Quick-Build Transportation Safety Programs in Denver & Boulder
Introductions

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Learning Objectives

1. Types and locations of **innovative, quick-build pedestrian, bicycle, and traffic calming facilities** that are being installed in Denver and Boulder.

2. Key takeaways from simultaneously planning and designing projects and estimating the cost of their construction.

3. Key takeaways from **engaging the public** including graphics and engagement during COVID.
Quick-Build Safety Improvements

- Address immediate safety needs
- Quick to implement
- Cost efficient
- Can be temporary

35th Ave & Julian St (Denver, CO)

26th St & Spruce St (Boulder, CO)
Cost Effectiveness

Concrete Median
Cost: $40,000 to $50,000
Design: 6 to 12 months
Construction: 6 to 24 months
(consultant/vendor)

Paint & Post Median
Cost: $2,000 to $15,000
Design: 3 to 6 months
Construction: 0 to 3 months
(in-house)
Polling Question #1

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City of Boulder

Guiding Documents
- Transportation Master Plan
- Low-Stress Walk and Bike Network Plan

Vision Zero Innovation Program
- Innovative, low-cost quick-build improvements to streets that focus on corridor traffic calming and increasing pedestrian comfort and visibility at crossing locations.

Neighborhood Speed Management Program
- Boulder's resident-driven traffic calming program - implements engineering, education and enforcement to slow speeding traffic on residential streets.
City & County of Denver

Community Transportation Networks
• Accelerated implementation of a network of better bike facilities that make it more comfortable, safe, and accessible for people to connect the places they want to go.

Neighborhood Transportation Management Program
• Working together with neighborhood residents to establish local transportation priorities and to develop and implement transportation projects that support those priorities.

Denver Vision Zero
• CCD’s program to eliminate traffic deaths and serious injuries by 2030 with the understanding that these are unacceptable and preventable, and safety must be the most important consideration for every Denver street.
Process

- Project initiation
- Community engagement plan
- Design
- Feasibility/cost estimating
- Installation
26th St & Spruce St Curb Extensions

High-stress location, need for crossing improvements and increased visibility.

Key Takeaways

• Using public art to make curb extensions more visually appealing, coordinating with community organization

• Budget needs to cover artist, materials, and traffic control

• Vendor installation vs in-house
Santa Fe Streetscape Pilot Project

Pilot lane repurposing project that sought to enhance the experience for people who walk the corridor, which is home of the Art District on Santa Fe.

• Eliminated one travel lane
• Added 6’ pedestrian buffer on each side
• Installed planters, parklets, and artist murals in buffer space

Key Takeaways
• Aesthetics
• Engagement process
• Vendor availability
Aurora Ave Corridor

2018 NSMP complex project – residents requested traffic calming (3-6 years away); two schools

Key Takeaways

• Distance between traffic calming elements considerations
• Gateway feature
Aurora Ave & 35th St Traffic Circle

One of busier intersections in corridor, 40' wide roadway with low on-street parking usage

Key Takeaways

• Design vehicle (designed for delivery vehicles rather than SU-30)
• Paint only curb extensions in certain areas to reduce damaged flex posts
• Material changes to reduce cost and time (parking curb stops rather than rubberized curbs)
Bayaud Neighborhood Bikeway

Originally implemented as a shared street, the CTN South Central effort accelerated the installation of the Bayaud NB to prioritize people walking and biking.

- Intersection bulb-outs
- Diverters

**Key Takeaways**

- Easier sell to the community
- Design elements – practice vs theory
- Great Example of bikeway facility

Bayaud Ave & Emerson St (Denver, CO)
Polling Question #2

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Grinnell Median Island

2019 NSMP simple project – speed humps recommended, one hump not feasible because of drainage and street cross-slope

Key Takeaways

• Temporary island is effective in slowing vehicle speeds to near speed limit
• Attached sidewalks make residents feel less comfortable
• Parking concerns
NTMP Concept Designs

Previous NTMP efforts used detailed descriptions of the proposed projects. Residents found them difficult to understand and they were not easy to translate.

NTMP team changed to concept images which showed a basic rendering of the proposed project during our fifth NTMP neighborhood.

Key Takeaways
• Using images sell projects better
• Additional time, resources, and budget
• Potential risk of over selling to the community
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Upland Chicane

2018 NSMP simple project – speed humps recommended, residents and TAB asked for another traffic calming device

Key Takeaways
• Build high quality traffic calming that are low cost and effective
• Non-apparent uses of private property
• Post-installation evaluation has shown effectiveness in yielding behavior and reducing speeds
• Cost limits number of chicanes
Morrison Rd & Lowell Blvd

On December 31, 2020 the Westwood community experienced a terrible fatality in the corner of Morrison and Lowell. The Morrison Rd Reconstruction Bond project is expected to rebuild this intersection in 2023, but our Vision Zero Rapid Response team identified interim safety improvements. Denver Community Active Living Coalition (CALC) funded the murals.

Key Takeaways
• Vision Zero tool
• Fast response after a fatality
• Shows our response to the community
• Interim solution until full reconstruction
Key Takeaways

Flexibility
• Paint and post materials provide flexibility and allow tweaks in design for more permanent designs

Community engagement approach
• Consider when/how to engage
• Consider messaging and aesthetics

Design
• Determining feasibility early in process
• Run turning movements
• Consider ADA parking impacts

Cost estimating
• COVID impacts on materials and vendors

Evaluation
• Comfort for users & post-installation evaluation
Polling Question #3

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Toolkits & Resources

NACTO Don’t Give Up at the Intersection
• https://nacto.org/publication/dont-give-up-at-the-intersection/build-toolkit/

Denver Complete Streets Guidelines

Boulder Neighborhood Speed Management Engineering Toolkit
• https://bouldercolorado.gov/services/neighborhood-speed-management-program
Questions & Answers