Denver Moves: Broadway

Final Design Workgroup Meeting
February 18, 2021
Meeting Purpose

• Provide a process and schedule update

• Review and discuss final bikeway design

• Discuss next steps and project implementation process
Final Design Workgroup: Agenda

• Welcome and Introductions

• Project Update: Design Process & Timeline

• Community Input: What We Heard & How It Was Applied

• Breakout Discussions/Reporting: Final Design Review

• Next Steps
Meeting Guidelines

- Demonstrate courtesy and respect
- Be collaborative
- Provide productive ideas and feedback
- Focus on the task at hand
- Actively listen, keep an open mind and refrain from interrupting
- Help us stay on agenda
Welcome and Introductions

Project Team – Design Workgroup – Community Members
Project Update:
Design Process & Timeline
How We Got Here
Mayor’s Mobility Action Plan

$2+ billion over the next 12 years to make it safer and easier to get where we need to go.

Denver’s Mobility Action Plan
Denver is ready to transform its transportation system.

Strategic Goals

- **30%**
  - Commuters biking, walking or taking transit by 2030

- **80%**
  - Reduction of emissions by 2050

- **Zero**
  - Traffic Deaths by 2030

**CHOICE**
- Providing more choices: Walk, Bike, Drive, Transit or Share

**SAFETY**
- Improving safety through Vision Zero

**CLIMATE & HEALTH**
- Expanding use of electric vehicles and charging stations

**ACCESSIBILITY**
- Increasing technology to make your trip easier and faster
Creating vibrant places where people of all ages and abilities feel comfortable using any mode of travel is central to the project’s goals:

- Everyone arrives safely
- Community and business collaboration
- New and enhanced mobility options for everyone

<table>
<thead>
<tr>
<th>Benefits</th>
<th>SAFETY: Supports Vision Zero with street design that protects people walking and biking in part of Denver’s High Injury Network (HIN).</th>
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<td>EFFICIENCY: Moves more people through the same amount of space by improving options for walking, biking, transit and driving.</td>
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<td>CONNECTIVITY: Increases options for getting to and from downtown, entertainment districts, major transit stations and transportation corridors.</td>
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<td>COMMUNITY CHARACTER: Provides opportunities for public art, landscaping and other streetscape improvements.</td>
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How We Got Here

Key Engagement Activities

- Design Workgroup Meetings
- Community Meeting Outreach
  - West Washington Park Neighborhood Association
  - Baker Historic Neighborhood Association
  - Broadway Merchants Association
  - Maintenance Districts
- Public Surveys
- Community Office Hours
- Bike to Work Day
- Denver Health Tabling
- Email List Updates
Where We’ve Been & Where We’re Going

Project Schedule

North Segment

Spring 2019: Conceptual Design
Fall 2019+: Funding Identification

2019: Conceptual multimodal design of North Segment

2021: Construction-ready multimodal design of South Segment

Spring 2019: Conceptual Design (30%)
Fall/Winter 2019: Detailed Design (60%)
Winter 2020/2021: Final Design (Construction-ready)

2021+: Implementation Planning (Construction expected to start in 2022)

South Segment

2015-2018: Broadway test bikeway (Bayaud to Virginia), data collection and reporting
Design Process:
From Conceptual to Detailed to Final Design
30% > 60% > 90%
Conceptual (30%) Design

• Identify design envelope
  • How much space do we have?
• Determine conceptual layout and functionality
  • What will we put in that space?
Detailed (60%) Design

- Specific placement and development of key project elements:
  - Intersection layouts (e.g., ADA curb ramps, limits of disturbance, signals, beacons, etc.)
  - Bike lane buffer type
  - Curb lane use (e.g., loading zones, parking details, etc.)
  - Drainage/stormwater, etc.

Preliminary detailed (60%) design subject to change
From Detailed (60%) Design to Final

- What will it look like when it’s built?
  - Detailed design and coordination
    - Intersections: layouts, signal equipment, grading/ADA, drainage, utility coordination, etc.
  - Corridor: Signage, loading zones, amenities, etc.
Community Input:
What We Heard & How It Was Applied
# Community Input
## Incorporating community input into design

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![Raised Concrete Buffer](image)
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<td>Option 1A (plaza connection) used in detailed design</td>
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South Broadway and Cherry Creek Bike Path Connection

Opt. 1A

Legend:
- Red: On-street bike path
- Dotted red: Future on-street bike path
- Green: Sidewalk/bike path
- Yellow: Necessary bike path connection point
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![Raised Pedestrian Refuge](image-url)
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<td>All intersections include fully accessible pedestrian ramps. No designated accessible parking currently exists on the east side of Broadway, and opportunities for additional accessible locations on side streets are being identified with the help of community input.</td>
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<td>Opportunities for <strong>Broadway station and east/west connectivity</strong> are being explored and all signalized intersections will have <strong>protected left turn, bike and pedestrian signal phases</strong></td>
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Protected vehicle left turn with bike and pedestrian signal phases
Community Input & Amenities: Detailed to Final Design
Parking for bicycles and scooters was the top priority for new amenities installed along Broadway:

• Bike/scooter parking was prioritized by 70% of respondents
• Planters were also a high priority (47%)
• Trash and recycling facilities (44%)
• Public art (39%)

Nearly 50% of all respondents support the currently proposed commercial/ride-hailing loading zone locations and 33% are neutral on loading zone locations.

Visibility, accessibility and safety continue to be major priorities for the public when it comes to use of the curb lane, on-street parking area and bike facility.
• Request for public art proposals generated 182 artist responses

• Artist Jamie Pawlus from Indianapolis, IN selected

• Anticipated 5-8 pieces throughout the corridor

• Specific designs, locations and lighting still to be determined*

• Art installation plans finalized late 2021 prior to construction

*conceptual artists’ renderings subject to change
Breakout Discussions:
Detailed Design Review

Breakout A: 7th Avenue (Cherry Creek Trail) to 3rd Avenue

Breakout B: 3rd Avenue to Bayaud Avenue

Breakout C: Bayaud Avenue to Center Avenue (Broadway Station)
Breakout A
Breakout Group A: 7th Avenue (Cherry Creek Trail) to 3rd Avenue

Key Design Elements

- Cherry Creek Trail Connection
- 7th Ave Connection
- 6th Ave Improvements
- 5th Ave
  - Traffic signal
  - Bus bulb out
  - Driveway consolidation
- 4th Ave
  - NEC Improvements
- 3rd Ave
  - Driveway reduction
- Loading zones
- Bike parking/amenities
Breakout Group A: 7th Avenue (Cherry Creek Trail) to 3rd Avenue
Breakout B
Key Design Elements
• Tree Grate Improvements
• 3rd Ave
  • Bus bulb out
• 1st Ave
  • Bus bulb out
• Irvington/Archer
  • Pedestrian refuge islands
• Loading zones
• Bike parking/Amenities
Breakout C
Key Design Elements

- Broadway Station Connection/D4 Development
- Coordination with South Broadway and I-25 Improvement Project
- Alameda Ave Bus Bulb Out
- Nevada Ave Driveway Reconstruction
- Loading zones
- Tree grates
- Bike Parking/Amenities
Broadway and I-25 Improvement Project

• Extends bikeway from Center Ave to Exposition Ave.

• Bike/ped connection into the station is through a multi-use path on W. Exposition Ave and Bannock Street.
Breakout Group Reporting:
Key Themes & Takeaways
Next Steps
Next Steps

• Upcoming meeting dates:
  • **February 24, 5:30pm** – Joint Transportation Projects Meeting: Broadway/Lincoln/I-25
  • Request a small group briefing

• Implementation planning
  • **Final Design**: Anticipated to be complete in mid-2021
  • **Construction Planning**: Expected to begin in late-2021
    (12-18 months of land acquisition and pre-construction planning)
  • **Construction**: Anticipated start in 2022
    (12-18 months of phased project installation)
Questions?

Additional questions can be sent to:
DenverMovesBroadway@DenverGov.org
Additional Information
Current Street Design (Broadway and Center)
Detailed Design Rendering (Broadway and Center)

Fully Improved Condition
Detailed Design Rendering

- Increased Visibility of Bike Signal
- Two-way Cycle Track and Striping
- Raised Concrete Buffer
- Southbound Left-turn Lane
Raised Pedestrian Refuge
Detailed Design Rendering

Corner Reconstruction

Accessible Pedestrian Curb Ramps
Upgraded Signals, Signs and Improved Lighting
Detailed Design Rendering

24-Hour Transit Lane
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| **Traffic Management**: Concerns exist regarding current traffic speeds and increased vehicle congestion on Broadway, as well as concerns about increased traffic diversion on adjacent side streets as a result of removing a vehicle travel lane on Broadway. | In order to safely manage traffic, a number of operational improvements will be made on Broadway and parallel roadways. These options include, but are not limited to:  
- Traffic calming and safety improvements  
- Signal timing/optimization  
- Extended or new turning lanes  
- Minimal capacity improvements through re-striping or minor curb/gutter relocation  
When DOTI conducted its protected bikeway study along South Broadway in 2016, vehicle travel time was not significantly impacted, with only 9 seconds added to the average commute from Colfax to I-25 during peak period. |