment north to E. 168th Avenue/Highway 7 (Corridor #1).

**Action Items Needed:**

- Design all intersections with vehicular turn lanes to provide bike lane pockets and/or dashed bicycle lane markings to indicate merge areas through the intersection to minimize conflicts with right-turning traffic.
- Include on-street bicycle lanes as part of future roadway widening north of E. 144th Avenue.

**Corridor #11: Off-Road**

**Big Dry Creek Trail**

The Big Dry Creek Trail is viewed as the crown jewel of the city of Westminster’s off-road trail system, meandering nearly 12 miles east of I-25 to link with Standley Lake. It has been designated as a National Recreation Trail since 2003. To date, only a .75-mile segment of the trail is built within the city of Thornton, but the Adams County Open Space, Parks and Trails Plan lists the Big Dry Creek south of E-470 as a high-priority trail expected to be completed within the next three years. In the 2040 plan, this significant regional facility will continue north into Weld County, connecting with the South Platte River.

**Action Items Needed:**

- Extend trail from the I-25 underpass for .5 mile north to E. 136th Avenue.
- Proposed trail route is a sidepath on the north side of E. 136th Avenue for .5 mile via a grade-separated crossing of 136th. On-street bicycle lanes are also proposed to be striped on E. 136th Avenue as part of Corridor #2, offering an additional travel option.
- Proposed trail route continues as a sidepath treatment on the east side of Washington Street for 1 mile to E. 144th Avenue. On-street bicycle lanes are also proposed to be striped on Washington Street as part of Corridor #10, offering an additional travel option.
- Complete .5 mile of off-road trail from Washington Street to the existing trail segment located north of 144th.
- Beginning at the existing trail terminus at 150th, continue north to the provided trail segment under E-470.
- Develop proposed trailhead on open space lands between Big Dry Creek and York Road at 152nd.
- Continue off-road trail development northeast for another 1.25 mile to Highway 7.
Corridor #12: Hybrid
**Signal Ditch Trail / Madison Street / Woodglen Boulevard**

Corridor #13 utilizes the existing Signal Ditch Trail in the northern portion of Thornton, connecting with proposed bicycle lane facilities on Madison Street to the south connecting to the Margaret Carpenter Recreation Center. Bicycle designation of Woodglen Avenue is also recommended to create a highly-visible connection street linking Madison Street, Colorado Boulevard, and Birch Drive (Corridors #13, 15, and 14). In the 2040 plan, this significant regional facility will continue northeast into Adams County.

**Action Items Needed:**

Develop proposed trailhead in new park south of E-470, which is the proposed terminus of 2025 trail expansion along Signal Ditch. (Future extensions will continue the Signal Ditch Trail northeast to Yosemite.)

- Construct approx. 1.5 miles of missing link south to the existing trail facility that begins at 142nd Avenue.
- Utilize the existing Signal Ditch Trail south to and around Eastlake Reservoir #3 to E. 124th Avenue. Clearly sign and designate all connections between various trail facilities for wayfinding purposes.
- Add either bike lane striping or sharrow pavement markings to the first three blocks of Steele Street and all of Madison Street south to E. 112th Avenue.
- Additionally designate Woodglen Boulevard, from Madison Street to Birch Drive, with either bike lane striping or sharrow pavement markings.
- Mark all at-grade street crossings along this route with ladder-style crosswalk markings and provide directional signage where needed.
- Provide appropriate transitions and wayfinding signage at junctures with all intersecting primary trail facilities (Corridors #2, 3, 4, and 15).

Corridor #13: Hybrid

**Yosemite Street / Todd Creek / Summit Grove Parkway / Fairfax Street / Birch Drive**

This corridor was pieced together to provide a primary north/south route of travel located east of Colorado Boulevard. Due to the mix of facility types that combine to create this hybrid corridor, directional signage and pavement markings will be critical for user wayfinding along the route.

**Action Items Needed:**

- Beginning at E. 160th Avenue, follow the existing trails along Yosemite Street and around Heritage Todd Creek Golf Course.
- Complete approx. 1.5-mile gap in the trail segment along Todd Creek north of 136th, connecting trail segments along Yosemite with the current terminus of the Lee Lateral Trail.
- Add wayfinding to follow existing trails through Springvale Park and the Trail Winds Park and Open Space to connect with existing bike lanes on Summit Grove Parkway.
- Cross E. 128th Avenue at the signal and add either bike lane striping or sharrow pavement markings to Eudora Drive/Fairfax Street/E. 125th/124th Way to reach the Brantner Gulch Trail.
- Direct trail users to continue south on the trail around the elementary school to E. 123rd Ave.
- Add either bike lane striping or sharrow pavement markings to designate a preferred route south to Grange Creek Park along Fairfax Street/E. 119th Way/Elm Drive/E. 118th/Birch Drive/E. 115th Court/Cherry Drive/Dahalia Drive.
Follow existing trails through Grange Creek Park and along Grange Hall Creek to link to the South Platte River Trail at the West Sprat Platte Fishing Facility.
Mark all at-grade street crossings along this route with ladder-style crosswalk markings.
Clearly sign and designate all route transitions between on-road and off-road facilities, as well as the desired routing through neighborhoods on various local streets.

**Corridor #14: On-Road**

**Colorado Boulevard**

Roadway retrofit to narrow motor vehicle travel and turning lanes to provide space for on-street bicycle lanes is recommended on this major north/south arterial. This accommodation will provide bicycle commuters with a faster, more direct route of travel than that offered by either Corridor #13 or #14, and will provide access to the wide variety of destinations located along Colorado Boulevard. On-street bike lanes are currently planned for short-term implementation from Thornton Parkway to E. 104th Avenue, with the entire stretch of Colorado Boulevard from E. 88th Avenue north to E. 136th Avenue projected to have bike lanes added by 2025 through ongoing resurfacing projects.

**Action Items Needed:**

- Restripe 6.5 miles of Colorado Boulevard to remove center turn lane, redesign intersections, and add on-street bicycle lanes. (Most critical is restriping of the 4-mile segment between 88th and Woodglen Boulevard where no parallel north/south local street alternatives exist.)

**Corridor #15: On-Road**

**Marion Street / Downing Street / Dorothy Boulevard / Hoffman Way**

This primarily on-street route is proposed to provide north/south connectivity through the historic residential neighborhoods of Thornton, connecting with four major east/west bike facilities (Corridors #5-#8). This route overlaps with part of the proposed Original Thorton Heritage Trail Loop as presented in the Thornton Heritage Trail Concept Plan. It also serves as the primary corridor that provides access to Thornton’s civic arts district and urban center. Several short, local east/west bike linkages are proposed to be provided to improve mobility as part of the 2012 Thornton Urban Center Plan, and should be extended east from the mixed-use redevelopment area to link into this primary corridor.

**Action Items Needed:**

- Add directional bike route signage on Marion Street within the city of Northglenn, and along the trails around the east end of Lambertson Lakes.
- Add either bike lane striping or sharrow pavement markings to delineate the preferred route along E. 101st Avenue/E. 100th Avenue/Downing Street.
- Utilize the existing sidewalk on north side of Thornton Parkway to cross this arterial at a signalized intersection.
- Add either bike lane striping or sharrow pavement markings to Dorothy Boulevard.
- Stripe one-way bike lanes on either side of divided Hoffman Way.
Corridor #16: Off-Road

South Platte River Greenway Trail

The South Platte River corridor is the most significant natural feature in the Thornton vicinity. Trail users may travel for over 11 miles on a multi-use, multi-jurisdictional trail that connects into Downtown Denver at Confluence Park. Planned extensions to the northeast into Adams County will allow additional connections of city of Thornton Primary Corridors #4 and #6 to this major recreational and commuter destination.

Action Items Needed:

- Coordinate with Adams County to simultaneously extend the South Platte River Trail north of E. 104th Avenue, and complete identified linkages needed along Grange Hall and Brantner Gulch Creeks within the city of Thornton.
The following list is provided to aid in programming some of the highest priority trail needs. Each project segment identified below represents a critical gap in connectivity within the primary corridor system, and in most instances, is a location where alternative routes are not currently available. Once projects are selected to move forward for implementation, site-specific needs should be examined in detail for accurate costs associated with land acquisition, preliminary engineering, topographic or major drainage challenges, and unique design features that may be warranted.

**Corridor #2: E. 136th Avenue**
- Restripe roadway to add bike lanes to the 2-mile segment between I-25 and Cottonwood Lakes Boulevard

**Corridor #4: Brantner Gulch Trail**
- Complete approximately 1 mile of missing 10’ wide trail segment between Brantner Gulch Trail and 120th Avenue

**Corridor #6: Grange Hall Creek Trail**
- Extend Grange Creek as a 10’ wide trail east of Riverdale Road for 1 mile

**Corridor #8: E. 88th Avenue**
- Complete bicycle lane striping from Colorado Boulevard to Devonshire Boulevard

**Corridor #9: Niver Creek Trail / Coronado Parkway Trail**
- Restripe roadway to add bike lanes on 96th Avenue for .5 mile from Pecos Street to city limits
- Collaborate with adjacent land owners to complete approx. 0.3-mile of enhanced sidewalk connections between the two existing trail projects
- Install High Intensity Activated Crosswalk (HAWK) Signal and pedestrian lights at trail crossing on secondary spur trail near North Star Elementary School

**Corridor #11: Big Dry Creek Trail**
- Construct a 10’ wide trail for 2.5 miles from the I-25 underpass northeast to the existing trail segment at 144th Avenue
- Extend 10’ wide trail northeast for another .75 mile from 150th Avenue to E-470
- Develop proposed trailhead at York Street and E-470

**Corridor #12: Signal Ditch Trail / Madison Street / Woodglen Boulevard**
- Develop proposed trailhead in new park south of E-470
- Construct 1.5 miles of 10’ wide trail from new park south to 142nd Avenue

**Corridor #13: Todd Creek Trail**
- Complete 1.5-mile trail gap along Todd Creek, north of 144th Avenue

**Corridor #14: Colorado Boulevard**
- Restripe roadway to add bike lanes to 4-mile segment between 88th and 104th Avenue
This guidance for the design of trailheads and trail amenities has been moved from the previous POSMP Trails Chapter to the Technical Appendices, and expanded to incorporate guidance for implementing unique, themed amenities on trail loops identified as part of the Heritage Trail system.

Exhibit 13.1 displays various trail facility amenities to be provided throughout the city of Thornton trails system and the functional classification trail network in which they are either Required (amenity must be provided as part of the trail segment or corridor) or Recommended (amenity provided at the discretion of city staff on a case-by-case basis).

### EXHIBIT 13.1: TRAIL AMENITIES

<table>
<thead>
<tr>
<th>Trail Amenity</th>
<th>Regional</th>
<th>Local</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benches</td>
<td>Required</td>
<td>Recommended</td>
<td>Benches should be placed at major trailheads, trail lighting, and at waiting/resting areas.</td>
</tr>
<tr>
<td>Bollards</td>
<td>Recommended</td>
<td>Recommended</td>
<td>Bollards should have reflective surfaces, be removable and be placed where motor vehicles have potential access to trails.</td>
</tr>
<tr>
<td>Delineators</td>
<td>Recommended</td>
<td>Recommended</td>
<td>Delineators can be used in place of guard rails and in areas where the trail is adjacent to water features or slopes in excess of 1:4.</td>
</tr>
<tr>
<td>Distance markers</td>
<td>Recommended</td>
<td>Recommended</td>
<td>Distance markers should be placed at the beginning of major trailheads and at locations where there is high recreational use. The markers should be placed at ½ mile to 1 mile intervals otherwise.</td>
</tr>
<tr>
<td>Guard rails/fences</td>
<td>Required</td>
<td>Required</td>
<td>Guard rails should be a minimum height of 42” and used where there is more than 30” vertical drop off at edge of the shoulder.</td>
</tr>
<tr>
<td>Informational and wayfinding signage</td>
<td>Recommended</td>
<td>Recommended</td>
<td>Informational signage should be located as needed.</td>
</tr>
<tr>
<td>Lighting</td>
<td>Required</td>
<td>Recommended</td>
<td>Lighting shall conform to the city’s Standards and Specifications.</td>
</tr>
<tr>
<td>Regulatory signage</td>
<td>Required</td>
<td>Required</td>
<td>Signage at street crossings should be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) Chapter 9.</td>
</tr>
<tr>
<td>Trash receptacles</td>
<td>Required</td>
<td>Required</td>
<td>Trash receptacles, as well as provisions for recycling, should be provided at street crossings, and near benches.</td>
</tr>
<tr>
<td>Dog waste stations</td>
<td>Required</td>
<td>Recommended</td>
<td>Provide dog waste stations at street crossings.</td>
</tr>
</tbody>
</table>

Table 13.2 further identifies additional trail amenities, signing elements, and design features that are desired to be incorporated into the Heritage Trail loops, as mapped in Exhibit 6.6. The intent is to convey Thornton’s spirit, character, and uniqueness by integrating a diverse spectrum of regional themes, or stories, pertaining to the community’s history, culture and environment. Individual themes, unique site features, and possible trail enhancements are further detailed in the city of Thornton Heritage Trail Plan document (March 2012).
<table>
<thead>
<tr>
<th>Trail Amenity</th>
<th>Heritage Loops</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benches</td>
<td>Required</td>
<td>Benches may be considered public art and can be designed to reflect the assigned theme of an individual Heritage Trail.</td>
</tr>
<tr>
<td>Bicycle Parking</td>
<td>Recommended</td>
<td>Bike parking racks may be considered public art as long as they are designed to offer a safe and secure means to lock a bike frame and wheel, and can be designed to reflect the assigned theme of an individual Heritage Trail.</td>
</tr>
<tr>
<td>Bollards</td>
<td>Recommended</td>
<td>Bollards may be considered public art as long as safety and emergency access needs are met, and can be designed to reflect the assigned theme of an individual Heritage Loop trail.</td>
</tr>
<tr>
<td>Distance markers</td>
<td>Required</td>
<td>All Heritage Trails are desired to be planned and implemented in 1/4-mile distances. Distance markers are therefore recommended to be placed at 1/4 mile intervals along all Heritage Loops to enable recreational users to track miles traveled. Use of a unique pavement marking across the trail surface may be considered in lieu of traditional bollard or signage mile markers.</td>
</tr>
<tr>
<td>Entrance signage</td>
<td>Required</td>
<td>These signs should be located within trailheads and consistently use trail system branding to identify projects as Heritage Trails. Entrance signs may also include maps of the loop route identifying key destinations and distances to be traveled.</td>
</tr>
<tr>
<td>Interpretive signage</td>
<td>Required</td>
<td>Consistent sign layout and format should be used across all Heritage Trail interpretive signing, with each project telling its unique story through words, photos, and graphics.</td>
</tr>
<tr>
<td>Lighting</td>
<td>Recommended</td>
<td>Lighting may be considered public art and can be designed to reflect the assigned theme of an individual Heritage Trail. Street pole banners identifying themes and special events may also be used on standard lighting fixtures along Heritage Trails.</td>
</tr>
<tr>
<td>Regulatory signage</td>
<td>Required</td>
<td>Signage at street crossings should be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) Chapter 9.</td>
</tr>
<tr>
<td>Trailheads</td>
<td>Required</td>
<td>At least one Type I trailhead with parking shall be provided for each project. The design of each Heritage Trail trailhead should include distinct materials, furnishings, and interpretive exhibits that reflect the project’s assigned heritage theme.</td>
</tr>
<tr>
<td>Wayfinding signage</td>
<td>Required</td>
<td>Thornton’s overall trail branding package should include sign types for wayfinding/directional routing. Important will be a way to consistently identify the route of a Heritage Trail loop as it routes along various regional and local trail segments with different project names.</td>
</tr>
</tbody>
</table>
**Trailheads**

Trailheads are vital to the trail network system. Trailheads are typically the “gateways” to the trail system, and thus they should be highly visible and provide amenities, including wayfinding and regulatory signage, that make a user’s experience enjoyable. Trailhead design should take into consideration the surrounding environment and the overall function of the specific trail (e.g., whether it is a component of the regional or local network).

In this section, three different types of trailheads are discussed. Each type differs by a few amenities. Only Type 1 trailheads have been mapped, Type 2 and Type 3 trailheads shall be placed and located on a case-by-case basis and therefore have been omitted from the Proposed Regional and Community Trail Network Map.

- Trailheads with Parking (Type 1)
- Trailheads without Parking (Type 2)
- Trailheads at various trail junctions (Type 3)

Table 13.3 summarizes the attributes of each type of trailhead.

<table>
<thead>
<tr>
<th>EXHIBIT 13.3: TRAILHEAD TYPES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Trailhead Type</strong></td>
</tr>
</tbody>
</table>
| Type 1 (Trailheads with Parking) | • Type 1 trailheads provide a comprehensive system of parking, transit access, information and function as a gateway to the trail system.  
• Parking for this type of trailhead should be provided in a lot configuration, rather than shoulders of roadways, and may either be paved, unpaved or a combination of both.  
When possible it will be necessary to explore shared used parking options with other facilities (e.g., schools, parks, churches, etc.).  
• When a trailhead is located along a designated RTD fixed-route, at a minimum a transit stop shall be provided with adequate access to the trail. |
| Type 2 (Trailheads without Parking) | • Type 2 trailheads are located at junctions where streets bisect trails, or where trails originate without parking.  
• They should be easily visible from the street and fit within the context of the surrounding development. |
| Type 3 (Trailheads at various trail junctions) | • Type 3 trailheads are located where trails intersect. They will usually consist of a sign with trail name and directional arrows.  
• Where local and regional trails intersect, the trailhead should ideally provide wayfinding information as well as important changes in regulations, surfacing, or other attributes. |

Exhibit 13.4, following page, displays various trailhead amenities and the type of trailhead that they are associated with. The trailhead amenities are either Required (amenity must be provided as part of the trailhead) or Recommended (amenity provided at the discretion of city staff on a case-by-case basis).
EXHIBIT 13.4: TRAILHEAD AMENITIES

<table>
<thead>
<tr>
<th>Trailhead Amenity</th>
<th>Type 1</th>
<th>Type 2</th>
<th>Type 3</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benches</td>
<td>Required</td>
<td>Recommended</td>
<td>N/A</td>
<td>Benches should be a minimum 6’ length and be located in shaded areas when possible.</td>
</tr>
<tr>
<td>Bike Racks</td>
<td>Recommended</td>
<td>Recommended</td>
<td>N/A</td>
<td>Bike racks should be located near the parking facility and should be covered and lighted when possible. Provisions for bike lockers are also recommended.</td>
</tr>
<tr>
<td>Lighting</td>
<td>Required</td>
<td>Recommended</td>
<td>Recommended</td>
<td>Lighting shall conform to the city standards.</td>
</tr>
<tr>
<td>Wayfinding Signage</td>
<td>Recommended</td>
<td>Recommended</td>
<td>N/A</td>
<td>Wayfinding signage should illustrate the entire trail network.</td>
</tr>
<tr>
<td>Parking</td>
<td>Required</td>
<td>N/A</td>
<td>N/A</td>
<td>Where provided, parking should be signed and located with close proximity to the trail. Parking should also be lighted as necessary.</td>
</tr>
<tr>
<td>Restrooms</td>
<td>Required</td>
<td>N/A</td>
<td>N/A</td>
<td>Restrooms should be located at trailheads that are perceived to have high use. Restrooms should be accessible for wheelchair users (ADA standards).</td>
</tr>
<tr>
<td>Regulatory Signage</td>
<td>Required</td>
<td>Required</td>
<td>Required</td>
<td>Signage should be provided at major trailheads and street crossings in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) Chapter 9.</td>
</tr>
<tr>
<td>Transit Access</td>
<td>Required</td>
<td>N/A</td>
<td>N/A</td>
<td>Transit stops should be easily accessible and visible, and provide route and schedule information and typical signage.</td>
</tr>
<tr>
<td>Trash Receptacles</td>
<td>Required</td>
<td>Recommended</td>
<td>Recommended</td>
<td>Trash receptacles, as well as provisions for recycling, should be provided at trailheads and locations of benches and wayfinding signage.</td>
</tr>
</tbody>
</table>

**Trailhead Locations**

Trailheads are generally recommended to be spaced approximately every 2.5 miles throughout the community, with locations of existing and proposed trailheads mapped on Exhibit 6.7. Four proposed trailheads remain to be built from recommendations of the 2009 POSMP, and one new trailhead is being recommended as part of the 2013 POSMP. The suggested additional trailhead in the far northeast corner of the community is desired to meet spacing guidance and provide access to the future Signal Ditch Trail extension as it leaves Thornton and enters Adams County.

Furthermore, an identifiable Heritage Trail trailhead shall be located along the route of each Heritage Trail, as mapped in Exhibit 6.6. Design of amenities within these trailheads shall follow supplemental guidance contained in Table 13.2.