COLORADO
Department of Transportation

RTD

Boulder County

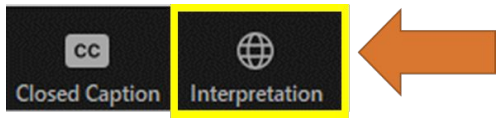
CO 119 Safety and Mobility Improvements Alternative Delivery

Industry Review Meeting

January 26, 2023

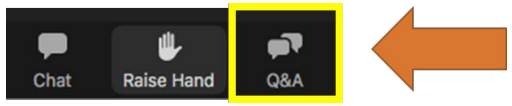
Today's Presenters

Interpretación simultánea en español



This meeting is being recorded

Submit questions in the Q&A



Adnana Murtic, P.E. – Project Manager, CO 119

Casey Valentinelli, P.E. – Alternative Delivery Program

Additional Project Team Members

Ali Imansepahi, P.E. –

RTD Project Manager, CO 119 BRT

Stacey Proctor

Boulder County Project Manager, Bikeway

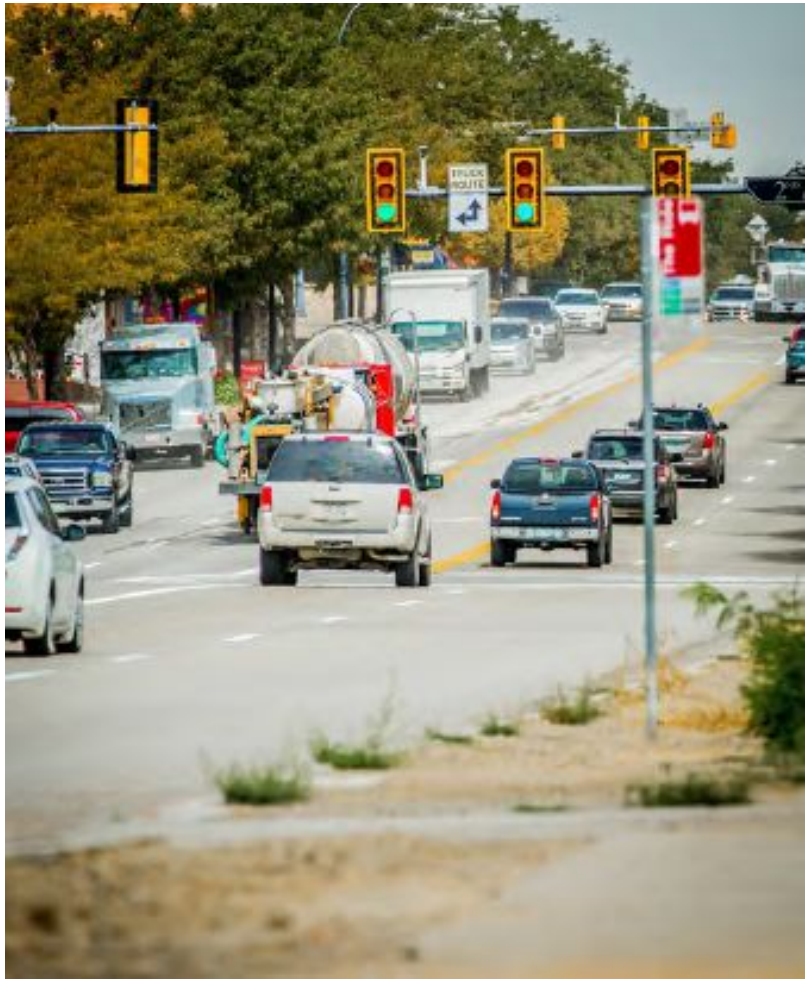
Welcome

AGENDA:

- Welcome and purpose of meeting
- Project overview
- CDOT delivery method selection process
- Project delivery method recommendation
- Collect comments
- Project questions & answers

Purpose of Meeting

- Review alternative delivery method recommendation for the CO 119 Safety and Mobility Improvements Project and Commuter Bikeway Project (combined - The Project)
- Solicit comments and respond to questions



Project Background and Need

Highest crash corridor for motorists, second highest for bicyclists in Boulder County

1009 total vehicle crashes
(368 injury, 3 fatal)
509 injured persons | 3 fatalities

17 bicycle crashes
5 severe injuries | 1 fatal

2 pedestrian crashes

Safety Corridor Improvements

Project improvements will reduce crashes

370+ vehicle crashes prevented in the 20 years following project completion

Expect to eliminate nearly all bikeway crashes

Corridor Mobility Challenges

Bikeway connection
No direct bike connection across the corridor

Bus transit
BOLT service can be slow and travel times are unreliable

Traffic

25% increase in vehicular traffic by 2040

Corridor Mobility Improvements

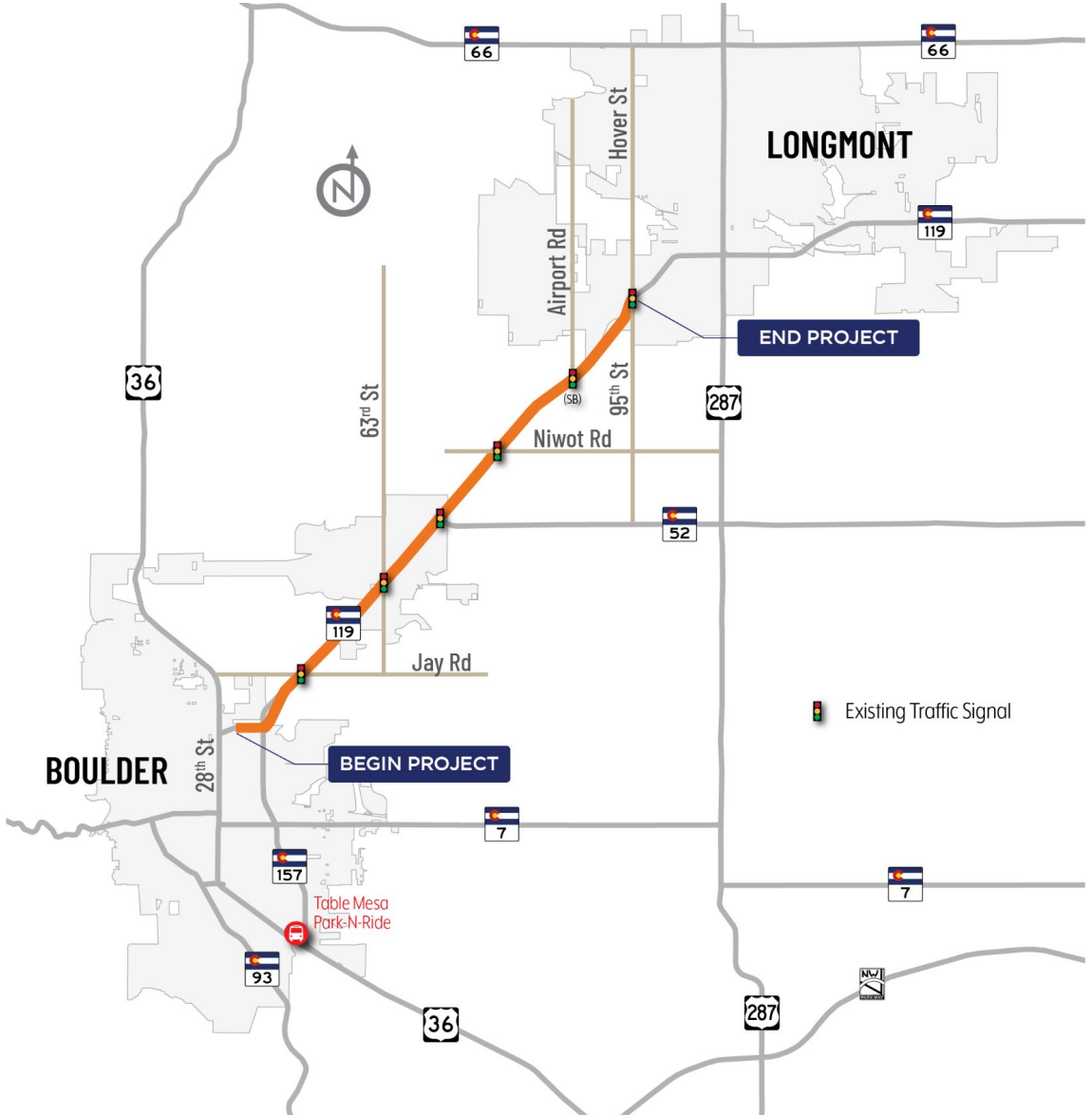
Commuter bikeway
New separated commuter bikeway provides safe and direct connection

Bus transit
New Bus Rapid Transit expected to cut transit travel times in half and increase ridership by 33%

Smart growth

Project improvements enhance travel choice and mitigate challenges of regional growth

Project Location

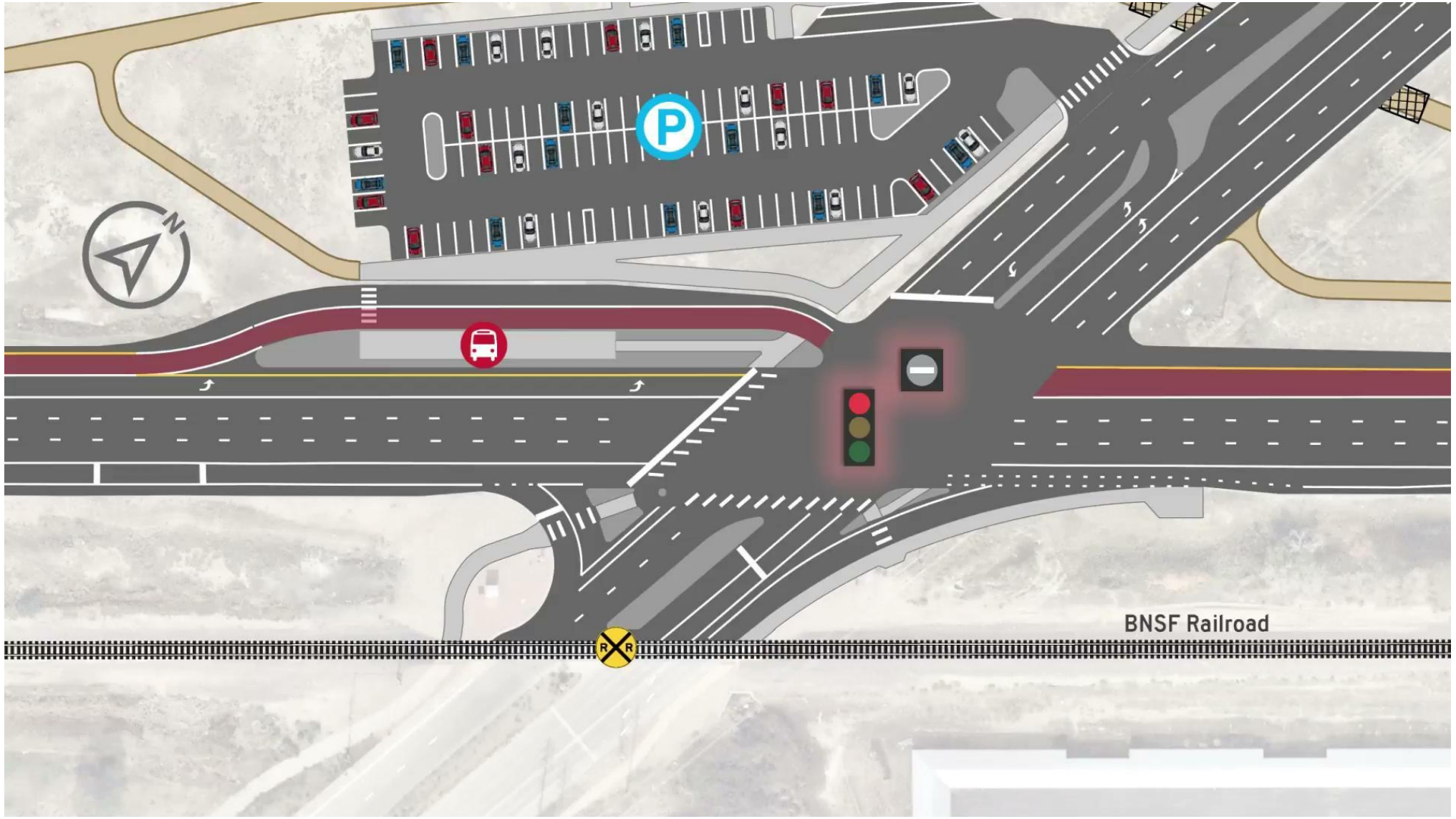


Safety and Mobility Improvements Project

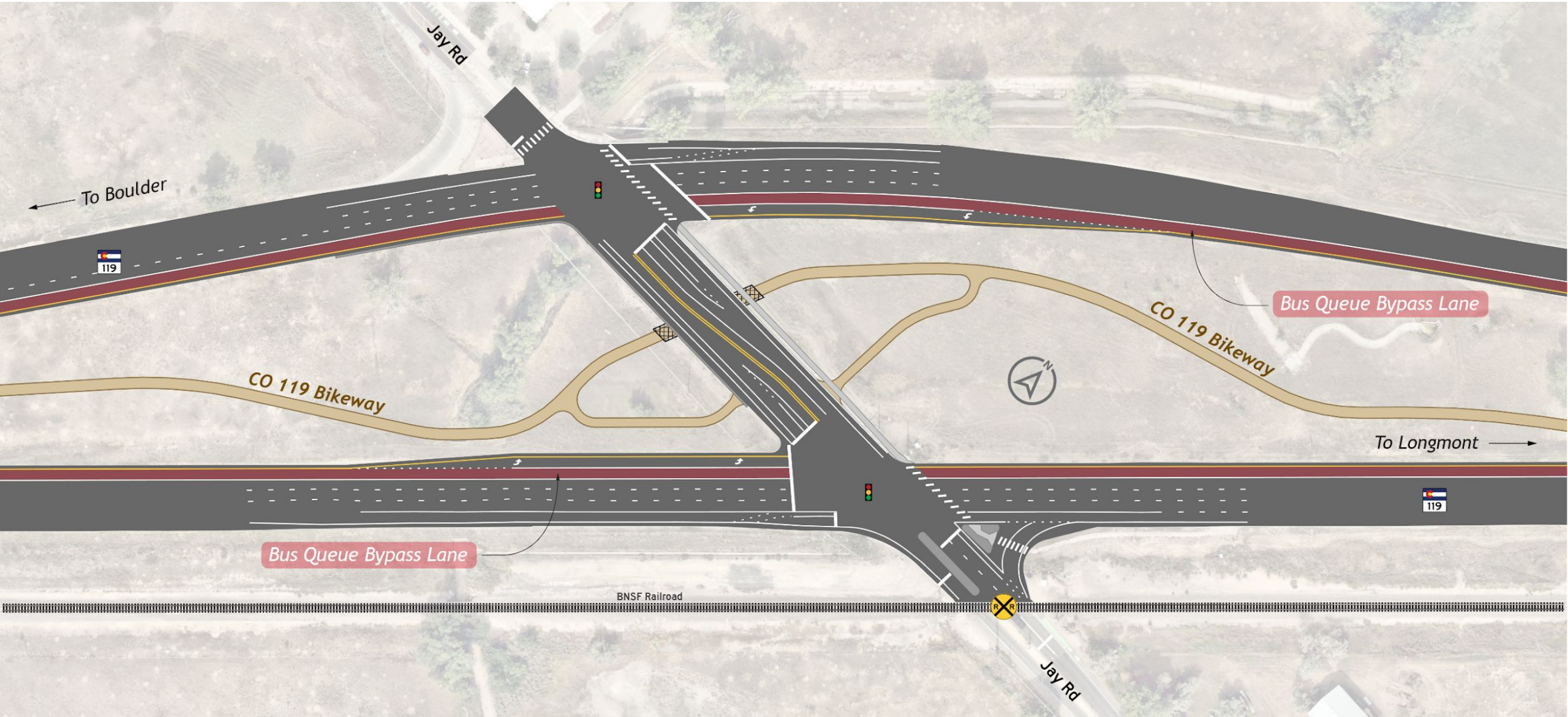
Major Features of Work

- CO 52 Intersection
  - Reconstruction – Split Intersection
- Airport Rd Intersection
  - Operational Reconfiguration
- **Hover Street (*RAISE Grant Dependent)**
- General Intersection Improvements
  - Jay Rd
  - 63rd Street
  - Niwot Rd
  - Airport Rd
- Park-n-Rides
  - 63rd Street
  - Niwot Rd
- ITS
- Queue Bypass Lanes
  - Jay Rd
  - 63rd Street
  - CO 52
  - Niwot Rd
  - SB Airport Rd
- Bus Rapid Transit (BRT) Stations
  - 63rd Street
  - CO 52
  - Niwot Rd
- Commuter Bikeway (including underpasses)
  - Full scope is pending funding scenario & agreements at the time of construction

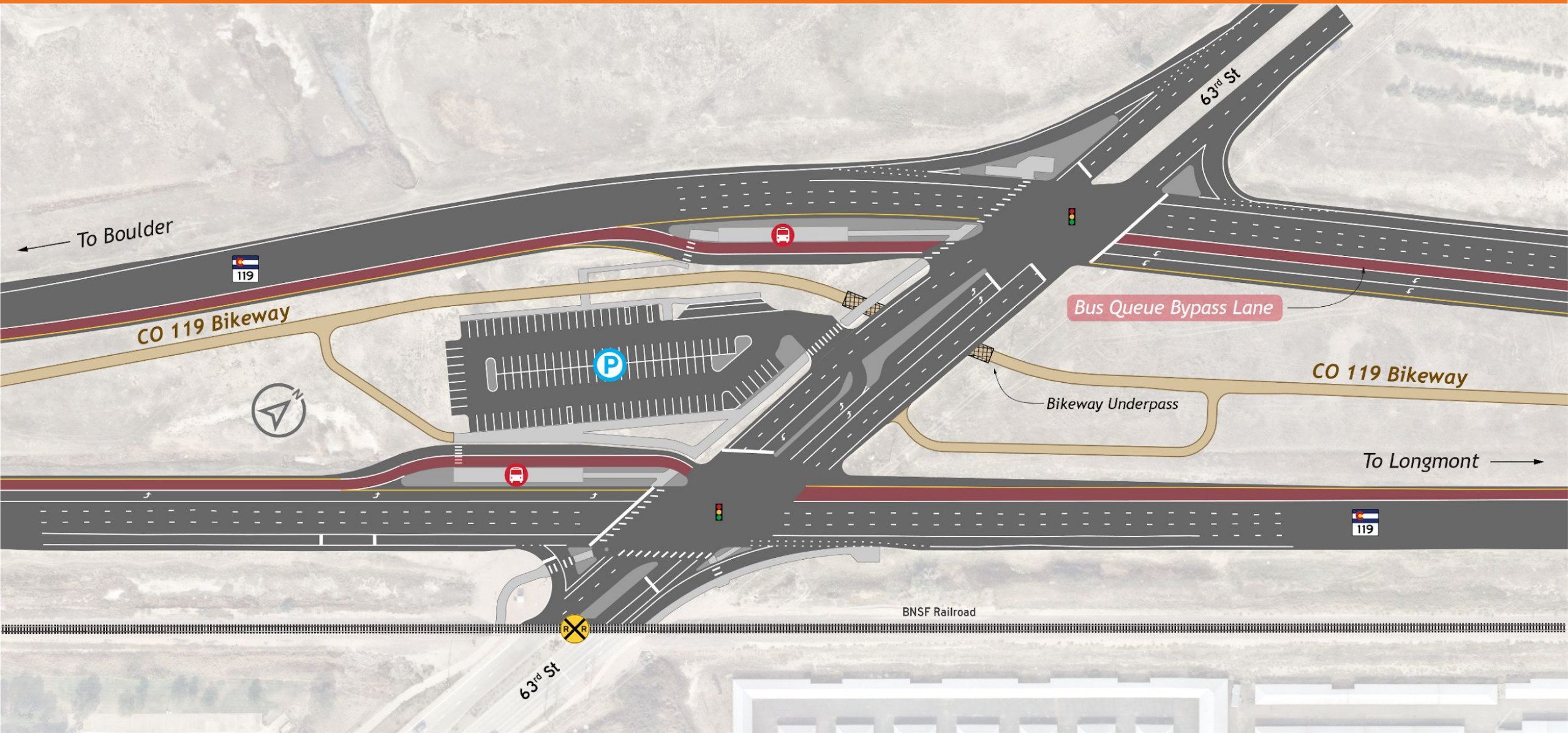
Queue Bypass Lane



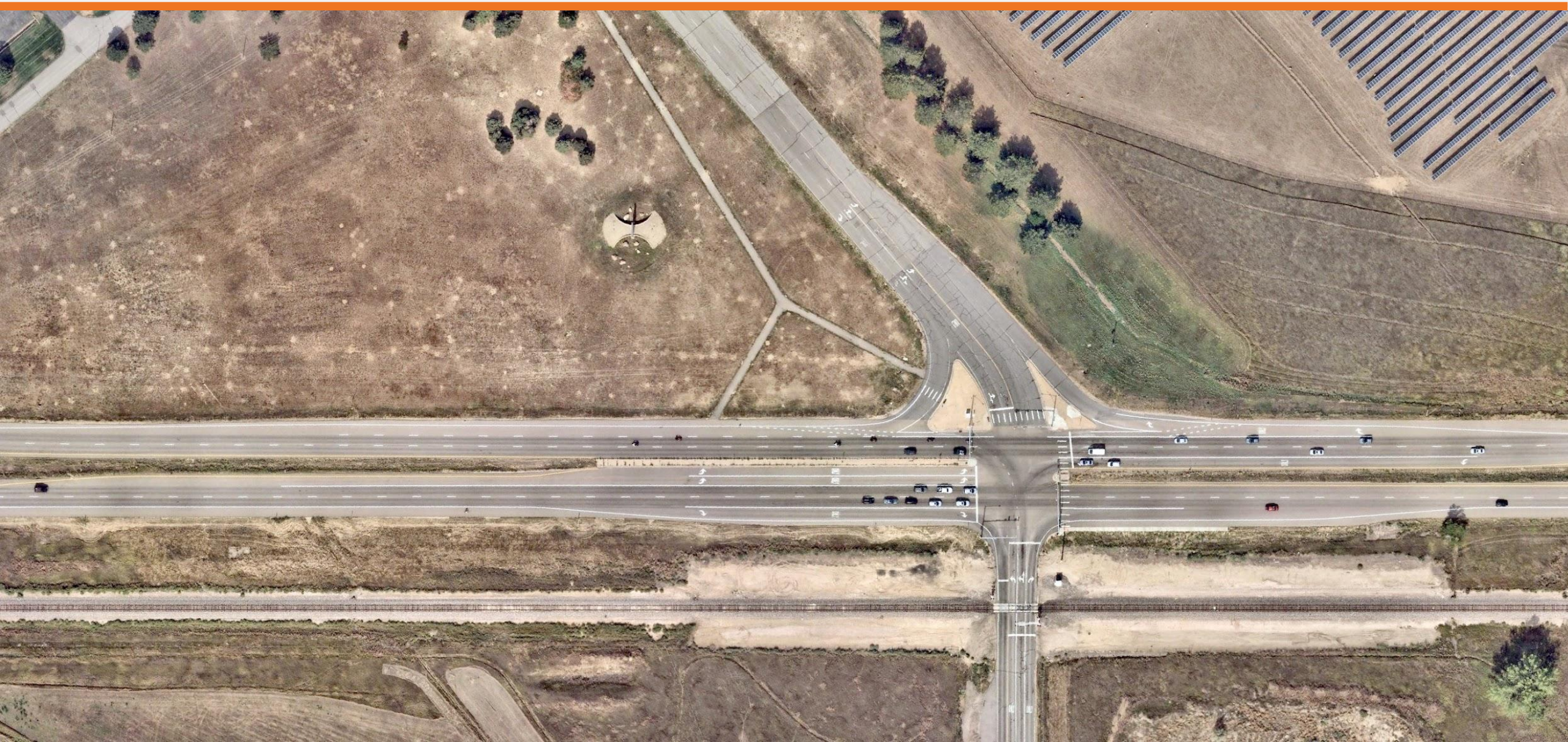
Jay Road Intersection



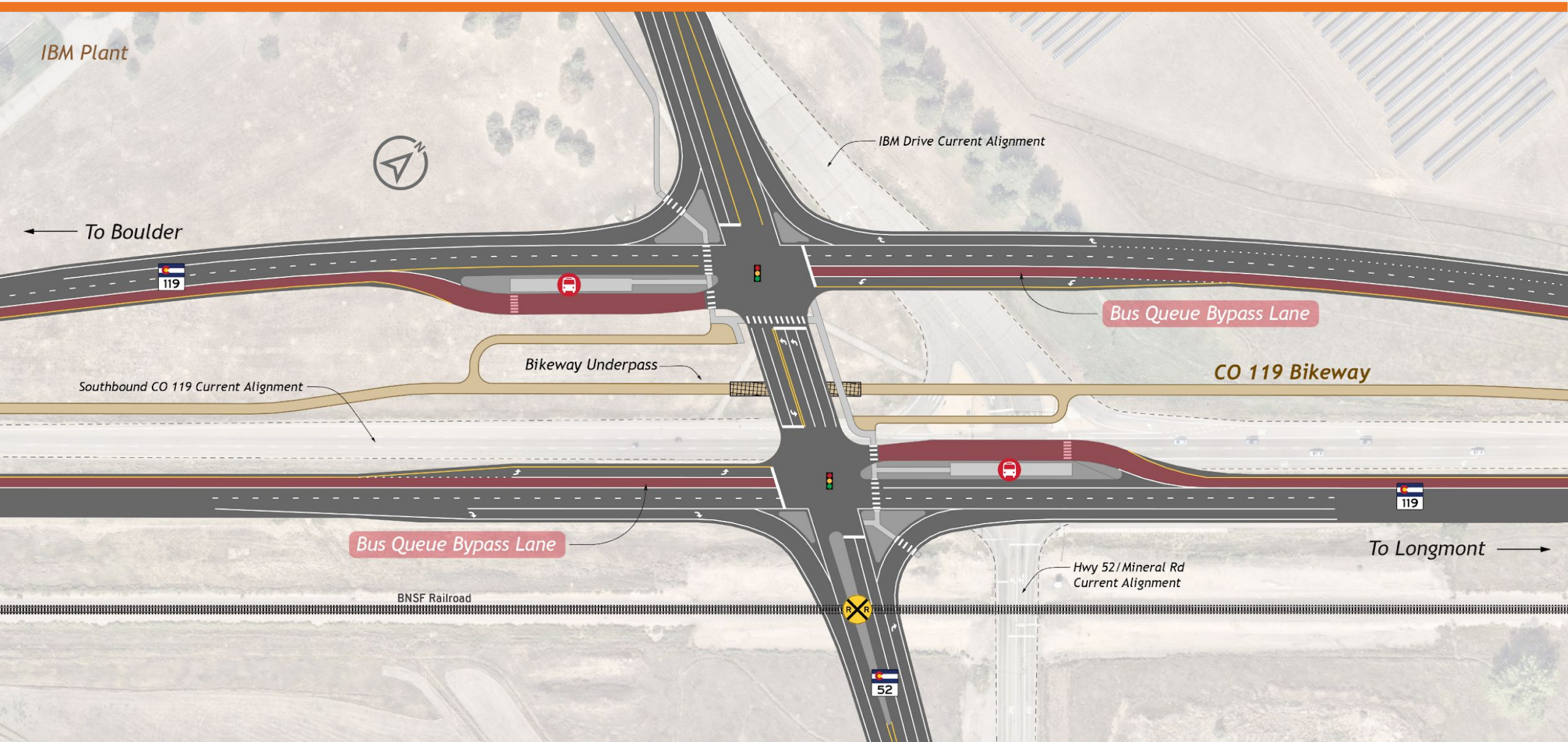
63rd Street Intersection



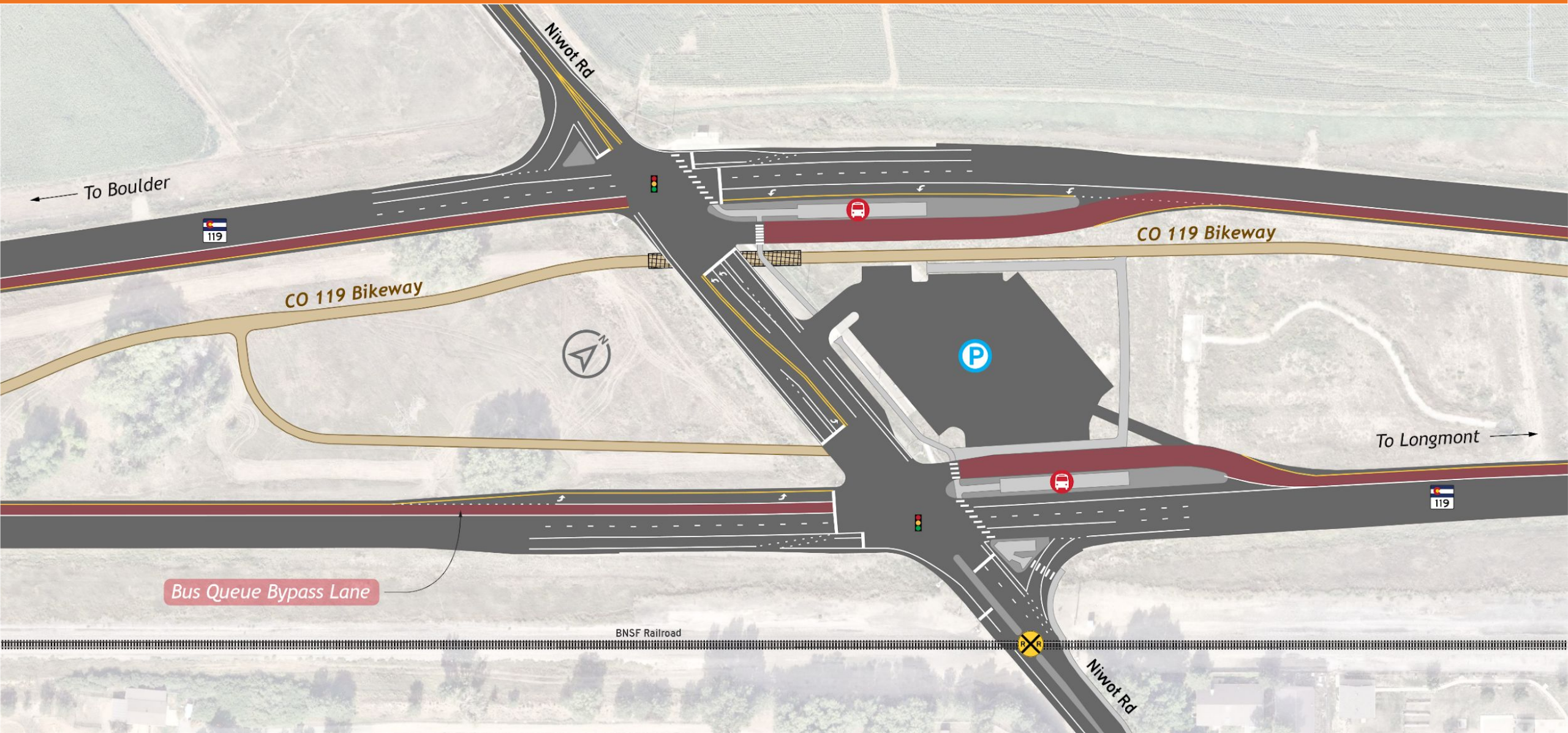
CO 52 Intersection (Existing)



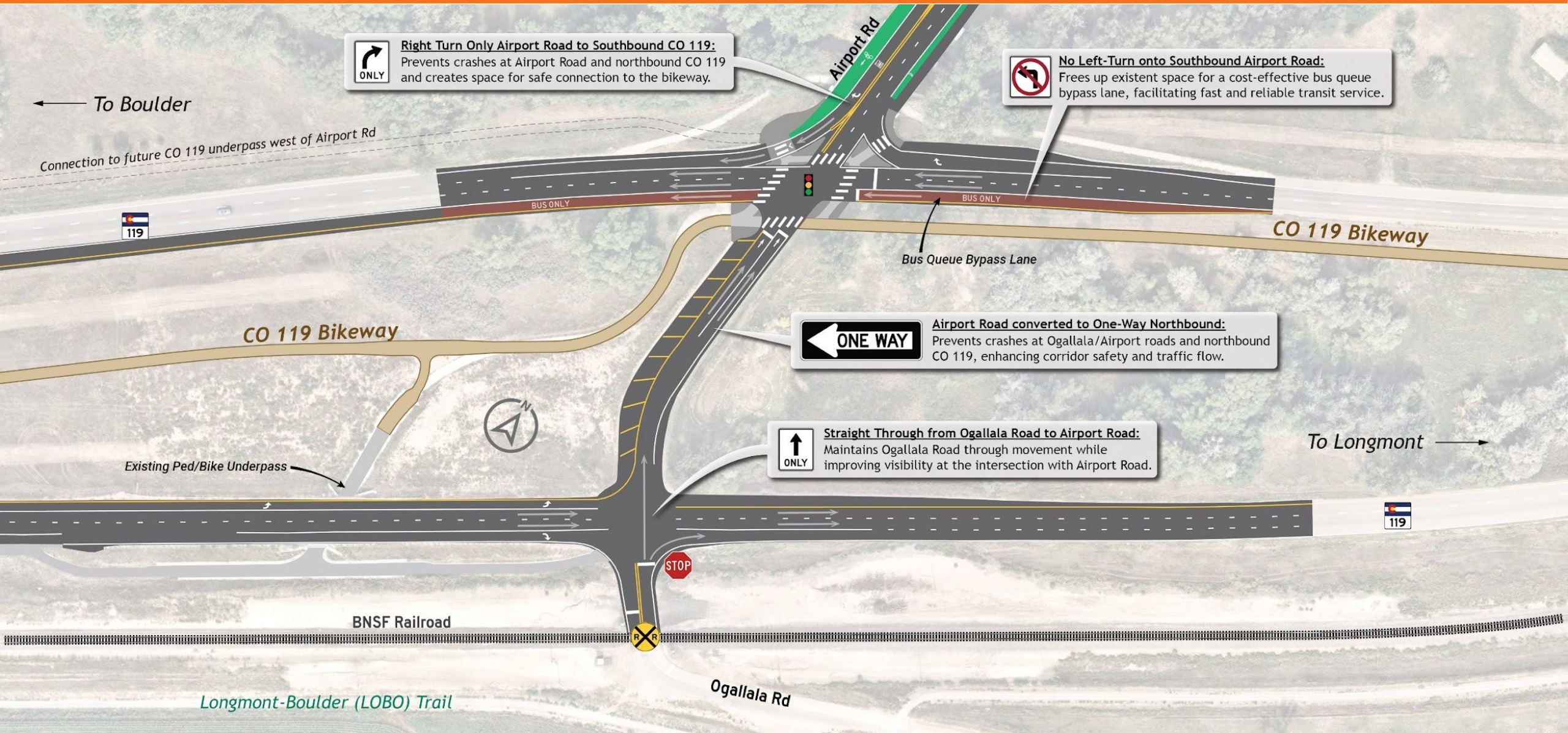
CO 52 Intersection



Niwot Road Intersection

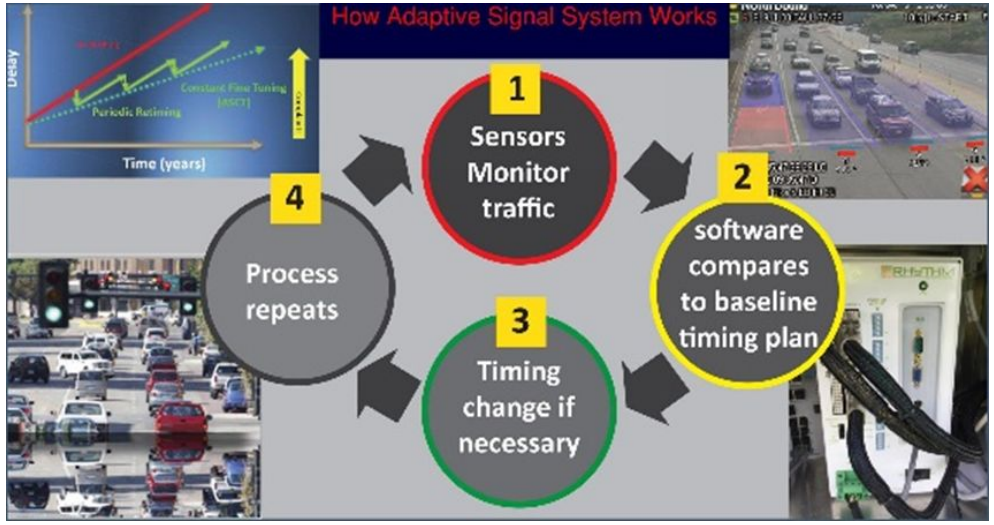


Airport Road Intersection



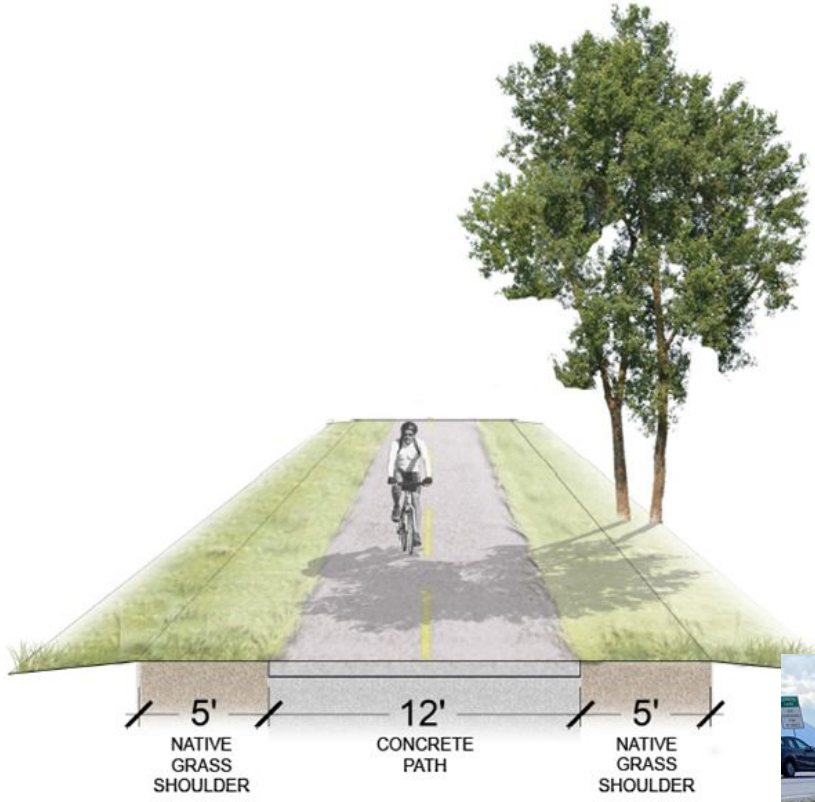
Roadway and ITS Improvements

- Traffic Signals Poles
- Signing and Pavement Marking
- Lighting
- Adaptive Signals
- Airport Road Access Changes
- CO 52 Intersection Reconfiguration
- Security Cameras
- Road/Weather Information System Stations
- Variable Message Signs
- Transit Signal Priority
- Automatic Traffic Recorders

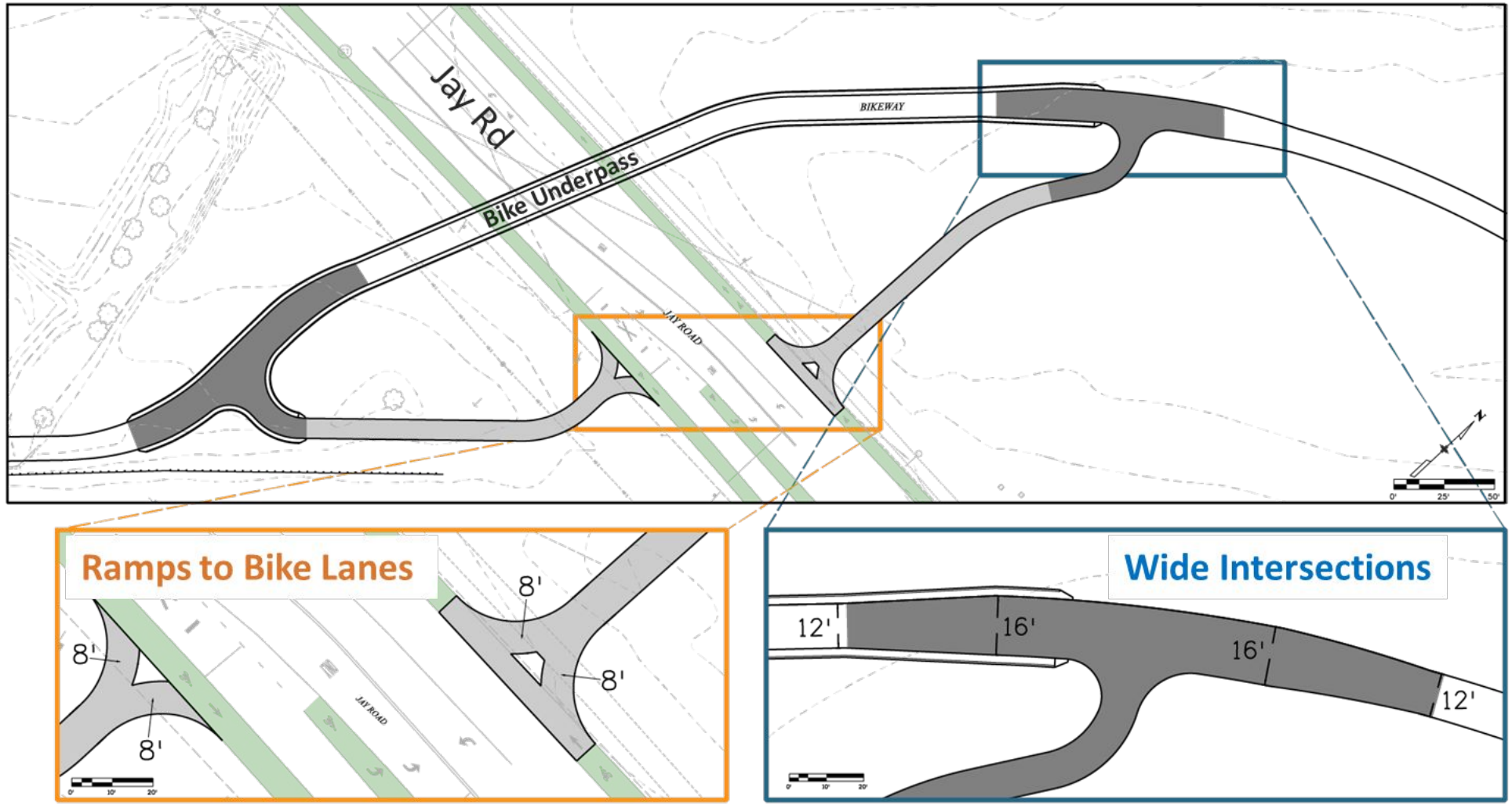


Commuter Bikeway
Safe, Direct, Accessible

- ✓ Separated from road
- ✓ Plowed in winter
- ✓ Grade-separated crossings at major intersections
- ✓ Direct connection to BRT stations
- ✓ E-bikes allowed
- ✓ Connects to existing bike networks
- ✓ ADA accessible



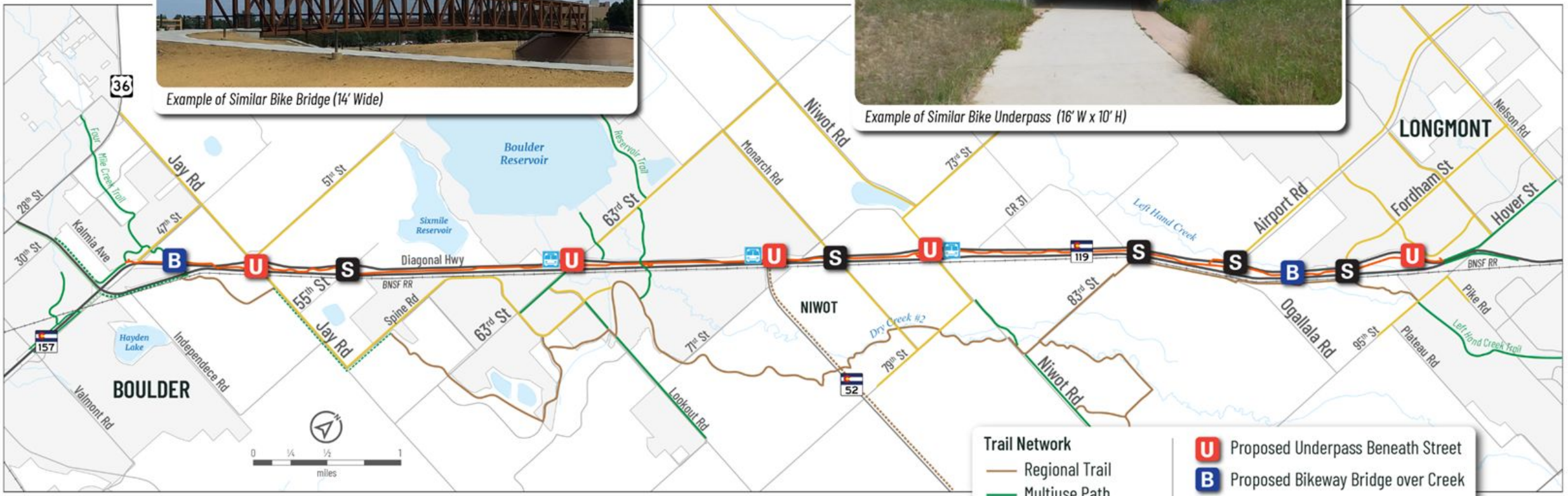
Commuter Bikeway
Spur Connections at Cross Streets



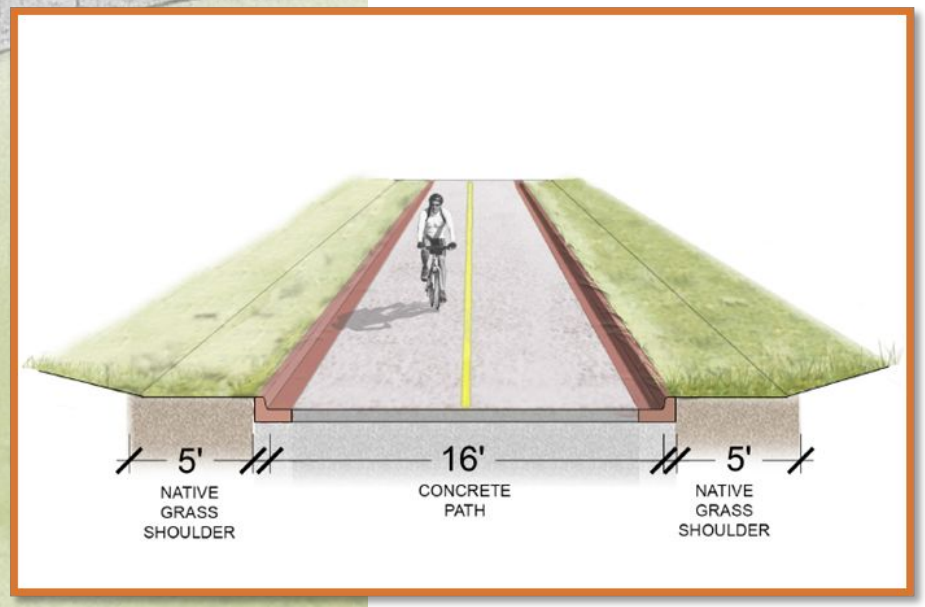
Commuter Bikeway Streets and Creek Crossings

Example of Similar Bike Bridge (14' Wide)

Example of Similar Bike Underpass (16' W x 10' H)



Commuter Bikeway Underpass Crossing



Commuter Bikeway Crossing at Street Level

Raised Crossing Example

- 55th Street
- Monarch Road
- Oxford Road
- 83rd Street
- Fordham Street

Project Goals

PEL / PROJECT GOALS:

Improve safety in the whole corridor

Maximize intersection operational efficiency

Maximize corridor-wide operational efficiency

Maximize the number of people able to move through the corridor

Improve transit travel times

Improve connectivity to the bicycle and pedestrian network

Key Project Risks

- Variable resources, funding, timing, and scope of the project
- Public and stakeholder acceptability of design
- Permitting and approval processes (Floodplain, 1041, NEPA, etc.)
- Third party (Railroad, Ditch Company, etc.) reviews and approvals
- Cost Escalation
- Material availability
- Lead time for utility relocations

General Constraints

- Source of Funding
  - Sources identified and secured but a Phase 1 scope yet to be finalized; pursuits ongoing for remaining funding needs
- Schedule Constraints
  - Accelerated project schedule
  - Minimize travelling public impacts
- Federal, state, and local laws:
  - City of Boulder
  - City of Longmont
  - Boulder County
  - Comply with all CPW, USACE and USFWS environmental requirements
- Third party agreements with railroads, ROW, etc.:
  - **Railroad (BNSF)**
  - **Utility Relocation Agreements**
  - **Ditch Company Agreements**
  - **IGAs for Funding Participants**
  - **Boulder County 1041**
  - **Maintenance IGAs (Boulder County & RTD)**

Funding Summary to Date

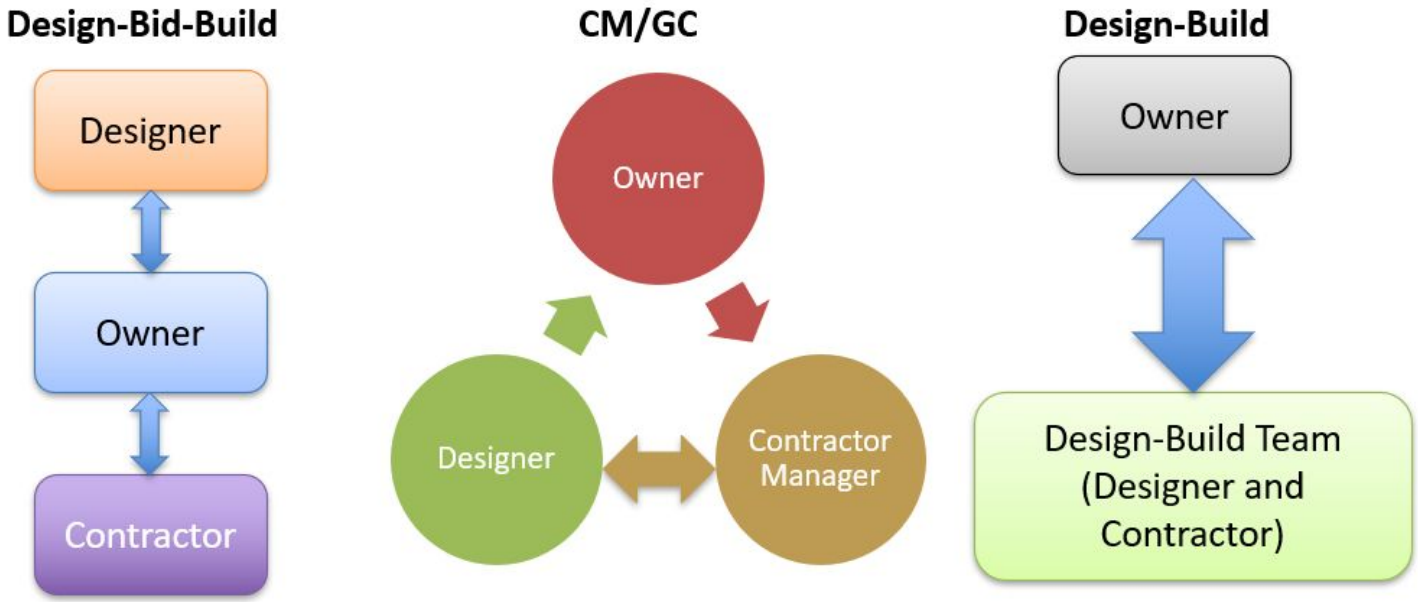
Agency	Funding Designation	Funding Sub-total	Total Funding
CDOT	Years 1-4	$40.0M	$73.9M
	Years 5-10	$24.9M	
	RPP	$9.0M	
RTD	(of $33M total for CO 119)		$16.8M
Boulder County			$3.1M
DRCOG	TIP Grants		$34.9M
Longmont	CIP		$2.0M
		Total Secured Funding	**$130.7M**

- **Total Program Cost: $160.6M (Including Hover)**
- **Estimated Construction Portion: $113.9M**
- **Total Secured Funding: $130.7M**
- **Estimated Construction Portion:$90.5M**
- **Remaining Need: $29.9M**
- **Estimated Construction Portion:$23.4M**

Current Funding Pursuits:

- **RAISE Grant - $25M**
  - Focused on funding Hover Street
- **DRCOG Call 4 - $16.2M**
  - 3 segments of the bikeway
  - Not likely to receive full funding

Toolbox of Project Delivery Options



- Types of Project Delivery at CDOT
  - Design-Bid-Build (Traditional)
  - Design-Build (Alternative)
  - Construction Manager/ General Contractor (CM/GC) (Alternative)
- Project Delivery selection is considered through a detailed workshop process

How Does CDOT Decide?

- CDOT has developed a specific Tool to assist our Project Teams in making this decision. It is the:

  Project Delivery Selection Matrix (PDSM)

https://www.codot.gov/business/designsupport/adp-db-cmgc/pdsm

- A 4-8 hour workshop is held to complete the PDSM
- It is a Goals and risk analysis tool that guides project teams through 5 primary “Critical Discussions” to determine Opportunities and Obstacles that each “Major Delivery Method” presents.
- CDOT does not require the PDSM to be completed on all projects

Project Delivery Selection Factors

Delivery Method Opportunity/Obstacle Summary			
	DBB	CM/GC	DB
Primary Selection Factors			
1. Project Complexity and Innovation			
2. Project Delivery Schedule			
3. Project Cost Considerations			
4. Level of Design			
5. Risk Assessment			
Secondary Selection Factors			
6. Staff Experience/Availability (Agency)			
7. Level of Oversight and Control			
8. Competition and Contractor Experience			

Rating Key

- ++ Most Appropriate delivery method
- + Appropriate delivery method
- - Least Appropriate delivery method
- X Fatal Flaw (discontinue evaluation of this method)

PDSM Workshop

- CO 119 Safety and Mobility Improvements Project (CDOT and RTD) and Bikeway Project (Boulder County) Delivery Selection Matrix (PDSM) Workshops
  - CDOT process for determining project delivery methods for complex projects
  - 16 participants
  - Representatives from:
    - CDOT
    - RTD
    - Boulder County
  - Started and finalized in November 2022

Project Delivery Selection Factors and Recommendation - CM/GC

Delivery Method Opportunity/Obstacle Summary			
	DBB	CM/GC	DB
Primary Selection Factors			
1. Project Complexity and Innovation	+	+	
2. Level of Design	+	++	
3. Project Cost Considerations	+	++	
4. Project Delivery Schedule	+	++	X
5. Risk Assessment	+	++	
Secondary Selection Factors			
6. Staff Experience/Availability (Agency)	++	+	
7. Level of Oversight and Control	+	+	
8. Competition and Contractor Experience	+	++	

Rating Key

- ++ Most Appropriate delivery method
- + Appropriate delivery method
- - Least Appropriate delivery method
- X Fatal Flaw (discontinue evaluation of this method)

Summary/Findings

- **Design-Build**
  - Funding timelines (DRCOG) are not compatible with this delivery method
  - Removed from consideration based on Delivery Schedule

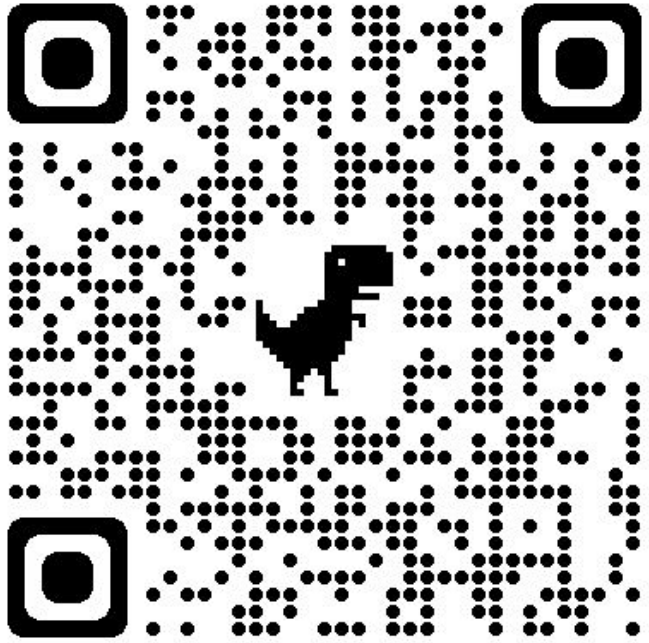
- **Design-Bid-Build**
  - Pros – Known delivery method, Agency input/control and Competitive pricing
  - Cons – Lack of package flexibility, Unknown risks, Contractor Expertise for wide variety of scope, Cost Escalation & Material availability and Schedule duration if scope were to be added

- **CM/GC**
  - Pros – Contractor Feedback on design, Agency input/control, Flexibility in packaging, Cost Certainty, Contractor input on schedule/phasing and Risk identification and mitigation
  - Cons – Minimal innovation opportunities, Increased pre-construction costs and delay to procure contractor
  - ***Staff Recommendation*** **– Proceed with CM/GC procurement and delivery method**

Next Steps

- Prepare and publish meeting summary Q&A document and recording
- Consider input from this meeting related to Alternative Delivery Selection of CM/GC
- Present Delivery Recommendation to Transportation Commission
- Develop and Release Requests for Proposals

Comments and Questions



https://forms.gle/2VKTJPxGUbnNVXfx8

- To submit a comment on the CM/GC alternative delivery method recommendation, please access the QR code with your phone
  - You can also provide comments via the url typed into the Zoom chat window
- To submit a question for the Q&A session, click the Q&A icon located at the bottom of the Webinar screen. Questions will be addressed in the order in which they are received.

Project Contacts

Roadway and Bus Rapid Transit

codot.gov/projects/co119-mobility-design
codot.gov/business/alternativedelivery/opportunities/cm-gc-solicitations/21497-co-119-safety-and-mobility-improvements-project

co119safetyandmobility@gmail.com

Bikeway

bouldercounty.org/transportation/plans-and-projects/highway-119-bikeway-project

aphillips@bouldercounty.org