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CHAPTER 1 INTRODUCTION

The Colfax Corridor Connections project aims to improve access for people traveling along Colfax Avenue between Denver and Aurora, with bus rapid transit (BRT) as the preferred alternative. BRT service on this corridor is anticipated to provide enhanced transit service in the form of limited stops, fast travel times, exclusive lanes, more frequent headways and consistent branding throughout all components of the system.

This study, as part of the BRT project, identifies pedestrian and bicycle improvements to provide better access to improved transit service along Colfax as part of the larger BRT project. Recommendations will be included as part of the Colfax Corridor Connections project for the environmental clearance process. The improvement recommendations will also inform City and County of Denver (CCD) and City of Aurora (CoA) staff for future longer term studies.

STUDY GOALS

As part of the larger Colfax Corridor Connections project, the goal for this study is to improve access for BRT riders who chose to walk and bike to the stations by

- improving multimodal access to and at BRT stations and
- identifying high ease-of-use improvements that can be funded in the near term with the BRT project.

High ease-of-use is a designation to identify more comfortable, low stress pedestrian and bicycle facilities that are priority routes for accessing BRT stations by foot and bike.

To examine pedestrian and bicycle improvement strategies for the Colfax BRT stations, this study examined the design elements at the stations and adjacent intersections for pedestrians and bicyclists, improvements along north-south routes to provide better access to/from stations, and concepts for improved east-west bicycle access related to the identified north-south routes.

OBJECTIVES

The project team identified a list of potential treatments with short term timeframes and feasible implementation with direct and high quality benefit to people accessing the BRT stations by foot or bike. Since both pedestrians and bicyclists will travel to and at the stations, the treatments and recommendations are organized in two categories: “to the stations” and “at the stations”.

“To the stations”
Access for pedestrians and bicyclists along streets in the station area

“At the stations”
Pedestrian and bicycle treatments immediately adjacent to the stop and at adjacent intersections

This captures improvements for people traveling to the 22 stations from multiple blocks away as well as improvements at the stations and immediately adjacent intersections.
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As part of this planning effort, the project team led outreach activities to collect feedback. The team provided information at two public meetings in January 2016. In order to receive more detailed feedback, the project team also presented and received feedback from the February and March meetings for the Denver Mayor’s Bicycle Advisory Committee (MBAC) and the Denver Mayor’s Pedestrian Advisory Committee (MPAC).

Overall, stakeholders shared positive feedback and understood the focus of the study on improving BRT access. Input of potential strategies and concerns from both the public outreach and MBAC/MPAC meetings was documented and considered with the development of study recommendations or will be applied to future stages of BRT project development.

PUBLIC OUTREACH

Study information was presented at the public meetings held in Denver (on January 20th, 2016) and Aurora (on January 21st, 2016). A questionnaire asked a number of questions associated with the larger BRT project, but two questions in particular collected information associated with bicycle and pedestrian access. The questions asked attendees to select the most effective strategies and their largest concerns.

The three most popular strategies identified were:
- Green and intersection markings,
- Protected bikeways, and
- Signal timing.

The three largest concerns were:
- Crossing or walking on Colfax Avenue,
- Safety and security, and
- Cars not yielding.

Full details of completed questionnaires relating to bicycle and pedestrian access are included in Appendix A.
STAKEHOLDER OUTREACH

Stakeholder outreach for this study included involvement in the larger Colfax Corridor Connections project with presentations on January 6th, 2016 to the Technical Working Group and the Community Task Force for that project. The study team met with Walk Denver and Bike Denver at the beginning of the project to gain insight and discuss potential issues that might arise over the course of the project. The team also presented at the February and March meetings of MBAC and MPAC.

At the February MBAC (February 4th, 2016) and MPAC (February 10th, 2016) meetings, the team introduced the study and talked about the overall goals and potential outcomes. In addition to collecting general comments, the team also distributed a similar questionnaire as was distributed at the January public meetings. The strategies were updated with the most current list of possible improvements. The top three strategies identified by these two groups were:

- Green and intersection markings,
- Protected bikeways, and
- Crosswalk markings.

The top three concerns from these two groups were:

- Crossing or walking on Colfax Avenue,
- Lighting, and
- Bike parking.

Full details of comments received from these meetings can be found in Appendix A.

The two March meetings with MBAC (March 3rd, 2016) and MPAC (March 9th, 2016) updated both groups with preliminary recommendations for potential strategies and station treatments.

SUMMARY

Overall, public meeting attendees and members of the Mayor’s Advisory Committees selected the following top strategies for improving bicycle and pedestrian access to the BRT stations:

- Green and intersection markings,
- Protected bikeways, and
- Signal timing.

The top concerns were:

- Crossing or walking on Colfax Avenue,
- Safety and security, and
- Cars not yielding.

The project team considered the most popular strategies and how to mitigate the top concerns when identifying the study recommendations.
CHAPTER 3 METHODOLOGY

DATA
The project team utilized data compiled for the Colfax Corridor Connections project, as well as additional data collected for this study. The following data sources were utilized for this study:

- **Traffic volumes:** Volumes were compiled for the Colfax Corridor Connections project and include current (2010) and projected (2035) traffic volumes along the corridor. This information was used primarily in identifying “to the station” recommendations.

- **Turning movements:** Volumes were compiled for the Colfax Corridor Connections project and include current (2010) and projected (2035) traffic volumes at intersections along the corridor. Additional traffic counts were collected at selected intersections to provide additional guidance for bicycle facilities. This information was used primarily in identifying “at the station” recommendations.

- **Projected ridership:** Projected ridership information included boarding and alightings for the BRT stations in 2035, developed for the Colfax Corridor Connections project. These numbers were considered in identifying treatment recommendations based on anticipated number of riders at each station.

- **Crash information:** Multimodal crash information was compiled for station areas within the City and County of Denver. To incorporate the areas that people would likely transverse to get to the stop, the project team utilized data for crashes located within one full block of the eastbound and westbound stops. Crash information can be found in Appendix E.

- **Bicycle and pedestrian observations:** The project team conducted bicycle and pedestrian observations at key areas along the corridor for consideration with recommendations.

To the Station
To develop recommendations for improving access to the stations, the project team identified potential north-south connections to each BRT station. North-south connections were identified based on review of Denver Moves: Enhanced Bikeways (2016) and the Aurora Bicycle and Pedestrian Master Plan (2012). The project team conducted field visits and used aerial photography to assess planned improvements, evaluate alternatives where multiple options for north-south connections exist, identify the preferred north-south connection, and identify additional bicycle and pedestrian treatment recommendations. This was an iterative process completed in collaboration with CCD Public Works and City of Aurora staff.

At the Station
A station typology was developed to group stations of similar conditions and to facilitate the identification of appropriate strategies for improving access at the stations. Two main criteria were used to determine the three different typologies: station characteristics and projected ridership. The projected ridership used for this study is the anticipated ridership for 2035, developed for the Colfax Corridor Connections project.
**TYPOLOGIES**

The station characteristics were determined by stop location on the block: farside (immediately past the intersection), midblock (between two intersections) and nearside (immediately before the intersection). All stop locations offer pros and cons to transit users, although farside stops are generally preferred. This is especially true on systems equipped with transit signal priority, such as the planned Colfax BRT, to prevent buses from stopping twice at a single intersection.

Pedestrians and bicyclists are expected to face potential challenges at each type of station, which the strategies developed for this study will attempt to mitigate.

**Farside**
- Boarding occurs further from intersection crossing points
- Waiting and boarding occurs further from intersection lighting

**Nearside**
- Reduced sight distance for crossing pedestrians when a bus is stopped on the nearside area of an intersection
- Higher potential for conflicts between pedestrians/bicyclists and vehicles

**Midblock**
- Lack of nearby crossings within close proximity to stop, which often results in jaywalking by pedestrians and/or illegal movements by bicyclists at midblock locations

Three typologies were developed based on station ridership and characteristics. Ridership is based on boardings for both the eastbound and westbound stops. The following three typologies were created as categories that would likely require similar types of station strategies:

- **Typology 1**: Stations with lower projected ridership. These include stations with both nearside and farside stops with projected ridership under 2,500 boardings per day.
- **Typology 2**: Stations located at and between intersections for stops with low projected ridership. These include midblock and farside stops with projected ridership under 2,500 boardings per day.
- **Typology 3**: The most complex type of stations located at and between intersections with high projected ridership. These include nearside, farside and midblock stops over 2,500 boardings per day.

Examples of each of the typologies are illustrated in Figure 1.

---

**Figure 1. Station Typology Illustrations**

- **Typology 1**: Nearside or farside with lower projected ridership
- **Typology 2**: Midblock or farside with lower projected ridership
- **Typology 3**: Nearside, farside or midblock with higher projected ridership
Figure 2 shows the Colfax BRT Stations.

Figure 2. Colfax BRT Station Map

The resulting typologies for each station along the Colfax corridor are shown in Table 1.

Table 1. Station Typologies

<table>
<thead>
<tr>
<th>Stop ID</th>
<th>Station</th>
<th>Typology</th>
<th>Stop – E bound</th>
<th>Stop – W Bound</th>
<th>2010 Boardings</th>
<th>2035 Boardings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mariposa</td>
<td>3</td>
<td>Nearside</td>
<td>Farside</td>
<td>4,689</td>
<td>4,745</td>
</tr>
<tr>
<td>2</td>
<td>13th</td>
<td>2</td>
<td>Midblock</td>
<td>Farside</td>
<td>1,153</td>
<td>1,827</td>
</tr>
<tr>
<td>3</td>
<td>14th</td>
<td>2</td>
<td>Midblock</td>
<td>Midblock</td>
<td>591</td>
<td>1,758</td>
</tr>
<tr>
<td>4</td>
<td>Broadway</td>
<td>3</td>
<td>Nearside</td>
<td>Nearside</td>
<td>2,835</td>
<td>6,471</td>
</tr>
<tr>
<td>5</td>
<td>Grant</td>
<td>1</td>
<td>Nearside</td>
<td>Farside</td>
<td>N/A²</td>
<td>N/A²</td>
</tr>
<tr>
<td>6</td>
<td>Downing</td>
<td>1</td>
<td>Nearside</td>
<td>Farside</td>
<td>2,292</td>
<td>2,172</td>
</tr>
<tr>
<td>7</td>
<td>Josephine</td>
<td>1</td>
<td>Nearside</td>
<td>Farside</td>
<td>1,623</td>
<td>2,105</td>
</tr>
<tr>
<td>7.5</td>
<td>Steele</td>
<td>2</td>
<td>Farside</td>
<td>Farside</td>
<td>N/A²</td>
<td>N/A²</td>
</tr>
<tr>
<td>8</td>
<td>Colorado</td>
<td>3</td>
<td>Farside</td>
<td>Nearside</td>
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<td>9</td>
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<td>Farside</td>
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<tr>
<td>10</td>
<td>Krameria²</td>
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<td>Farside</td>
<td>Nearside</td>
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<tr>
<td>11</td>
<td>Monaco</td>
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<td>Nearside</td>
<td>Nearside</td>
<td>1,154</td>
<td>1,046</td>
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<tr>
<td>12</td>
<td>Quebec</td>
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<td>Farside</td>
<td>Nearside</td>
<td>504</td>
<td>531</td>
</tr>
<tr>
<td>13</td>
<td>Uinta</td>
<td>1</td>
<td>Farside</td>
<td>Farside</td>
<td>312</td>
<td>395</td>
</tr>
<tr>
<td>14</td>
<td>Yosemite</td>
<td>2</td>
<td>Midblock</td>
<td>Farside</td>
<td>745</td>
<td>1,106</td>
</tr>
<tr>
<td>15</td>
<td>Dayton</td>
<td>2</td>
<td>Midblock</td>
<td>Farside</td>
<td>1,189</td>
<td>1,512</td>
</tr>
<tr>
<td>16</td>
<td>Havana</td>
<td>2</td>
<td>Farside</td>
<td>Farside</td>
<td>865</td>
<td>1,101</td>
</tr>
<tr>
<td>17</td>
<td>Moline</td>
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<td>Farside</td>
<td>Farside</td>
<td>1,824</td>
<td>2,878</td>
</tr>
<tr>
<td>18</td>
<td>Peoria</td>
<td>2</td>
<td>Midblock</td>
<td>Farside</td>
<td>1,155</td>
<td>1,217</td>
</tr>
<tr>
<td>18.5</td>
<td>Scranton</td>
<td>2</td>
<td>N/A</td>
<td>Midblock</td>
<td>N/A²</td>
<td>N/A²</td>
</tr>
<tr>
<td>19</td>
<td>Aurora⁴</td>
<td>3</td>
<td>Midblock</td>
<td>Farside</td>
<td>1,267</td>
<td>5,123</td>
</tr>
<tr>
<td>20</td>
<td>Potomac</td>
<td>2</td>
<td>Midblock</td>
<td>Farside</td>
<td>404</td>
<td>1,990</td>
</tr>
</tbody>
</table>

(1) Data from Colfax and Welton
(2) Current and projected ridership was not available
(3) Data from Colfax and Ivy
(4) Data from Aurora Ct/17th Ave
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CHAPTER 4 POTENTIAL TREATMENTS

After collecting and compiling available data, the project team developed a list of potential treatments for pedestrian and bicycle access improvements to the station and at the station. To be considered within the list of potential treatments, the treatments must have relatively low impact (on project cost and roadway infrastructure) with an expected direct improvement on BRT station access for pedestrians and bicyclists.

All of the potential treatments reviewed in this report are conceptual and will need to be further analyzed in subsequent levels of design to determine ultimate feasibility and design.

A simplified table with details of potential treatments can be found in Appendix B.

TO THE STATION
The project team identified three categories of short-term strategies to improve bicycle and pedestrian connections to BRT stations. These categories are bicycle improvements, pedestrian improvements and shared-use improvements. Recommended strategies for enhancing pedestrian and bicycle access to BRT stations vary throughout the corridor based on existing infrastructure, right-of-way, traffic volumes (motorized and non-motorized) and speeds, cost, and desired user experience. These short-term strategies typically do not require major changes to existing right-of-way. Strategies largely consist of signage, crossing improvements, signal modifications, and striping.
Bicycle Improvements

Bicycle improvements consist of clearly designated space within the right-of-way to enhance bicyclist safety, navigability, and access to the BRT stations. Examples of these types of treatments include:

- Bike lane
- Buffered bike lane
- One-way protected bike lane
- Two-way protected bike lane
- Contraflow bike lane
- Neighborhood bikeway (bike boulevard)

A **bike lane** is a travel lane designated for the exclusive use of bicyclists through use of pavement markings and signage. They are typically used on streets with moderate travel speeds and volumes.

A **buffered bike lane** is a conventional bike lane paired with a designated horizontal painted buffer space, separating the bike lane from the vehicle travel lane and/or parking lane. This treatment may be used on streets with 3-5 travel lanes with moderate travel speeds and volumes.

A **one-way protected bike lane** is a physically separated bike lane that allows bicycle movement in one direction on one side of the street. Physical separation from vehicular travel can include bollards, planter strips, extruded curbs, or on-street parking lanes. It is typically used on streets with high travel speeds and volumes, high truck traffic, areas of high parking turnover and/or to mitigate intersections with high conflicts.

A **two-way protected bike lane** is a physically separated bike lane that allows bicycle movement in both directions on one side of the street. Physical separation from vehicular travel can include bollards, planter strips, extruded curbs, or on-street parking lanes. This treatment is typically used on streets with high travel speeds and volumes.

A **contraflow bike lane** is a designated bike lane to allow bicyclists to ride in the opposite direction of vehicle traffic, converting a one-way traffic street into a two-way street for bicycles. This type of bike lane is typically used on streets where large numbers of bicyclists currently ride the wrong direction, where alternate routes require excessive out of direction travel, or alternate routes are unsafe for bicycling.

**Neighborhood bikeways (bike boulevards)** are low volume, low speed streets which are modified to enhance bicycle safety and comfort using design treatments such as signage, pavement markings, speed and/or volume reduction features, and crossing improvements. Neighborhood bikeways are typically used on streets with lower travel speeds and volumes, streets parallel to major thoroughfares, and streets that follow a desire line for bicycle travel.
**Pedestrian Improvements**

Improvements for pedestrians directly address sidewalk needs to enhance pedestrian safety and access to the BRT stations. These types of treatments are:

- New sidewalk installation
- Sidewalk widening

*Sidewalk installation* is necessary where gaps in the current sidewalk infrastructure exist. Sidewalks should be provided on both sides of urban streets, vertically separated from moving traffic and ideally have a horizontal buffer from moving traffic. Sidewalk installation is recommended in areas where there are gaps in sidewalk connectivity.

*Sidewalk widening* should expand sidewalks to be a minimum of 5 feet wide. In areas with high pedestrian volumes, sidewalks should be widened where possible to allow pedestrian through circulation space. This treatment is typically used at intersections, midblock crossings, and transit stops, areas of high pedestrian demand, and areas where bicyclists are expected to share the sidewalk with pedestrians. For sidewalk widening applications in Aurora, the City’s Urban Street Standards should be utilized.
Shared-Use Improvements

Utilizing space shared by both pedestrians and bicyclists, shared-use improvements directly address gaps in connectivity and key crossings to enhance bicycle and pedestrian safety, navigability and access to BRT stations. Examples of these types of treatments include:

- Shared-use sidewalk
- Enhanced treatment crosswalks

A shared-use sidewalk can provide great access on streets with high volume, high speed vehicle traffic, and limited space for a conventional or protected bike lane. In such circumstances, bicycles may need to use the sidewalk with pedestrians. In these areas, the sidewalk should be widened if possible. Shared-used sidewalks are typically used in areas where bicyclists only need to share the sidewalk for a short distance to reach a destination or connect to another facility.

Standard crosswalks, which may be either transverse or continental, are painted across a roadway to designate a pedestrian crossing. These crosswalks are typically used at signalized intersection on every leg of the intersection, unless pedestrians are prohibited from a section of the roadway and at midblock crossings with high pedestrian or bicycle volumes.
AT THE STATION

The project team grouped potential short term strategies to improve access at the BRT stations into three categories: station amenities, marking/signage improvements and crossing improvements. While these strategies generally improve access for pedestrians and bicyclists, they are not recommended at every station given the specific physical characteristics, expected volume of pedestrians and bicyclists, cost, tradeoffs to drivers, and direct impact to the BRT station. Solutions consist of concrete paving, curb improvements, signage, and striping—all within the City right-of-way.

Station Amenities

Amenities at the BRT stations are intended to improve the station experience for riders and encourage multimodal access and general BRT ridership. The strategies considered by this study are:

- Inverted U-rack bike racks
- Bike lockers

**Inverted U-rack bike racks** provide a structure for parking and securing a bike within the station area. These types of racks were considered in locations with limited space within the planned station area and an anticipated need for bike parking.

**Bike lockers** provide locations for secure, long-term bike parking with restricted access and protection from the elements and theft. The recommendations for lockers consider the available space within the planned station area, the anticipated bicyclist volume and need for long-term bike parking.
## Signage and Pavement Marking Improvements

Signage and marking improvements clearly differentiate space for the different users (bicyclists versus pedestrians versus vehicular drivers) and improve navigation through the station area. The strategies considered by this study are:

- Flashing yellow arrow
- Protected-only right turn (red arrow)
- Bike box
- Pedestrian signal timing improvements
- Shared sidewalk markings
- Green and crossing pavement markings
- Sign: “Turning vehicles yield to peds”
- Sign: “2 Way Crossing”, often placed with a yield sign
- Sign: “Cross at Crosswalk”
- Station wayfinding signs

### Description of Strategies

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flashing yellow arrow</strong></td>
<td>A vehicular signal to communicate to drivers to yield to crossing pedestrians and oncoming vehicles during the crossing phase. Stations with relatively high projected ridership and intersections would typically have this recommendation.</td>
<td></td>
</tr>
<tr>
<td><strong>Protected-only right turn (red arrow)</strong></td>
<td>A protected-only vehicular right-turn signal phase and phase for pedestrians and bicyclists to cross without vehicular conflict. This treatment is considered for recommendation at stations with higher projected ridership and intersections with exclusive right turn lanes.</td>
<td></td>
</tr>
<tr>
<td><strong>Bike box</strong></td>
<td>A pavement marking to indicate location for bicyclists to wait at an intersection in front of vehicles. This treatment is typically recommended at stations with a relatively high number of anticipated bicyclists to facilitate direct bicycle access to the station while reducing conflict with vehicles at a signal.</td>
<td></td>
</tr>
<tr>
<td><strong>Pedestrian signal timing improvements</strong></td>
<td>Provide better pedestrian crossings, and can include leading pedestrian interval and exclusive crossings. Signal timing improvements would typically be recommended at stations with higher projected ridership, but not necessarily with exclusive right turn lanes.</td>
<td></td>
</tr>
<tr>
<td><strong>Shared sidewalk markings</strong></td>
<td>Pavement markings on the sidewalk that complement appropriate signage to communicate where bicyclists and pedestrians should use the sidewalk (includes the separation as well as mixing). This is typically recommended at stations that require more than a block to access the station.</td>
<td></td>
</tr>
</tbody>
</table>

---

[Image for visual representation of strategies]
To improve access through intersections, **green and crossing pavement markings** communicate where bicyclists should use the roadway at approaches and through intersections. Green and crossing pavement markings are usually recommended at stations with adjacent existing or planned bicycle facilities as well as stations that have a high percentage of nearby bicycle crashes.

The **“Turning vehicles yield to peds” sign** increases drivers’ awareness of pedestrians in the crosswalk. This sign is recommended at stations with higher projected ridership and dedicated turn lanes.

The **“2 way crossing” sign** alerts drivers of pedestrians and bicyclists from either side of crosswalk. This sign is recommended at station area intersections with free right turn lanes.

The **“Cross at Crosswalk” sign** directs pedestrians to cross street at crosswalk. This sign is recommended at midblock stations.

**Station wayfinding signs** are intersection signage to direct pedestrians and bicyclists to stations and bike parking. These signs are recommended at every station.
**Crossing Improvements**

Intersection crossing improvements are intended to increase the safety of all users through the intersections immediately adjacent to the station. The strategies considered by this study are:

- Concrete median
- Median extension
- Perpendicular alignment of crosswalk
- Enhanced crossing treatments
- New crosswalk marking

**Concrete median** is a raised median area in the center of roadway to act as a pedestrian/bicyclist refuge. This is recommended at stations with relatively high projected ridership and intersections with available space and anticipated need due to intersection operations.

**Median extension** extends an existing raised median past crosswalk area. This treatment is recommended at stations with relatively high projected ridership and intersections with available space.

**Perpendicular alignment of crosswalk** realigns existing crosswalks to be perpendicular to the intersection approach. This may be recommended at the station area intersections with geometry that allows perpendicular crosswalks and where other geometric changes to the intersection require the realignment.

**Enhanced crossing treatments** provide colored or textured crosswalk pavement markings for increased driver awareness of pedestrians/bicyclists. This treatment may be used at stations with relatively high projected ridership.
Standard crosswalks, which may be either transverse or continental, are painted across a roadway to designate a pedestrian crossing. These crosswalks are typically used at signalized intersection on every leg of the intersection, unless pedestrians are prohibited from a section of the roadway and at midblock crossings with high pedestrian or bicycle volumes.

A pedestrian curb extension is an expanded area at intersection corners to provide a larger pedestrian area and shorter crossing distance. This treatment would be recommended at stations with higher projected ridership and intersections with available space.

Countdown pedestrian signals are pedestrian signals that show time left for pedestrian crossing. This treatment would be considered for recommendation at all stations if not already present.
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CHAPTER 5 RECOMMENDATIONS

To examine pedestrian and bicycle improvement strategies for the Colfax BRT stations, this study examined the design elements at the stations and adjacent intersections for pedestrians and bicyclists, improvements along north-south routes to provide better access to/from stations, and concepts for improved east-west bicycle access related to the identified north-south routes.

This chapter describes the concept-level recommendations for access improvements to the station and at the station. The implementation of the recommended treatments and strategies outlined in this report will require further evaluation during subsequent stages of design with the BRT project or a separate improvement project.

EAST-WEST BIKE ACCESS

Concepts for improved east-west bicycle access were identified to provide better access to/from the Colfax BRT stations. The concepts were evaluated to consider the need for enhanced facilities, intersection modifications, and roadway configuration challenges, as well as costs. The implementation station access was developed based largely on Denver Moves: Enhanced Bikeways and the Aurora Bicycle and Pedestrian Master Plan recommendations. The identified routing assumes that bicyclists will typically access Colfax BRT stations via short, north-south connections from east-west bicycle routes. While evaluating the to the station recommendations, the project team identified east-west areas of particular interest to BRT, due to the lack of a consistent east-west bicycle connection near Colfax Avenue. Identified east-west bicycle routes running parallel to Colfax Avenue include:

- 15th Street (Glenarm Place to Broadway)
- E 16th Avenue (Broadway to City Park Esplanade and Detroit St to Harrison St)
- E 17th Avenue (City Park Esplanade to Detroit St and Colorado Blvd to Wheeling Street)
- W 11th Avenue (Osage Street to Humboldt Street)
- E 12th Avenue (Humboldt Street to Yosemite Street)
- E 13th Avenue (Yosemite Street to Xanadu Street)

16th Avenue and 17th Avenue were identified as the closest potential east-west bicycle corridors. Between Broadway and Colorado Boulevard, the primary recommended east-west connection is on 16th Avenue. From Colorado Boulevard to Yosemite, 17th Avenue has been identified as the recommended primary east-west connection. A few other locations were examined in closer detail to determine the best east-west routing: navigating East High School from Colfax Ave/Columbine Street on City Park Esplanade and 17th Avenue and Colorado Boulevard. Full recommendations can be found in Appendix C.
TO THE STATION
Routing and potential treatments for bicyclists and pedestrians accessing the BRT stations are based on recommendations identified in related planning initiatives, field observations, existing right-of-way, and available traffic volume and speed data. See Chapter 3 for more information on data used to inform recommendations.

The identified routing recommendations assume that bicyclists will typically access the Colfax BRT stations via short north-south connections from crosstown east-west bicycle routes.

With the exception of a few areas, sidewalks generally exist throughout the corridor area and provide pedestrian connections to the stations. Crossing enhancements are recommended at most of the route crossings at 12th Avenue, 13th Avenue and 14th Avenue.

The City and County of Denver will designate applicable Colfax Avenue sidewalks accessing the stations as “sidewalk riding routes” to make riding on the sidewalk legal for bicyclists in locations where a Colfax Avenue traverse is recommended. Sidewalk riding is legal everywhere in Aurora.

Wayfinding signage is recommended for all proposed bicycle and pedestrian routes. Enhanced wayfinding is recommended at anticipated bicycle and pedestrian high ease-of-use stations (Mariposa Street, 14th Street, Broadway, Steele Street, Eudora Street, Krameria Street, and Uinta Street).

AT THE STATION
Recommendations for treatments and strategies at each station depend on projected ridership, stop location, adjacent land uses, traffic operation analysis, bicycle connections, and available crash data. Pedestrian countdown signals and station wayfinding signs are recommended at every station along the BRT corridor due to the increased number of pedestrians expected and the focus on improving access to the stations. Inverted-U racks are recommended for every station except the eastbound stop at Aurora Court, where existing bike racks are expected to meet demand.

Strategies were considered to provide better access at stations with relatively high projected ridership and safety concerns due to potential conflicts. Pedestrian signal timing improvements were recommended at locations with benefits to crossing pedestrians while not creating notable delays for motor vehicles. Various crosswalk improvements (e.g., perpendicular alignment of crosswalk and enhanced crossing treatments) were recommended at stations with high ridership and/or near areas with safety concerns.

Pedestrian signal timing improvements were analyzed with a comparison between benefits to crossing pedestrians versus potential additional vehicular and BRT delay. Various crosswalk improvements improve the crossing experience (e.g., perpendicular alignment of crosswalk and enhanced crossing treatments). These strategies provide better access at stations with relatively high projected ridership and safety concerns due to potential conflicts.

The recommendations are described on the following pages by station with details for improvements at the station and to the station. Improvements at the station focus on enhancing the pedestrian experience while the improvements leading to the station focus on enhancing the bicycle experience. Improvements are illustrated on a map for each station. Recommendations for treatments and strategies at each station are summarized in a matrix in Appendix D. The details and recommendations for each station are subject to change as further analysis and evaluation for each station continues with design development for the BRT project or a separate improvement project.
MARIPOSA STATION

(High Ease-of-Use Station)

As the first stop for eastbound BRT riders, the last stop for westbound BRT riders and a transfer opportunity with light rail, this stop serves as an important connection along the Colfax BRT. Given that this area already provides access to the light rail station, improvements include adding more amenities for bicyclists who may use existing bike lanes (and a recommended extension to Colfax Avenue) to access the BRT station. Since all riders will travel in the eastbound direction on the BRT service, more bike lockers and racks have been recommended for the eastbound stop. Due to a nearby project at the Colfax/ Mariposa intersection, the improvements for bicyclists will focus on Mariposa Street and the improvements for pedestrians will focus on Lipan Street. Existing sidewalks will provide pedestrian access to the station.

At the Station Improvements

- Bike lockers
- Inverted U-racks
- Bike box – on Mariposa Street
- Shared sidewalk markings
- Green and crossing pavement markings
- “Turning vehicles yield to peds” sign
- Wayfinding signs
- Median extension
- Enhanced crossing treatments – To complement the current work at Colfax/Lipan, high visibility crossings recommended at the Colfax/Lipan intersection
- New crosswalk marking - To encourage pedestrian crossings at Colfax/Lipan, a new crosswalk is recommended for the west leg of the intersection
- Pedestrian curb extension

13TH STREET STATION

Although close to the Mariposa station, the 13th Street station will draw riders traveling eastbound to Aurora. Improvements for crossing bicyclists and pedestrians are recommended at this station due to the higher projected ridership as well as a high percentage of crashes involving pedestrians in this area. This includes green and crossing pavement markings for bicyclists and enhanced crossing treatments for pedestrians. Existing bike lanes on Glenarm Place and Tremont Place and the recommended Delaware Street contraflow bike lane will enhance bicycle access to the BRT station. As riders will travel in the eastbound direction on the BRT service, more bike lockers and racks were recommended for the eastbound stop. Existing sidewalks will provide pedestrian access to the station.

At the Station Improvements

- Bike lockers
- Inverted U-racks
- Green and crossing pavement markings
- Sign: “Cross at crosswalk”
- Wayfinding signs
- Median extension
- Perpendicular alignment of crosswalk
- Enhanced crossing treatments

To the Station Improvements

- Existing bike lanes on Glenarm Place (southbound and northbound) and Tremont Place (southbound)
- Delaware Street shown as “needs feasibility analysis” in Denver Moves
- Consider a Delaware Street contraflow bike lane to the south (similar to Bannock); Delaware Street bike facilities would require removal of parking or travel lane

- Extend Glenarm Place bike lane to intersection
- Recommended implementation with Denver Moves phasing plan
- Pedestrians use existing sidewalks

To the Station Improvements

- Existing bike lanes on Mariposa Street
- Extend bike lanes on Mariposa Street to intersection
- Recommended implementation with BRT project
- Pedestrians use existing sidewalks in the area
**14TH STREET STATION**  
*(High Ease-of-Use Station)*

The two midblock stops at the 14th Street Station offer direct access to/from the BRT for City and County of Denver employees working in the Webb Building as well as nearby access to the Denver County Courthouse, city hall and other municipal buildings. Given the connection to a number of existing bicycle facilities (the Bannock raised protected bike lane, 15th Street protected bike lane and 14th Street bike lane), station recommendations include green and crossing pavement markings to communicate where bicyclists and pedestrians should navigate through the intersection. This will also reduce safety concerns—especially between pedestrians and bicyclists—since about two percent of all crashes in this area involve bicyclists. The multiple access points will provide bicyclists with multiple options for accessing the 14th Street Station. Existing sidewalks will provide pedestrian access to the station.

**At the Station Improvements**
- Inverted U-racks
- Shared sidewalk markings
- Green and crossing pavement markings
- Sign: “Turning vehicles yield to ped’s”
- Sign: “2 Way Crossing”
- Sign: “Cross at crosswalk”
- Wayfinding signs
- Median extension
- Enhanced crossing treatments

**To the Station Improvements**
- Existing bike lane and raised protected bike lane on Bannock Street
- Existing northbound protected bike lane on 15th Street
- Proposed protected bike lane (enhancement from existing separated bike lane) will be installed in 2016
- Pedestrians use existing sidewalks in the area

---

**BROADWAY STATION**  
*(High Ease-of-Use Station)*

The eastbound and westbound stops at Broadway serve a number of routes and attract many riders. Even without BRT service, both stops are currently heavily utilized. In an effort to make crossings easier and reduce the potential for crashes, crossing improvements are recommended for both pedestrians and bicyclists. In addition to enhanced crossing treatments, pedestrian signal timing improvements are recommended for this station as a potential solution for maximizing the time for people to cross the intersections. The City and County of Denver is currently undergoing a study on Broadway that will include bicycle facility recommendations. The potential Broadway two-way protected bike lanes will likely draw increased riders arriving by bike. Due to high pedestrian volumes and existing security issues at this station, bike lockers are recommended at this station with the BRT project. Existing sidewalks will provide pedestrian access to the station.

**At the Station Improvements**
- Bike lockers
- Inverted U-racks
- Pedestrian signal timing improvements
- Shared sidewalk markings
- Green and crossing pavement markings
- Sign: “Turning vehicles yield to ped’s”
- Wayfinding signs
- Enhanced crossing treatments

**To the Station Improvements**
- Broadway shown as “needs feasibility analysis” in Denver Moves
- Assumes a two-way facility on Broadway will serve station and will require parking and/or lane removal
- Broadway study currently underway
- Recommended implementation with BRT project following Denver Moves
- Pedestrians use existing sidewalks in the area
**GRANT STATION**

Improvements at the Grant Station focus on providing a seamless experience between the recommended bicycle facility on Grant Street and the BRT stops. The recommended Grant Street two-way protected bike lane will enhance bicycle access to the BRT station. This is the first eastbound stop along the corridor without lockers recommended. Existing sidewalks will provide pedestrian access to the BRT station.

**At the Station Improvements**
- Inverted U-racks
- Green and crossing pavement markings
- Sign: “Turning vehicles yield to peds”
- Wayfinding signs
- Perpendicular alignment of crosswalk
- Enhanced crossing treatments
- Pedestrian push buttons

**To the Station Improvements**
- Two-way protected bike lane on Grant requires repurposing a travel lane or parking lane, per Denver Moves
- Recommended implementation with Denver Moves phasing plan
- Pedestrians use existing sidewalks in the area

**DOWNING STATION**

The Downing Station projected ridership is expected to be just over 2,000 daily boardings. Enhanced pedestrian crossings and pedestrian curb extensions will improve the pedestrian environment. The existing Ogden Street signed bicycle route to the south and recommended Downing Street two-way protected bike lanes running north from Colfax Avenue to 16th Avenue will enhance bicycle access to the BRT station. Existing sidewalks will provide pedestrian access to the BRT station. A bus bulb out will provide additional space at the eastbound stop with relatively restricted space.

**At the Station Improvements**
- Bike lockers
- Inverted U-racks
- Sign: “Turning vehicles yield to peds”
- Wayfinding signs
- Enhanced crossing treatments
- Pedestrian curb extension
- Pedestrian push buttons

**To the Station Improvements**
- Existing signed route on Ogden Street, south of Colfax
- Consider a two-way protected bike lane on Downing between Colfax and 16th Avenue; would require travel lane repurposing or parking removal
- Recommended implementation with Denver Moves phasing plan
- Pedestrians use existing sidewalks in the area
J O S E P H I N E S T A T I O N

The installation of bus bulb outs will provide additional space for the over 2,000 daily projected boardings at the Josephine Station. Green and crossing pavement markings will provide bicycle improvements at the intersection to help all users navigate the crossing. The recommended City Park Esplanade one-way protected bike lanes and Gaylord Street neighborhood bikeway will enhance bicycle access to the BRT station. Existing sidewalks will provide pedestrian access to the BRT station.

A t t h e S t a t i o n I m p r o v e m e n t s

- Inverted U-racks
- Pedestrian signal timing improvements
- Green and crossing pavement markings
- Wayfinding signs
- Pedestrian curb extension
- Pedestrian push buttons

T o t h e S t a t i o n I m p r o v e m e n t s

- Existing bike lanes on City Park Esplanade
- One-way protected bike lanes shown on Esplanade in Denver Moves
- Consider on west side of Columbine St a 2-way protected bike lane
- Consider a raised 2-way protected bike lane on south side of 17th Avenue and west side of Detroit Street would require curb and inlet relocation, tree removal and parking removal

- Recommended implementation with BRT project
- Pedestrians use existing sidewalks in the area

S T E E L E S T A T I O N

(High Ease-of-Use Station)

A number of pedestrian improvements were identified for this intersection, including: shared sidewalk markings, median extension, enhanced crossing treatments and pedestrian curb extensions. These improvements will provide an improved pedestrian environment for access to the Steele Station. Current bicycle access along Steele Street, a signed bicycle route, will be further enhanced with the upcoming signal installation at the intersection and the recommended neighborhood bikeway along Saint Paul Street. Existing sidewalks will provide pedestrian access to the BRT station.

I m p r o v e m e n t s i d e w a l k s w i l l p r o v i d e p e d e s t r i a n a c c e s s t o t h e B R T s t a t i o n . E x i s t i n g s i d e w a l k s w i l l p r o v i d e pedestrian access to the BRT station. Improvements identified at the station include both types of bike parking (lockers and inverted U-racks) as well as pavement marking improvements for bicyclists and pedestrians.

A t t h e S t a t i o n I m p r o v e m e n t s

- Bike lockers
- Inverted U-racks
- Bike box
- Shared sidewalk markings
- Green and crossing pavement markings
- Wayfinding signs
- Median extension
- Enhanced crossing treatments
- Pedestrian curb extension

T o t h e S t a t i o n I m p r o v e m e n t s

- Existing signed route on Steele Street
- Signal and bicycle facility implementation will take place in 2016/2017
- Pedestrians use existing sidewalks in the area
### COLORADO STATION

The eastbound bus bulb out provides additional space for the almost 2,500 of projected daily boardings. As an existing large and complicated intersection, modifications were recommended to improve access for BRT riders. Shared sidewalk markings will communicate to pedestrians and bicyclists the shared nature of the space. Enhanced crossing treatments will improve safety for crossing pedestrians. The median extensions will need to be examined further given the tendency for people to use the space for panhandling. The recommended Garfield Street neighborhood bikeway will enhance bicycle access to the BRT station. Existing sidewalks will provide pedestrian access to the BRT station. Along Colorado Boulevard north of Colfax Avenue, it is assumed that pedestrians will use the sidewalks on the west side of the street.

### At the Station Improvements
- Inverted U-racks
- Shared sidewalk markings
- Wayfinding signs
- Median extension
- Perpendicular alignment of crosswalk
- Enhanced crossing treatments
- Pedestrian curb extension
- Pedestrian bush buttons

### EUDORA STATION

*(High Ease-of-Use Station)*

Lower ridership at this station (about 1,000 daily projected boardings) indicates less potential conflicts between people accessing the BRT station and drivers. Bus bulb outs for the eastbound and westbound stops will increase space for people waiting for the BRT, as well as pedestrians and bicyclists passing through the area. Green and crossing pavement markings will connect bicyclists to the BRT station. Existing sidewalks will provide pedestrian access to the BRT station. Sidewalk installation on the east side of Eudora is recommended across the E 17th Avenue median.

### At the Station Improvements
- Inverted U-racks
- Green and crossing pavement markings
- Wayfinding signs
- Median extension
- Pedestrian curb extension

### To the Station Improvements
- Recommended implementation with BRT project
- Pedestrians use existing sidewalks in the area
- Sidewalk across E 17th across median recommended
KRAMERIA STATION

*(High Ease-of-Use Station)*

The eastbound bus bulb out will provide expanded space for riders to wait for the bus. Although the Krameria Station is projected to have lower ridership than other stations, enhanced crossing treatments will improve conditions for people crossing and alert drivers to the likelihood of pedestrians. The recommended Krameria Street and N Kearney Street neighborhood bikeways and E 17th Avenue bicycle crossing treatment will enhance bicycle access to the BRT station. Existing sidewalks will provide pedestrian access to the BRT station. Sidewalk installation is recommended across the median at E 17th Avenue on the east side of Krameria.

**At the Station Improvements**

- Inverted U-racks
- Pedestrian signal timing improvements
- Green and crossing pavement markings
- Sign: “Turning vehicles yield to peds”
- Wayfinding signs
- Enhanced crossing treatments

**To the Station Improvements**

- Existing signed route on Krameria Street
- Krameria St shown as a bike lane/neighborhood bikeway in Denver Moves
- Bicycle crossing treatment recommended at E 17th Avenue
- Bicycle facility implementation will take place in 2016
- Connect missing pedestrian facility gaps across median of Krameria Street at 17th Avenue

MONACO STATION

Although most stations with high capacity for bicycle parking occur at the west end of service and the east end of service, it is recommended for this stop to have more bike parking than usual to provide an opportunity for people who start their trip in the middle of Colfax Avenue. Existing sidewalks will provide pedestrian access to the BRT station. Sidewalk installation is recommended where select gaps currently exists, which encourages access from an established neighborhood to the BRT corridor.

**At the Station Improvements**

- Bike lockers
- Inverted U-racks
- Green and crossing pavement markings
- Wayfinding signs
- Perpendicular alignment of crosswalk
- New crosswalk marking
- Pedestrian curb extension

**To the Station Improvements**

- Monaco Parkway recommended as buffered bike lanes in Denver Moves which would require parking removal
- Recommended implementation following Denver Moves
- Connect select missing pedestrian facility gaps
Quebec Station

The Quebec Street Station will experience relatively low daily projected boardings at about 500. For this reason, most of the improvements identified at this station provide basic access to the stops. Other improvements are scheduled for the roadway and may include recommendations for a shared use sidewalk. Existing and proposed sidewalks will provide pedestrian access to the BRT station. Sidewalk installation is recommended where a gap currently exists between Colfax Avenue and 17th Avenue on Quebec Street.

At the Station Improvements

- Inverted U-racks
- Pedestrian signal timing improvements
- Green and crossing pavement markings
- Sign: “Turning vehicles yield to peds”
- Wayfinding signs
- Perpendicular alignment of crosswalk
- Pedestrian curb extension

To the Station Improvements

- Quebec Street shown as “needs further study” in Denver Moves
- Primarily 28’ wide through study area
- Study currently underway, recommending shared use sidewalk
- Recommended implementation with BRT project
- With Quebec Street reconstruction project connect missing pedestrian facility gaps along Quebec Street between Colfax Avenue and 17th Avenue

Uinta Station

*(High Ease-of-Use Station)*

Although Uinta Station will have one of the lowest daily projected ridership of all stations, many of the recommended treatments are intended to improve safety for pedestrians. The enhanced crossing treatments, pedestrian curb extensions and bus bulb outs will improve the pedestrian environment. The recommended Uinta Street neighborhood bikeway will enhance bicycle access to the BRT station. In an effort to guide bicyclists through the intersection, green and crossing pavement markings are also recommended. Existing sidewalks provide pedestrian access to the BRT station. Sidewalk installation is recommended where a gap currently exists between 13th Avenue and 17th Avenue on Uinta Street.

At the Station Improvements

- Inverted U-racks
- Green and crossing pavement markings
- Wayfinding signs
- Enhanced crossing treatments
- Pedestrian curb extension

To the Station Improvements

- Recommended implementation with BRT project
- Connect missing pedestrian facility gaps along Uinta Street between 13th Avenue and 17th Avenue
YOSEMITE STATION
The westbound stop falls within the City and County of Denver and the eastbound stop falls within the City of Aurora. The westbound stop is located at the farside of the intersection and with the proposed bus bulb out, will provide an expanded space for riders to wait for the bus. A number of recommendations to enhance the safety of bicyclists and pedestrians have been identified for this station, including green and crossing pavement markings and enhanced crossing treatments. The recommended Yosemite Street bike lane will enhance bicycle access to the BRT station. Existing off-street paths and sidewalks provide pedestrian access to the BRT station. Sidewalk installation is recommended where a gap currently exists between 14th Avenue and Colfax Avenue on Yosemite Street (within CCD). Pedestrian and bicycle connections will be further enhanced by proposed trail connection to Montview Park with linkage into north Stapleton.

At the Station Improvements
- Bike lockers
- Inverted U-racks
- Pedestrian signal timing improvements
- Green and crossing pavement markings
- Sign: “Turning vehicles yield to peds”
- Wayfinding signs
- Enhanced crossing treatments
- Pedestrian curb extension
- Pedestrian push buttons

To the Station Improvements
- Yosemite Street shown as bikeway (for portions) in Aurora bike plan and Denver Moves which would require parking removal
- Proposed path connects north end of Aurora Street with E 17th Avenue
- Recommended implementation following Denver Moves and Aurora Plan
- Connect missing pedestrian facility gaps along Yosemite Street between 14th Avenue and Colfax Street (Denver side)

DAYTON STATION
Aurora has identified Dayton Street as a multimodal corridor for future improvements to encourage all modes, which will likely encourage more bicyclists to this station. To alert drivers to additional pedestrians in the area, the “turning vehicles yield to peds” sign is recommended. The recommended Dayton Street and Emporia Street neighborhood bikeways will enhance bicycle access to the BRT station. Existing sidewalks and City Park trail will provide pedestrian access to the BRT station. All conceptual improvements at Dayton Station are subject to Aurora’s park master planning process, as the station is located at Fletcher Plaza, a city park.

At the Station Improvements
- Bike lockers
- Inverted U-racks
- Sign: “Turning vehicles yield to peds”
- Wayfinding signs

To the Station Improvements
- Existing signal at Emporia Street mid block crossing
- Emporia Street is a non-motorized connection through two pedestrian plazas
- Utilizes paths within City Park to the north
- Dayton Street is a future “multi-modal” shared corridor
- Pedestrians use existing sidewalks in the area (and will use improvements identified through the upcoming multimodal corridor work scheduled for Dayton Street)
HAVANA STATION

Although Havana Station is projected to have about 1,100 daily boardings, there are limited bicycle connections to this station. To alert drivers to additional pedestrians in the area, the “turning vehicles yield to peds” sign is recommended. The recommended Geneva Street and Ironton Street neighborhood bikeways will enhance bicycle access to the BRT station. Existing sidewalks will provide pedestrian access to the BRT station.

At the Station Improvements
- Inverted U-racks
- Sign: “Turning vehicles yield to peds”
- Wayfinding signs

To the Station Improvements
- Assumes no parking removal is possible to the north
- Geneva Street is proposed as a bike boulevard, per Aurora bike plan
- Pedestrians use existing sidewalks in the area

MOLINE STATION

Pedestrian signal timing improvements to maximize the time for people to cross the intersection is recommended for this station, given that this station is projected to draw a number of riders (over 2,800 daily boardings). Delineation and signage for bicyclists and pedestrians to share the sidewalk is not recommended given that Moline Street is a bike facility. The recommended Moline Street neighborhood bikeway will enhance bicycle access to the BRT station. Existing sidewalks will provide pedestrian access to the BRT station.

At the Station Improvements
- Inverted U-racks
- Pedestrian signal timing improvements
- Wayfinding signs

To the Station Improvements
- Moline Street recognized in Aurora plan as a key north-south bike route
- Pedestrians use existing sidewalks in the area
This document describes existing and proposed routing to and from future Colfax BRT stations for pedestrians and bicyclists.

**PEORIA STATION**

Due to the larger intersection and many turning movements, enhanced crossing treatments and signs alerting drivers to expect pedestrians and bicyclists are recommended. Recommended considerations for bicycles include the Oswego Street neighborhood bikeway and Peoria Street and Colfax Avenue multi-use paths to enhance access to the BRT station. Existing sidewalks and potential multi-use paths will provide pedestrian access to the BRT station.

**At the Station Improvements**

- Inverted U-racks
- Sign: “Turning vehicles yield to peds”
- Sign: “2 way crossing”
- Wayfinding signs
- Enhanced crossing treatments

**To the Station Improvements**

- No connecting roadways to the east or west through “super blocks”
- Consider potential future sidewalk/multi-use path as shown
- Pedestrians use existing sidewalks in the area
- Utilizes paths within Generals Park

**SCRANTON STATION**

This westbound stop provides direct access to the Anschutz Medical Center. Very few treatments were identified for this stop since people will not have to navigate an intersection to access the BRT from the medical center. To alert drivers to additional pedestrians in the area, the “turning vehicles yield to peds” sign is recommended for the right out access located near the Scranton station. Existing sidewalks and internal pathways on the medical center campus will provide pedestrian access to the BRT station.

**At the Station Improvements**

- Bike lockers
- Inverted U-racks
- Sign: “Turning vehicles yield to peds”
- Wayfinding signs

**To the Station Improvements**

- No crossing of E Colfax Avenue at this location
- Anschutz connections on internal pathways
- Pedestrians use existing sidewalks in the area
**AURORA STATION**

Projected ridership is estimated to increase from approximately 1,000 daily boardings to over 5,000 daily boardings. The recommended Ursula Street neighborhood bikeway will enhance bicycle access to the BRT station. Existing sidewalks and internal pathways on Anschutz Campus will provide pedestrian access to the BRT station.

**To the Station Improvements**
- Bike lockers
- Inverted U-racks
- Sign: “2 way crossing”
- Wayfinding signs

**To the Station Improvements**
- Anschutz connections on internal pathways
- Utilizes existing pedestrian overpass
- Pedestrians use existing sidewalks in the area

**POTOMAC STATION**

Bicycle lockers are only recommended at the westbound stop since the eastbound stop is the last stop in the east direction. To alert drivers to additional pedestrians in the area, the “turning vehicles yield to peds sign” is recommended. The recommended Xanadu Street/Wheeling Street neighborhood bikeways and Toll Gate Creek Trail extension will enhance bicycle access to the BRT station. Existing sidewalks and the regional trail extension will provide pedestrian access to the BRT station.

**To the Station Improvements**
- Bike lockers
- Inverted U-racks
- Sign: “Turning vehicles yield to peds”
- Wayfinding signs

**At the Station Improvements**
- Existing light rail station
- Proposed bicycle improvements on Xanadu Street and Wheeling Street
- Construction planned to start in late 2016 to close the gap in the Toll Gate Creek Trail between Montview Blvd and Chambers Road
- Pedestrians use existing sidewalks in the area
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CHAPTER 6  CONCLUSIONS

The project team developed conceptual designs for three stations and developed conceptual-level costs for the improvement recommendations at each station.

These conceptual designs were developed to illustrate example layouts of the BRT stations, as well as to estimate general costs associated with the improvements.

CONCEPTUAL DESIGNS
The conceptual designs provide general guidance on placement for the identified recommendations for the Downing Station, Colorado Station and Dayton Station.

These three stations provide examples for the application of the study recommendations at typical corridor stations representing each of the typologies. The recommendations are illustrated on the aerial graphics of the station areas originally created for the larger Colfax Corridor Connections study.
As seen in Figure 3, enhanced pedestrian crossings and pedestrian curb extensions provide improvements for pedestrians crossing this intersection to access the BRT stops. The two-way protected bike lane that provides access along Downing Street from Colfax Avenue to 16th Avenue provides direct access for bicyclists who wish to bike to the Downing Station.

**Figure 3. Downing Station Conceptual Design**
Colorado Station

Similar to the improvements highlighted at the Downing Station, the Colorado Station, as seen in Figure 4, includes enhanced pedestrian crossings as well as pedestrian curb extensions. Perpendicular alignment of the crosswalks will also improve the pedestrian environment.

Figure 4. Colorado Station Conceptual Design
Dayton Station

The Dayton Station (in Figure 5) will provide improvements will provide bicycle parking at both the eastbound and westbound stops. Pedestrian curb extensions and perpendicular alignment of crosswalks will improve the pedestrian environment.

*Figure 5. Dayton Station Conceptual Design*

*Note: The conceptual improvements at Dayton Station are subject to Aurora’s park master planning process, as the station location is at Fletcher Plaza, a city park.*
STATION COSTS
Conceptual-level costs were developed for the recommendations based on order of magnitude cost estimates (as seen in Table 2). The estimates generally include labor and material costs and are based on previous projects completed by CCD, as well as national research from a number of sources. Mobilization and construction contingencies will need to be added as these recommendations are compiled into construction packages. Figure 6 shows the Colfax BRT Stations.

Table 2. Station Costs

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Figure 6. Colfax BRT Station Map

NEXT STEPS
This report outlines recommendations to improve pedestrian and bicycle access to and at the BRT stations to be constructed with the Colfax Corridor Connections project. The recommendations focus on improvements that can be funded in the near term with the BRT project, but also provide a framework to inform City and County of Denver and City of Aurora staff for future longer term studies and design that may occur as funding is available.

The pedestrian and bicycle recommendations from this study address the goal of improving multimodal access to and at the BRT stations. The specific treatments and applications will be examined further for each location during the future project design phase and may be implemented as funding becomes available with the BRT project or as separate improvement projects.
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### RESULTS OF PUBLIC MEETING QUESTIONNAIRE

#### Top Strategies Identified through Outreach

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<tr>
<td>Bike Parking</td>
<td>19</td>
<td>6</td>
<td>1</td>
<td>26</td>
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<tr>
<td>Crosswalk markings</td>
<td>18</td>
<td>3</td>
<td>4</td>
<td>25</td>
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</tr>
<tr>
<td>Bicycle intersection markings</td>
<td>12</td>
<td>5</td>
<td>3</td>
<td>20</td>
<td>8%</td>
</tr>
<tr>
<td>Curb improvements</td>
<td>15</td>
<td>3</td>
<td>1</td>
<td>19</td>
<td>7%</td>
</tr>
<tr>
<td>Wayfinding</td>
<td>11</td>
<td>3</td>
<td>2</td>
<td>16</td>
<td>6%</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>4</td>
<td>1</td>
<td>12</td>
<td>5%</td>
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<tr>
<td>Shared sidewalk markings</td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>9</td>
<td>4%</td>
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<tr>
<td>Medians</td>
<td>7</td>
<td>1</td>
<td>0</td>
<td>8</td>
<td>3%</td>
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<tr>
<td>Bollards</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>8</td>
<td>3%</td>
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<tr>
<td>Railings</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>4</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>182</strong></td>
<td><strong>47</strong></td>
<td><strong>28</strong></td>
<td><strong>257</strong></td>
<td><strong>100%</strong></td>
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#### Top Concerns Identified through Outreach

<table>
<thead>
<tr>
<th>Concern</th>
<th>Public Meeting</th>
<th>MBAC</th>
<th>MPAC</th>
<th>Total Responses</th>
<th>Percentage</th>
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<tr>
<td>Crossing or walking on Colfax</td>
<td>21</td>
<td>3</td>
<td>4</td>
<td>28</td>
<td>20%</td>
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<tr>
<td>Safety and security</td>
<td>17</td>
<td>2</td>
<td>2</td>
<td>21</td>
<td>15%</td>
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<tr>
<td>Cars not yielding</td>
<td>16</td>
<td>2</td>
<td>1</td>
<td>19</td>
<td>14%</td>
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<tr>
<td>Lighting</td>
<td>11</td>
<td>3</td>
<td>3</td>
<td>17</td>
<td>12%</td>
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<tr>
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<td>8</td>
<td>5</td>
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<td>14</td>
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<td>Location of the station</td>
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<tr>
<td>Crossing or walking on side street</td>
<td>8</td>
<td>1</td>
<td>2</td>
<td>11</td>
<td>8%</td>
</tr>
<tr>
<td>Room at station</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>10</td>
<td>7%</td>
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<tr>
<td>Other</td>
<td>6</td>
<td>0</td>
<td>0</td>
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<td>4%</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>103</strong></td>
<td><strong>20</strong></td>
<td><strong>17</strong></td>
<td><strong>140</strong></td>
<td><strong>100%</strong></td>
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<tr>
<td>Strategy</td>
<td>Treatment</td>
<td>Description</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>---------------------</td>
<td>----------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bicycle Improvements</td>
<td>Bike lane</td>
<td>A travel lane designated for the exclusive use of bicyclists through use of pavement markings and signage. They are typically used on streets with moderate travel speeds and volumes.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Buffered bike lane</td>
<td>A conventional bike lane paired with a designated horizontal painted buffer space, separating the bike lane from the vehicle travel lane and/or parking lane. This treatment may be used on streets with 3-5 travel lanes and moderate travel speeds and volumes.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>One-way protected bike lane</td>
<td>A physically separated bike lane that allows bicycle movement in one direction on one side of the street. Physical separation from vehicular travel can include bollards, planter strips, extruded curbs, or on-street parking lanes. It is used on streets with high travel speeds and volumes, high truck traffic, areas of high parking turnover and/or to mitigate intersections with high conflicts.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Two-way protected bike lane</td>
<td>A physically separated bike lane that allows bicycle movement in both directions on one side of the street. Physical separation from vehicular travel can include bollards, planter strips, extruded curbs, or on-street parking lanes. This treatment is typically used on streets with high travel speeds and volumes.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Contraflow bike lane</td>
<td>A designated bike lane to allow bicyclists to ride in the opposite direction of vehicle traffic, converting a one-way traffic street into a two-way street for bicycles. This type of bike lane is typically used on streets where large numbers of bicyclists currently ride the wrong direction, streets where alternate routes require excessive out of direction travel, or alternate routes are unsafe for bicycling.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Neighborhood bikeway (bike boulevard)</td>
<td>Low volume, low speed streets which are modified to enhance bicycle safety and comfort using design treatments such as signage, pavement markings, speed and/or volume reduction features, and crossing improvements. Neighborhood bikeways are typically used on streets with lower travel speeds and volumes, streets parallel to major thoroughfares, and streets that follow a desire line for bicycle travel.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pedestrian Improvement</td>
<td>Sidewalk installation</td>
<td>Necessary where gaps in the current sidewalk infrastructure exist. Sidewalks should be provided on both sides of urban streets, vertically separated from moving traffic and ideally have a horizontal buffer from moving traffic. Sidewalk installation is recommended in areas where there are gaps in sidewalk connectivity.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sidewalk widening</td>
<td>Should expand sidewalks to be a minimum of 5 feet wide. In areas with high pedestrian volumes, sidewalks should be widened where possible to allow pedestrian through circulation space. This treatment is typically used at intersections, midblock crossings, and transit stops, areas of high pedestrian demand, and areas where bicyclists are expected to share the sidewalk with pedestrians. For sidewalk widening applications in Aurora, the City’s Urban Street Standards should be utilized.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shared-use Improvement</td>
<td>Shared-use sidewalk</td>
<td>Can provide great access on streets with high volume, high speed vehicle traffic, and limited space for a conventional or protected bike lane. In such circumstances, bicycles may need to use the sidewalk with pedestrians. In these areas, the sidewalk should be widened if possible. Shared-used sidewalks are typically used in areas where bicyclists only need to share the sidewalk for a short distance to reach a destination or connect to another facility.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standard crosswalks</td>
<td>Also known as either transverse or continental, are painted across a roadway to designate a pedestrian crossing. These crosswalks are typically used at signalized intersection on every leg of the intersection, unless pedestrians are prohibited from a section of the roadway and at midblock crossings with high pedestrian or bicycle volumes.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For more detail on bicycle specific facility applications, see Denver Bikeway Design Guidelines.
## At the Station

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Treatment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Station</td>
<td>Inverted U-rack</td>
<td>Provide a structure for parking and securing a bike within the station area. These types of racks were considered in locations with limited space within the planned station area and an anticipated need for bike parking.</td>
</tr>
<tr>
<td></td>
<td>Bike lockers</td>
<td>Provide locations for secure, long-term bike parking with restricted access and protection from the elements and theft. The recommendations for lockers consider the available space within the planned station area, the anticipated bicyclist volume and need for long-term bike parking.</td>
</tr>
<tr>
<td>Marking/Signage</td>
<td>Flashing yellow arrow</td>
<td>A vehicular signal to communicate to drivers to yield to crossing pedestrians and oncoming vehicles during the crossing phase. Stations with relatively high projected ridership and intersections would typically have this recommendation.</td>
</tr>
<tr>
<td></td>
<td>Protected-only right turn (Red arrow)</td>
<td>A protected-only vehicular right-turn signal phase and phase for pedestrians and bicyclists to cross without vehicular conflict. This treatment is considered for recommendation at stations with higher projected ridership and intersections with exclusive right turn lanes.</td>
</tr>
<tr>
<td></td>
<td>Bike box</td>
<td>A pavement marking to indicate location for bicyclists to wait at an intersection in front of vehicles. This treatment is used at stations with a relatively high number of anticipated bicyclists to facilitate direct bicycle access to the station while reducing conflict with vehicles at a signal.</td>
</tr>
<tr>
<td></td>
<td>Pedestrian signal timing improvements</td>
<td>Provide better pedestrian crossings, and can include leading pedestrian interval and exclusive crossings. Signal timing improvements would typically be recommended at stations with higher projected ridership, but not necessarily with exclusive right turn lanes.</td>
</tr>
<tr>
<td></td>
<td>Shared sidewalk markings</td>
<td>Pavement markings on the sidewalk that complement appropriate signage to communicate where bicyclists and pedestrians should use the sidewalk (includes the separation as well as mixing). This is typically recommended at stations that require more than a block to access the station.</td>
</tr>
<tr>
<td></td>
<td>Green and crossing pavement markings</td>
<td>To improve access through intersections, these pavement markings communicate where bicyclists should use the roadway at approaches and through intersections. Green and crossing pavement markings are usually recommended at stations with adjacent existing or planned bicycle facilities as well as stations that have a high percentage of nearby bicycle crashes.</td>
</tr>
<tr>
<td></td>
<td>Sign: “Turning vehicles yield to peds”</td>
<td>Signage to communicate to increase drivers’ awareness of pedestrians in the crosswalk. This sign is recommended at stations with higher projected ridership and dedicated turn lanes.</td>
</tr>
<tr>
<td></td>
<td>Sign: “2 way crossing”</td>
<td>Signage to alert drivers of pedestrians and bicyclists from either side of crosswalk. This sign is recommended at station area intersections with free right turn lanes.</td>
</tr>
<tr>
<td></td>
<td>Sign: “Cross at crosswalk”</td>
<td>Signage that directs pedestrians to cross street at crosswalk. This sign is recommended at midblock stations.</td>
</tr>
<tr>
<td></td>
<td>Station wayfinding signs</td>
<td>Intersection signage to direct pedestrians and bicyclists to stations and bike parking. These signs are recommended at every station.</td>
</tr>
<tr>
<td>Crossing</td>
<td>Concrete median</td>
<td>A raised median area in the center of roadway to act as a pedestrian/bicyclist refuge. This is recommended at stations with relatively high projected ridership and intersections with available space and anticipated need due to intersection operations.</td>
</tr>
<tr>
<td>Improvements</td>
<td>Median extension</td>
<td>Extension of an existing raised median past crosswalk area. This treatment is recommended at stations with relatively high projected ridership and intersections with available space.</td>
</tr>
<tr>
<td></td>
<td>Perpendicular alignment of crosswalk</td>
<td>Realigns existing crosswalks to be perpendicular to the intersection approach. This is recommended at the station area intersections with geometry that allows perpendicular crosswalks and where other geometric changes to the intersection require the realignment.</td>
</tr>
<tr>
<td></td>
<td>Enhanced crossing treatments</td>
<td>Provide colored or textured crosswalk pavement markings for increased driver awareness of pedestrians/bicyclists. This treatment may be used at stations with relatively high projected ridership.</td>
</tr>
<tr>
<td></td>
<td>Standard crosswalks</td>
<td>Also known as either transverse or continental, are painted across a roadway to designate a pedestrian crossing. These crosswalks are typically used at signalized intersection on every leg of the intersection, unless pedestrians are prohibited from a section of the roadway and at midblock crossings with high pedestrian or bicycle volumes.</td>
</tr>
<tr>
<td></td>
<td>Pedestrian curb extension</td>
<td>An expanded area at intersection corners to provide a larger pedestrian area and shorter crossing distance. This treatment would be recommended at stations with higher projected ridership and intersections with available space.</td>
</tr>
<tr>
<td></td>
<td>Countdown pedestrian signals</td>
<td>Pedestrian signals that show time left for pedestrian crossing. This treatment would be used at all stations if not already present.</td>
</tr>
</tbody>
</table>

For more detail on bicycle specific facility applications, see Denver Bikeway Design Guidelines.
East-West to the Station Routing

To the station routing for this CMLAS project was developed based largely on Denver Moves: Enhanced Bikeways (2016) and the Aurora Bicycle and Pedestrian Master Plan (2012) recommendations. The identified routing assumes that bicyclists will typically access Colfax BRT stations via short north-south connections from crosstown (east-west) bicycle routes.

Identified east-west bicycle routes running parallel to the Colfax include:

- 15th Street (Glenarm Place to Broadway)
- E 16th Avenue (Broadway to City Park Esplanade and Detroit St to Harrison Street)
- E 17th Avenue (City Park Esplande to Detroit Street and Colorado Blvd to Wheeling Street)
- W 11th Avenue (Osage Street to Humboldt Street)
- E 12th Avenue (Humboldt Street to Yosemite Street)
- E 13th Avenue (Yosemite Street to Xanadu Street)

East-West Route Identification

16th Avenue and 17th Avenue were largely identified as the closest potential east-west bicycle corridors. To identify preferred east-west routes for BRT access, the project team divided the corridor into three segments and, based on existing conditions and recommended bicycle facility improvements, assessed the potential user experience, challenges and impacts to the built environment. The following diagrams illustrate the pros and cons associated with each segment.
Broadway to Josephine East-West Route Identification

**16th Avenue**
East- and west-bound buffered bike lanes from Broadway to East High School

Pros
- Existing bike lanes
- Low speed, low volume street

Cons
- Additional wayfinding recommended to connect bicyclists to retail destinations
- Discontinuous at East High School

**17th Avenue**
Two-way protected bike lanes on 17th from Broadway to Colorado

Pros
- High density of retail destinations
- No jogs/continuous route

Cons
- Higher speed, higher volume
- Changes to 2-way vehicular travel at City Park Esplanade, creating complex intersection
- One-way vehicular travel requires contra-flow bicycle facility
- Would require removal of parking and/or travel lane

Recommended primary east-west connection: 16th Avenue
Josephine to Colorado East-West Route Identification

16th Avenue
Raised two-way cycle track around East High School and neighborhood bikeway on 16th

Pros
- Less intensive infrastructure needs
- Lower speed, lower volume
- Close proximity to Colfax

Cons
- Discontinuous at East High School (indirect route)
- Challenging intersections at 16th and Colorado

17th Avenue
Two One-Way Protected Bike Lanes on 17th Avenue

Pros
- Bicyclists connect directly from City Park Esplanade bike lanes in east-bound direction
- Bicyclists use existing signal to cross Colorado
- No out-of-path travel

Cons
- Higher speed, higher volume
- Further from Colfax BRT than 16th
- Removal of parking/travel lane

City Park Existing Roadways and Paths
Primarily shared lane markings

Pros
- Lanes and paths already exist
- Low speed, low volume

Cons
- Indirect route, bicyclists may take alternate paths
- Wayfinding recommended
- Potential conflicts with people running and walking

Recommended primary east-west connection: 16th Avenue
16th Avenue
Use existing street as low-volume neighborhood bikeway

Pros
- Slightly lower volume than 17th
- Closer to Colfax BRT

Cons
- Multiple jogs
- Jogs often on major roads without signals

17th Avenue
East- and west-bound bike lanes (potentially buffered) from Colorado to Yosemite

Pros
- Connects to Aurora’s planned bike facility on 17th
- No jogs
- Major roadway crossings signalized

Cons
- Further than 16th from Colfax BRT

Recommended primary east-west connection: 17th Avenue
**East-West Route Recommendations**

With the exception of concepts developed for East High School, Columbine Street and Colorado Boulevard, the proposed east-west bicycle facilities are based on Denver Moves recommendations. The following sections illustrate bicycle facility recommendations for each of the identified east-west connections.

Additional design concepts have been developed to address challenges to establishing continuous east-west bicycle routing. These areas include East High School, Columbine Street and Colorado Boulevard. All recommendations are conceptual and require further review and refinement.

**East 16th Avenue from Broadway Street to North Lincoln Street**

**Bike Lane and Shared Use Lane**

NOTE: Section illustrates recently installed improvements.

**East 16th Avenue from North Lincoln Street to City Park Esplanade**

**Buffered Bike Lane**
City Park Esplanade from E 16th to E 17th Avenue
Protected Bike Lane

Columbine Street Two-way Protected Bike Lane
East 17th Avenue from City Park Esplanade to Detroit Street
Raised Two-Way Cycle Track

Along 16th Street, East High School creates a barrier to establishing a continuous east-west connection. To address this gap in connectivity, the project team developed a concept for separated pedestrian and bicycle facilities. The concept includes a 12' raised two-way cycle track and separated sidewalk.

## Detroit Street Raised Two-Way Cycle Track

East 16th Avenue from Detroit Street to Colorado Boulevard
Neighborhood Bikeway
**East 17th Avenue from Harrison Street to Colorado Boulevard**  
**Proposed Shared Use Sidewalk**

To route bicyclists from E 16th Avenue across Colorado Boulevard to E 17th Avenue Parkway, the project team identified a concept to direct cyclists along the proposed Harrison Street neighborhood bikeway to a shared-use sidewalk from Harrison to Colorado Boulevard. The subsequent section and concept on page 11 illustrate this proposed east-west connection.

**East 17th Avenue from Colorado Boulevard to Yosemite**  
**Proposed Buffered Bike Lane**

East 17th Avenue, identified as a proposed buffered bike lane in Denver Moves, provides a connection for bicyclists from Colorado Boulevard to Yosemite. The subsequent section illustrate this proposed east-west connection.
## Facility Cost Summary

<table>
<thead>
<tr>
<th>Bicycle Facility Section</th>
<th>Total Facility Cost ($/mile)</th>
</tr>
</thead>
<tbody>
<tr>
<td>East 16th Ave from N Lincoln St to City Park Esplanade - Buffered Bike Lane</td>
<td>$340,500</td>
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<tr>
<td>City Park Esplanade from E 16th to E 17th Ave - Protected Bike Lane</td>
<td>$69,610</td>
</tr>
<tr>
<td>Columbine Street On-street Protected Bike Lane</td>
<td>$64,900</td>
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<tr>
<td>East 17th Avenue Raised Two-Way Cycle Track</td>
<td>$96,500</td>
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<td>Detroit Street Raised Two-Way Cycle Track</td>
<td>$115,800</td>
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<td>East 16th Ave from Detroit St to Colorado Blvd Shared Use Lanes</td>
<td>$23,780</td>
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<tr>
<td>East 17th Ave from Harrison St to Colorado Blvd Proposed Shared Used Sidewalk</td>
<td>$103,400</td>
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<tr>
<td>East 17th Ave from Colorado Blvd to Yosemite Proposed Buffered Bike Lane</td>
<td>$658,600</td>
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<td><strong>Total</strong></td>
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<td>Station Name / Cross Street</td>
<td>Station Amenities</td>
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<tr>
<td>-----------------------------</td>
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<tr>
<td></td>
<td>Inverted U-rack (total units)</td>
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<tr>
<td></td>
<td>Bike box</td>
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<tr>
<td>Mariposa St</td>
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<td>East Bound (Mariposa)</td>
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<td>West Bound (Kalamath)</td>
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<tr>
<td>13th St</td>
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<td>East Bound (Fox)</td>
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<td>West Bound (Tremont)</td>
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<td>14th St</td>
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<td>West Bound (14th)</td>
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<td>Broadway</td>
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<td>East Bound (Lincoln)</td>
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<tr>
<td>West Bound (Broadway)</td>
<td>2 2 1 x</td>
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<tr>
<td>Grant St</td>
<td>2 2 1 x</td>
</tr>
<tr>
<td>Downing St</td>
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<tr>
<td>Josephine St</td>
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<td>Steele St</td>
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<td>Colorado Blvd</td>
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<td>Eudora St</td>
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<tr>
<td>Krammer St</td>
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<tr>
<td>Monaco Pkwy</td>
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<td>Quebec St</td>
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<tr>
<td>Uinta St</td>
<td>2 2 1 x</td>
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<td>Yosemite St</td>
<td>2 2 1 x</td>
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<td>Dayton St</td>
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<td>Havana St</td>
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<td>Moline</td>
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<tr>
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<tr>
<td>Potomac St</td>
<td>2 2 1 x</td>
</tr>
</tbody>
</table>
IDENTIFIED TREATMENTS WITH SAFETY INFORMATION

**13th Street Station**
- Enhanced crossing treatments – For all crashes resulting at the 13th/Colfax station area, a total of approximately 8 percent of all crashes involve pedestrians

**14th Street Station**
- Green and crossing pavement markings – For all crashes resulting at the 14th/Colfax station area, a total of approximately 2 percent of all crashes involve bicyclists

**Broadway Station**
- Green and crossing pavement markings – For all crashes resulting at the Broadway/Colfax station area, a total of approximately 3 percent of all crashes (the highest out of all Denver stations) involve bicyclists
- Enhanced crossing treatments – For all crashes resulting at the Broadway/Colfax station area, a total of approximately 6 percent of all crashes involve pedestrians

**Downing Station**
- Enhanced crossing treatments – For all crashes resulting at the Downing/Colfax station area, a total of approximately 8 percent of all crashes involve pedestrians

**Josephine Station**
- Green and crossing pavement markings – For all crashes resulting at the Josephine/Colfax station area, a total of approximately 2 percent of all crashes involve bicyclists

**Colorado Station**
- Enhanced crossing treatments – For all crashes resulting at the Colorado/Colfax station area, a total of approximately 4 percent of all crashes involve pedestrians

**Eudora Station**
- Green and crossing pavement markings – For all crashes resulting at the Eudora/Colfax station area, a total of approximately 2 percent of all crashes involve bicyclists

**Krameria Station**
- Pedestrian signal timing improvements – To improve pedestrian safety
- Enhanced crossing treatments – For all crashes resulting at the Krameria/Colfax station area, a total of approximately 6 percent of all crashes involve pedestrians

**Uinta Station**
- Enhanced crossing treatments – For all crashes resulting at the Uinta/Colfax station area, a total of approximately 12 percent of all crashes (the highest out of any station) involve pedestrians
- Pedestrian curb extension – To improve pedestrian safety

**Yosemite Station**
- Green and crossing pavement markings – For all crashes resulting at the Yosemite/Colfax station area, a total of approximately 2 percent of all crashes involve bicyclists
- Enhanced crossing treatments – For all crashes resulting at the Yosemite/Colfax station area, a total of approximately 5 percent of all crashes involve pedestrians