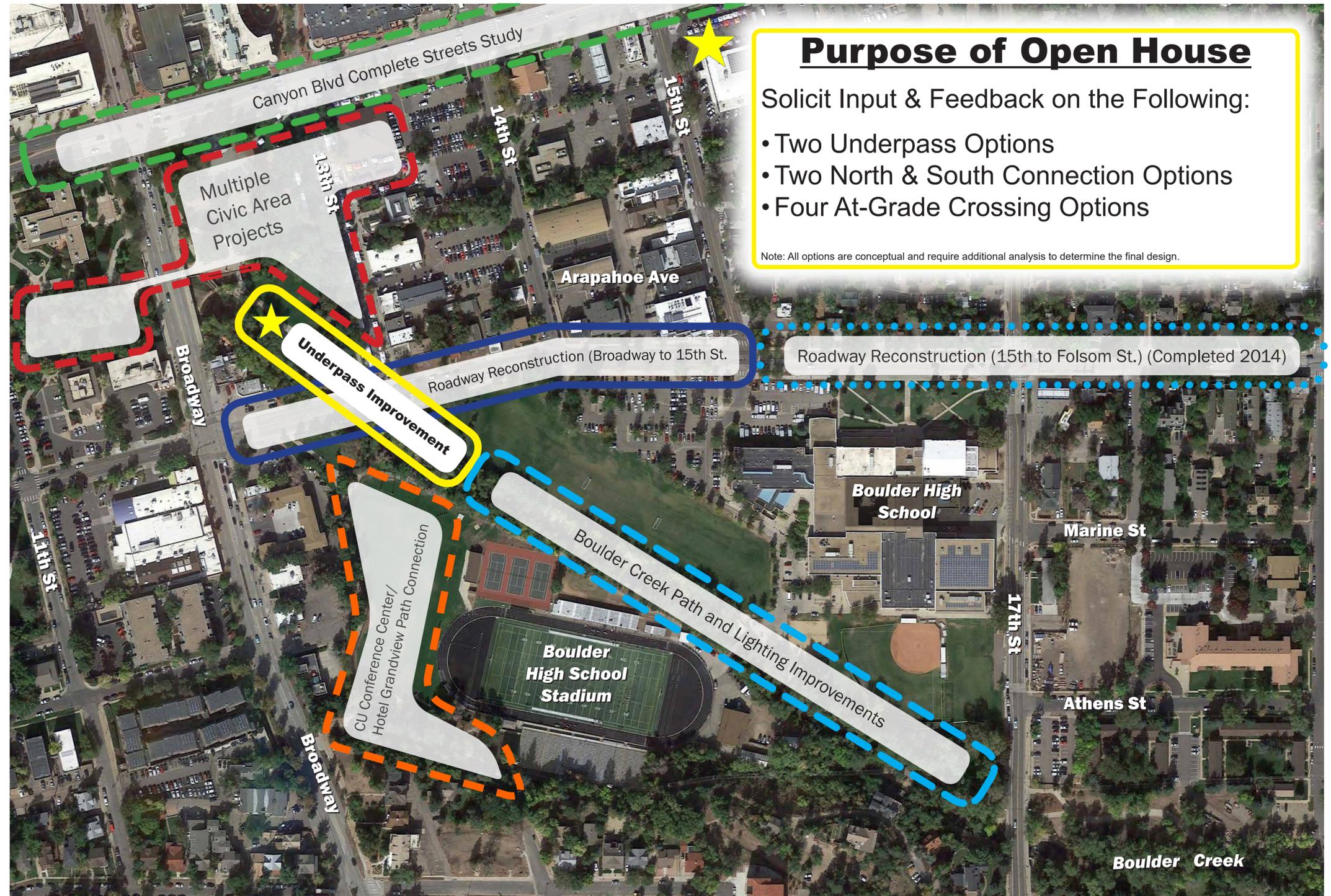


ARAPAHOE AVE UNDERPASS & RECONSTRUCTION

ADJACENT PROJECT COORDINATION MAP



Purpose of Open House

Solicit Input & Feedback on the Following:

- Two Underpass Options
- Two North & South Connection Options
- Four At-Grade Crossing Options

Note: All options are conceptual and require additional analysis to determine the final design.

Underpass Improvement

- \$2.5 million from Community, Culture & Safety Tax
- Improve existing underpass along Boulder Creek

Roadway Reconstruction

- Broadway to 15th St.
- Improve pavement, sidewalks and drainage
- \$2.5 million budget

Adjacent Projects

- Coordination with Civic Area, Creek Path & Lighting, and CU Convention Center & Hotel Path Connectivity

ARAPAHOE AVE UNDERPASS

Purpose and Need



Underpass Project

- Encourage use of the underpass through safety design improvements
- Improve approach sight lines & grades
- Address conflict zones at south entrance
- Widen the underpass and approaching paths
- Evaluate 13th St. Pedestrian crossing treatment
- Improve lighting
- Meet ADA accessibility standards
- Reduce high-water closures



ARAPAHOE AVE UNDERPASS Data Collection

April 2016

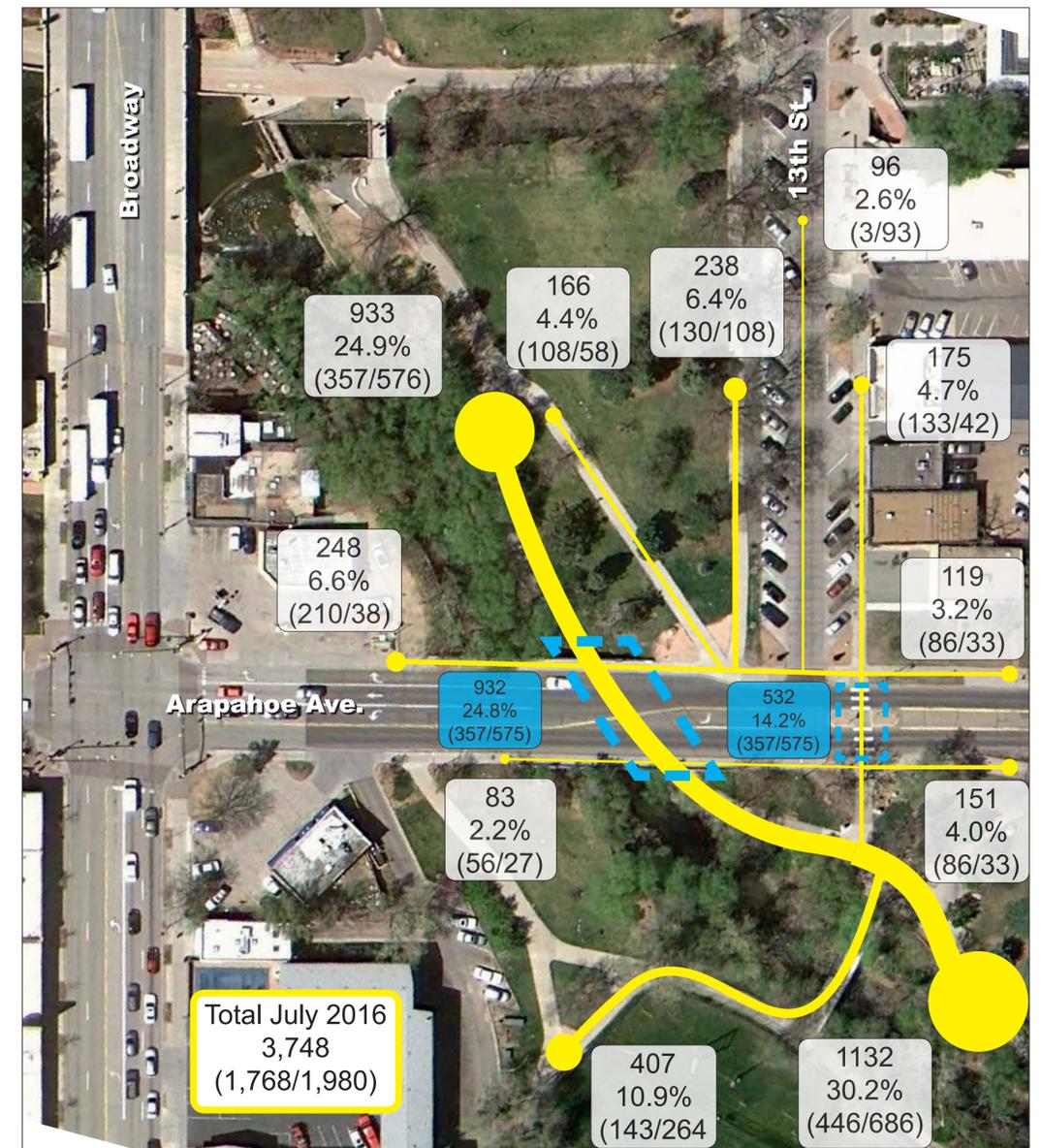
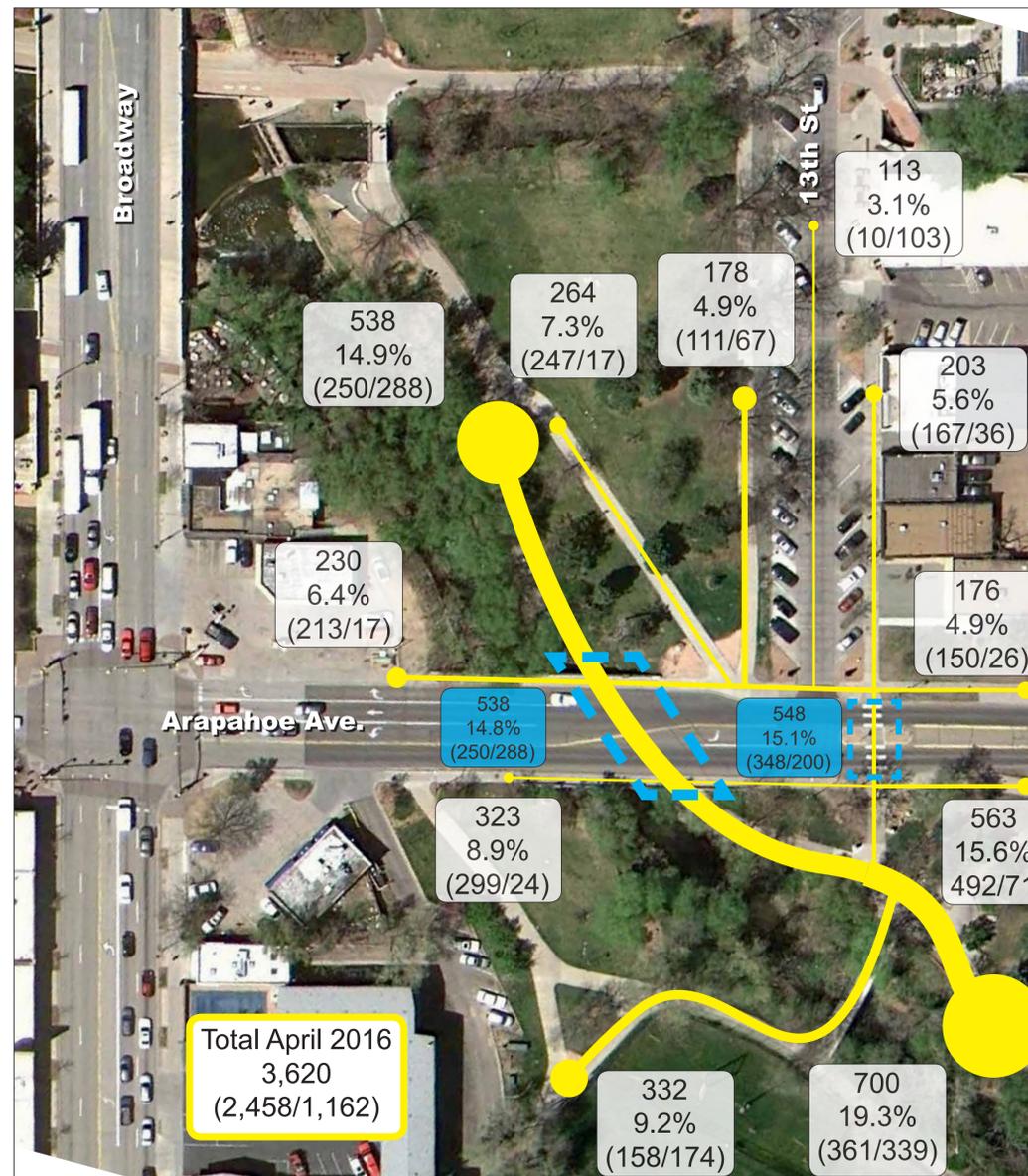
July 2016

Summary

- Two weekday collection periods April (CU and BHS in session) & July (CU & BHS not in session)
- Volumes represent combined peak periods 7:15AM-8:30AM, 11AM-1PM, & 3PM-5PM

Legend

- Movement Node
- XX
X.X%
(XX/YY) Node Volume
% of Total
(# Peds / # Cyclists & Skateboards)



ARAPAHOE AVE UNDERPASS



Underpass Option 1

Rehabilitate Existing Alignment

- Widen underpass from 10 to 24 feet
- Widen Boulder Creek multi-use path 10 to 15 feet with delineated widths for pedestrians and cyclists
- Reduce approach grades from 15% to less than 5%
- Flatten curves & improve sight lines
- Improve lighting for day- & night-time visibility
- Reduce flood closures during high-water snow melt with wall & pump system
- Utilizes existing bridge with improved underpass
- Minimizes impacts to existing park space
- Lowest cost alternative

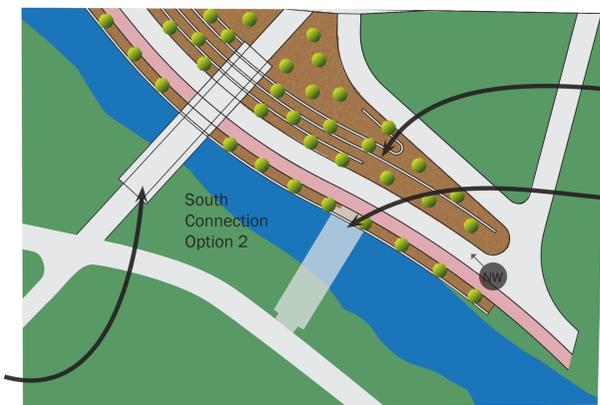
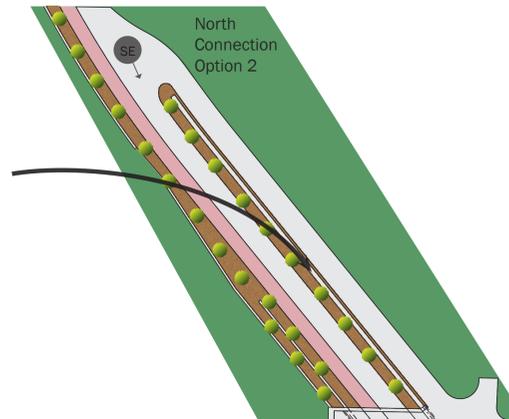
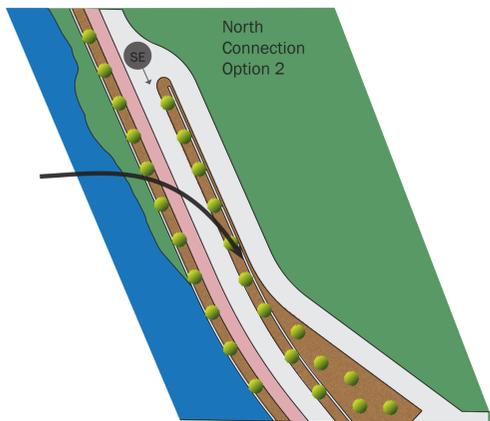
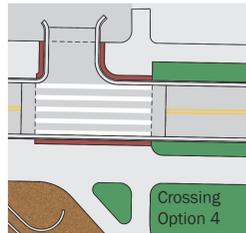
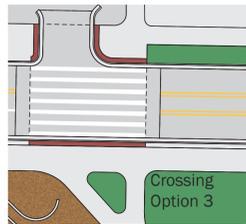
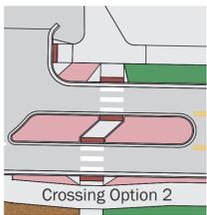


Looking Southeast (North Connection Option 1)



Looking Northwest (South Connection Option)

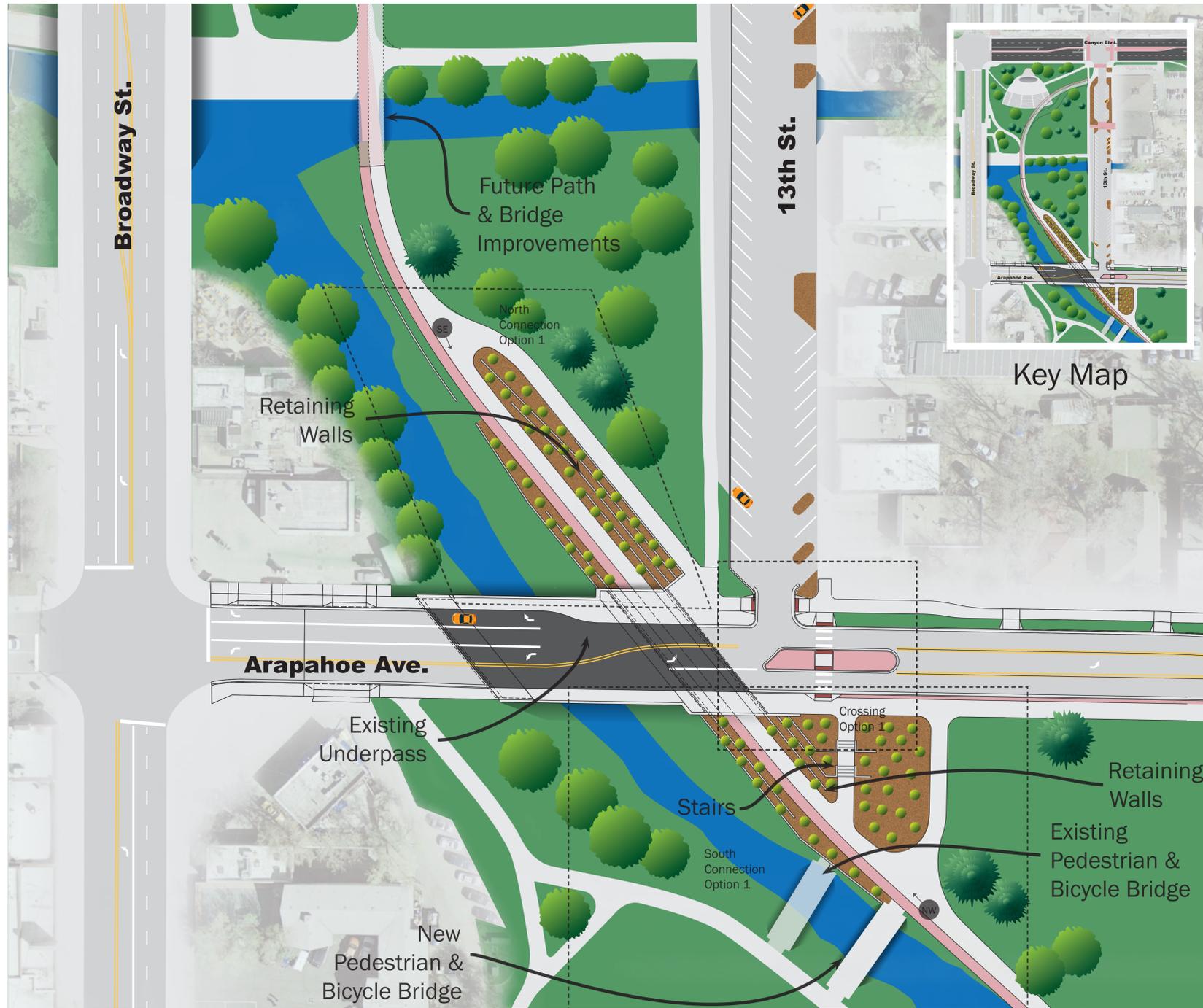
ARAPAHOE AVE UNDERPASS



Looking Northwest (South Connection Option 1)



ARAPAHOE AVE UNDERPASS



Underpass Option 2

New Underpass

- New 24-foot wide underpass east of existing bridge
- Widen Boulder Creek multi-use path 10 to 15 feet with delineated widths for pedestrians and cyclists
- Variable depth arch underpass structure
- Reduce approach grades from 15% to less than 5%
- Straighten alignment & provide “open” concept
- Improve lighting for day- & night-time visibility
- Reduce flood closures during high-water season with wall and pump system
- Remove existing underpass & restore stream bank
- Increases impacts to existing park space
- Increased costs



Looking Southeast (North Connection Option 1)



Looking Northwest (South Connection Option 1)



ARAPAHOE AVE UNDERPASS

Draft Evaluation Criteria

(Evaluation Criteria will be used to Identify the Preferred Combination of Presented Options)

Safety

- Reduces curves of path approaches to the underpass
- Encourages use of the underpass over the on-street crossing
- Encourages a bicycle entry speed of no more than 8mph at the on-street crossing of Arapahoe & 13th
- Improves visibility of travelers entering the crosswalk

Accessibility & Mobility

- Simplifies path connections
- Simplifies crossing movement for pedestrians & bicycles
- Impacts on persons with disabilities, senior populations, youth
- Supports existing movement patterns (pedestrian, bicycle, vehicle [including emergency vehicles]):
 - Boulder Creek Path to Boulder Creek Path
 - Boulder Creek Path to on-street crossing at Arapahoe Avenue
 - Boulder Creek Path to Broadway South Path Connection
 - Broadway South Path Connection to on-street crossing at Arapahoe Avenue
 - Arapahoe Avenue eastbound travel
 - Arapahoe Avenue westbound travel

Environmental Impacts & User Experience

- Minimizes encroachment on Boulder Creek
- Isolates users from Boulder Creek
- Habitat removal
- Restores portions of streambank habitat from removal of existing underpass
- Removes mature trees by Boulder Creek
- Removes native vegetation
- Impacts wildlife
- Substantial changes in topography
- Clearing, excavation, grading or other construction activities
- Change in hardscape
- Effects on the aesthetics of a site open to public view
- Preserves contiguous green space in Central Park
- Minimizes opportunities for unwanted activities in Central Park
- Builds retaining walls within Central Park
- Opportunity to incorporate art into infrastructure improvements

- Impacts users during construction

Infrastructure

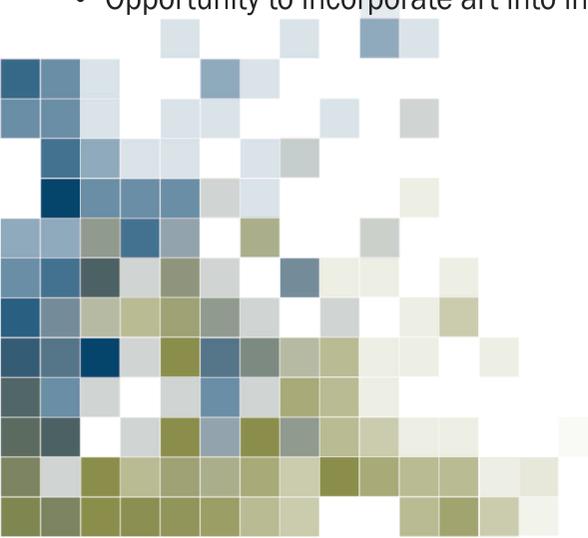
- Creates a new structure with a different service life than the vehicular bridge
- Supports future replacement or reconditioning of existing vehicular bridge
- Modifies existing vehicular bridge
- Increased maintenance
- Requires relocation of underground utilities

City Plans & Program

- Supports Civic Area Vision Plan goals:
 - Addressing conflict & connectivity along the Boulder Creek Multi-Use Path
 - Reducing barrier-effect of Arapahoe Avenue
 - Supports activation of Civic Area Central Park & 13th Street
 - Maintains ability to host events and programs within Civic Area Central Park & 13th Street
 - Supports Civic Area Vision Plan goal of pedestrian scale 13th Street
 - Supports the conceptual plans for expansion of the Boulder County Farmers' Market
 - Supports outcomes of the Market Hall Feasibility Study
- Supports Boulder Valley Comprehensive Plan (BVCP) goal:
 - Creating an accessible multimodal transportation system with safe travel options and connections
- Transportation Master Plan (TMP) goals:
 - Creating an accessible multimodal transportation system with safe travel options and connections
 - Improving facilities for all modes
 - Towards Vision Zero safety goal of reducing serious injury or fatal crashes
 - Decrease single-occupant vehicle use thus reducing and minimizing the use of non-renewable energy resources and greenhouse gas emissions.

Other Considerations

- Estimated project cost
- Estimated project duration





ARAPAHOE AVE UNDERPASS & RECONSTRUCTION Project Timeline

CEAP Overview

- Community & Environmental Assessment Process (CEAP)
- Development of alternatives presented to public
- Presentation of project to Transportation (TAB) and Parks & Recreation Advisory Boards (PRAB)
- Open House, TAB & PRAB feedback used in selection of preferred alternative
- CEAP Committee review and second public open house
- Final TAB, PRAB & Council Review and Approval

Summer/Fall 2016

- Preliminary Engineering
- Second Open House (Today)
- Advisory boards briefs (TAB/PRAB) (September 2016)
- Selection of Preferred Alternative (September/October 2016)
- CEAP Committee Presentation for Process Review and Determination of Preferred Alternative (October 2016)
- Final Presentation of Preferred Alternative to TAB, PRAB, & City Council (Est. November 2016)

Winter 2016/Spring 2017

- Final Engineering and Plan Development

Fall 2017

- Start Construction

Fall 2018

- Construction Complete

Contact Information

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- Melanie Sloan, Transportation Planner
- (303) 441-3266

For Additional Information:

- www.bouldertransportation.net > Programs & Projects
- www.boulderconezone.net (during constr.)