Welcome and Introductions
Project Partners

- Regional Transportation District (RTD)
- Colorado Department of Transportation (CDOT)
- Denver Regional Council of Governments (DRCOG)
- City of Aurora
Meeting Purpose and Agenda
Meeting Purpose

- Update on activities and progress since the last meeting
- Present and gather feedback on preliminary center-running BRT recommendation
- Preview broad-based outreach process and community preference survey
- Review near-term RTD 15L improvements
Agenda

- Project update
- Preliminary recommendation of center-running BRT
- Community outreach and preference survey
- Near-term RTD 15L improvements
- Next steps and path forward
Project Update
GO Bond Election Results

- Referred Question 2A (Transportation & Mobility System) includes:
  - $55 million for Colfax BRT
  - $20 million for Colfax Corridor Improvements

- 2A passed with 75.1% in favor

- Funding secured for detailed design, initial implementation and matching federal funds
Corridor Development Timeline

Opportunity for Stakeholders and Public To Influence Project Design

- Broad Definition of Project
- Design Detail

Alternatives Analysis

- 12-18 months

Conceptual Design & Environmental Analysis

- 18 months

Engineering & Design

- 18-24 months

Construction

- Ongoing

Revenue Service

- Ongoing

We Are Here

Locally Preferred Alternative
- Definition of mode & alignment
- Conceptual station locations
- Operating plan
- Local decision

Concept Design & Environmental Clearances
- Design detail determined
- Environmental impacts identified

Fully Designed and Funded Project
- Design complete
- Finance package

Federal Transit Administration Project Development
Preliminary Recommendation of Center-Running BRT
Basis for Decision and Decision-Making Process

- Screening criteria/evaluation
- Technical requirements
- Community input:
  - Task Force
  - Technical Working Group
  - Broader public feedback

Factors influencing the decision:
- Technical Viability
- Mobility Benefits
- Community Values

*Factors influencing the decision*
## Results Summary

<table>
<thead>
<tr>
<th>Category</th>
<th>Side-Running in Exclusive Lanes - All Day</th>
<th>Center-Running in Exclusive Lanes - All Day</th>
<th>Key</th>
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<tbody>
<tr>
<td>Ridership</td>
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<td>GOOD/FAIR</td>
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<td>FAIR</td>
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<td>Person Capacity</td>
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<td>FAIR/POOR</td>
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<td>Transit Reliability</td>
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<td>POOR</td>
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<td>Cost-Effectiveness</td>
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<td>Vehicle Miles Traveled</td>
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<td>Multimodal Access</td>
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<td>Pedestrian Safety + Experience</td>
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<td>Multimodal Safety</td>
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<td>Expansion Capacity</td>
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<td>Curb Access</td>
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<td>Construction Impact</td>
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<td>Agency + Community Support</td>
<td>(strang agency support)</td>
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<tr>
<td>Overall Results</td>
<td>TBD</td>
<td>TBD</td>
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</tbody>
</table>

*colfax corridor connections*
Basis: Safety and Accessibility

- Island stations calm traffic
- Pedestrian refuges reduce crossing distance
- Shorter crossing distances = less exposure to vehicle traffic
- Eliminating unprotected lefts improves pedestrian, bicycle, and vehicular safety
- Station lighting enhances security
Basis: Optimizing Person Mobility

Center-running BRT results in an increase in daily person trips on Colfax of 14%.

- No Action: 40k + 26k = 66,000
- Center Running BRT: 25k + 50k = 75,000

Provides the greatest expansion capacity allowing neighborhoods and businesses to grow around reliable, high-capacity transit.
Basis: Investing in Transit Performance

- Ridership more than doubles to 50,000 daily rides by 2035
- Transit travel time improved by 15 minutes compared to future baseline
- Optimal reliability for surface running transit

In 2035:

- Up to 50,000 daily riders
- Access to 280,000 jobs
- Up to 15 minute travel time improvement

Future proofing from delay as land-use, traffic, and curb uses change
Basis: Building Vital Neighborhoods Around Transit

- Opportunity for Street Trees
- Unique lighting
- Wider sidewalks
- Attractive, vertical features distinguish street
- Expanded Furniture Zone
Project Features: Street Design

EXCEPTIONS:

- Major arterial crossings w/ large truck turns
- Terminal locations

- Pedestrian crossings at signalized crossings every 700’ or less
- Left turn lanes at signalized intersections
- Prioritize curb parking/loading and expanded sidewalks
- Far-side of intersection stations
- Center running way; median to vary in width
Project Features: Full Transit Stations

- High Quality Shelters
- Off Board Payment
- Line Level Branding
- Lighting and Security
- Public Art Features
- System Traveler Information
- Protection from Traffic
Project Features: Integrated Operations

All corridor buses use one set of stations between Yosemite and Civic Center
Areas for Further Refinement

- Station Locations
- Branding
- Station Design
- Corridor Bus Operating Plan
- Curb Use and Mitigations
- Median Treatments
- Sidewalk Expansion & ADA Improvements
- Bike Facility Crossing
- Traffic Operations and Mitigations
Medians, Sidewalks, & Streetscaping Opportunities
Task Force Discussion

- What is the preferred approach for balancing sidewalk and median space in the corridor?

- This applies to areas where cross sections are approximately >=80’ curb-to-curb and >=100’ property line-to-property line, generally east of Colorado.
Narrow Sidewalk - Wide Median

Sidewalk
- No tree opportunity
- Limited frontage zone opportunities (awnings, open doors)

Median
- Shade trees
- Maintenance challenges
- Buses run directly adjacent
- Ped refuge opportunity

14' Sidewalk/Swale
8' Parking Lane
11' Travel Lane
12' Transit Lane
10' Median
12' Transit Lane
11' Travel Lane
8' Parking Lane
14' Sidewalk/Swale

72' Curb-to-Curb
100'
Modest Median – Modest Sidewalk

**Median**
- Shrubs, plantings, flowers, swales
- Maintenance challenges
- Buses run directly adjacent
- Ped refuge opportunity

**Sidewalk**
- Ornamentals
- Limited frontage zone opportunities (awnings, open doors)
Wide Sidewalk - Narrow Median

**Median**
- Decorative fencing
- Maintenance challenge: snow pileup
- No ped refuge opportunity (except at stations)

**Sidewalk**
- Shade trees along walking zone
- Opportunity for café seating
10’ Median (including curb): South Broadway
10’ Median: Lakewood
8’ Median: Boulder
Median with small trees (Nantes)
Decorative Fencing (Malmo)
Decorative Fencing (Nantes)
Decorative Fencing (Eugene)
Decorative Fencing (Colfax Ave)
16’ Sidewalk: 17th Street
18’ Sidewalk (State Street, Madison)
Three Approaches for Balancing Sidewalk and Median Space

- **Narrow Sidewalk – Wide Median**

- **Modest Median – Modest Sidewalk**

- **Wide Sidewalk – Narrow Median**
Left Turn & Pedestrian Crossing Opportunities
Task Force Discussion

- Where will left turns be allowed from Colfax?
- What is potential spacing between those turns?
- Where are potential opportunities for new signals?

**NOTE:**

Colfax Connections will continue to refine station spacing, station location, pedestrian crossing opportunities, left-turn and business access, and other detailed elements of street design.
Traffic signal locations

- Use existing protected crossing spacing as base input
Center-Running BRT: Community Outreach and Preference Survey
Community Outreach Process: Late 2017-Early 2018

- Traditional tools
  - Partner outreach
  - Roadshow presentations
  - Media relations
  - Digital engagement
- Innovative outreach
  - Office hours
  - Pop-up events
  - Project info and input kiosk
- Community preference survey
15L ROUTE IMPROVEMENTS

Colfax Corridor Connections Task Force
November 15, 2017
15L Project Overview

- RTD grant funded project to improve 15L stops and operations

- Short-term opportunity to improve passenger experience on East Colfax
  - Total project budget: $11 million
  - FTA Ladders of Opportunity Grant: $5 million

- East Colfax bus routes 15/15L serve as many passengers per day (over 20K) as some rail corridors

- First major capital investment since stops were constructed 30+ years ago
15L Project Area

I-225 Corridor (R Line)
- Opened Feb 2017
- Colfax is the iconic station on the line and provides transfers to the 15/15L at the Potomac Stop

Civic Center Station Rehabilitation
- Currently under construction
- Set to open later this year
- 15/15L connection with the Broadway stops
15L Project Status

- Defined project scope with Aurora and Denver
  - 37 total stop locations
  - 12 bus bulbs / curb extensions
  - 8 queue bypass lanes
- Received environmental clearance from FTA
- Began implementation of Transit Signal Priority (TSP)
- Developed enhanced bus shelter design
  - Incorporated feedback from an onboard passenger survey
Survey Bus Stop Elements

Shelter Options
- Glass Walls
- Metal and Glass Walls
- No Walls

Security & Comfort Elements
- Cameras
- Security Patrols
- Lighting
- Benches

Passenger Information
- Printed Schedules
- Digital Schedules with Ads
- Real-Time Schedule Information with Ads
Survey Results

• Most valued elements:
  • Glass bus shelter walls
  • Real-time information
  • Benches

• Least valued elements:
  • Metal and glass shelter walls
  • Shelters with no walls

• Most and least valued elements consistent between demographics and onboard vs stakeholder version

Utility Values for Bus Stop Elements

<table>
<thead>
<tr>
<th>Element</th>
<th>Utility Value</th>
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<tbody>
<tr>
<td>Glass bus shelter walls</td>
<td>1.68**</td>
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<tr>
<td>Real-time route and schedule information</td>
<td>1.30**</td>
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<tr>
<td>Shelter benches</td>
<td>1.26**</td>
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<tr>
<td>Digital schedules and route maps</td>
<td>1.03</td>
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<tr>
<td>Security cameras</td>
<td>1.00^</td>
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<tr>
<td>Security patrols</td>
<td>0.89*</td>
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<tr>
<td>Printed schedules and route maps</td>
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<tr>
<td>Shelter lighting</td>
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<tr>
<td>Bus shelters with roof only (no walls)</td>
<td>0.68**</td>
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<tr>
<td>Perforated metal and glass bus shelter walls</td>
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</tbody>
</table>
15L Enhanced Shelter Design

• All stops will include shelters with:
  • Transparent Weather Protection
  • Security cameras
  • Lighting
  • Passenger information

• Look for opportunities to add additional **benches**

• Electronic passenger information will be implemented at a minimum of 6 locations as a pilot project
15L Next Steps / Project Schedule

• Current Tasks:
  • Work through CDOT and Denver/Aurora design review and approval processes
  • Stakeholder updates

• Mid 2018: Issue RFP for a contractor

• End of 2019: Construction complete
Civic Center Stop Renderings
Center-Running BRT: Next Steps and Path Forward
Where Do We Go From Here?

- Broad-based community outreach – we need your help:
  - Community survey
  - Roadshow presentations
  - Neighborhood events
  - Newsletters
  - Other ideas?

*Next Task Force meeting: Early 2018*