



DRCOG FY2022-2025 TIP – Arapahoe County Subregion
Subregional Share Air Quality/Multimodal (AQ/MM)
Application Programming Federal Fiscal Years 2023-2025

APPLICATION OVERVIEW

What: The Subregional Share Call for Projects for the FY2022-2025 TIP, programming fiscal years 2023-2025

Funding Available: \$161,292,000 overall. Target of \$30,016,000 for Arapahoe County (estimated as of the open date)

Application: Air Quality & Multimodal (AQ/MM) eligible projects only

Major Project Eligibility Exceptions: Roadway capacity, roadway reconstruction, bridge, interchange projects

Call Opens: May 2, 2022

Call Closes: June 24, 2022, 3 pm

Application Submittals: submit the items below online through the submittal link on the [TIP Data Hub](#)

1. REQUIRED: a **single PDF document** containing the below. Please **DO NOT** attach additional cover pages, embed graphics in the application, or otherwise change the format of the application form.
 - a. this application
 - b. one location map/graphic
 - c. cost estimate (your own or the CDOT [cost estimate form](#))
 - d. CDOT/RTD concurrence response (if applicable)
 - e. any required documentation based on the application text (i.e., FHWA emissions calculators)
 - f. project support letters and/or [Request for Peer Agency Support](#)
2. OPTIONAL: Submit **one additional** PDF document containing any supplemental materials, if applicable
3. REQUIRED: Submit a zipped GIS shapefile of your project. Requests for assistance with creating a shapefile should be submitted to tipapplications@drcog.org no later than June 3, 2022

Other Notable items:

- **TIP Trainings:** To be eligible to submit an application, at least one person from your agency must have attended one of the two mandatory TIP training workshops ([February 10](#) and [February 16, 2022](#))
- **CDOT/RTD Concurrence:** If required, [CDOT and/or RTD concurrence](#) must be provided with the application submittal. The CDOT/RTD concurrence request is due to CDOT/RTD no later than May 13, 2022, with CDOT/RTD providing a response no later than June 10, 2022. Submit requests to the following: CDOT Region 1 – JoAnn Mattson, joann.mattson@state.co.us; CDOT Region 4 – Josie Hadley, josie.hadley@state.co.us; RTD – Chris Quinn, chris.quinn@rtd-denver.com
- **If a submitted application in Call #1 was not funded,** and you wish to resubmit the same application for this call, please contact DRCOG at tipapplications@drcog.org. In these cases, we can unlock the application, change the title, and save the applicant work in the resubmittal process.
- **Application Data:** To assist sponsors in filling out the application, DRCOG has developed a TIP Data Tool to streamline quantitative analyses requested in the application. A link to the TIP Data Tool and instructions on how to use it are available on the [TIP Data Hub](#). Additionally, sponsors may download datasets to run their own analyses from this same site. Requests for additional data or calculations from DRCOG staff should be submitted to tipapplications@drcog.org no later than June 3, 2022
- **Project Affirmation:** The application must be affirmed by either the applicant’s City or County Manager, Chief Elected Official (Mayor or County Commission Chair) for local governments, or agency director or equivalent for other applicants
- **TIP Policy:** Further details on project eligibility, evaluation criteria, and the selection process are defined in the [Policies for TIP Program Development](#) document (a [quick-guide](#) is also available for reference)
- **Evaluation Process:** DRCOG staff will review submittals for eligibility and post to the DRCOG website (June 27-July 1). Applications and scoring sheets will then be provided to the individual subregional forums no later than July 1. The forums will then review, score, discuss, and rank the applications and provide a recommended funding list within the funding available by August 5. The forums’ recommendations will then be forwarded to the DRCOG committee process for incorporation into the adopted TIP
- If you have any questions or need assistance, reach out to us at tipapplications@drcog.org

APPLICATION FORMAT

The AQ/MM Subregional Share application contains two parts: *project information* and *evaluation questions*.

Project Information

Applicants enter **foundational** information for the *project/program/study* (hereafter referred to as *project*), including a problem statement, project description, and concurrence documentation from CDOT and/or RTD, if applicable. This section is not scored.

Evaluation Questions

This part includes four sections (A-D) for the **applicant to provide qualitative and quantitative responses** to use for scoring projects. The checkboxes and data entry fields should guide the applicant’s responses. They are not directly scored but provide context as reviewers consider the full response to each question. Applicants may access the TIP Data Tool and additional data resources which applicants may find useful [here](#).

Scoring Methodology: Each section will be scored on a scale of 0 to 5, relative to other applications received. All questions will be factored into the final score, with any questions left blank receiving 0 points. The four sections are weighted and scored as follows:

Section A. Subregional Impact of Proposed Projects..... 30%

Projects will be evaluated on the degree to which they address a significant regional or subregional problem or benefit people throughout the subregion. Relevant quantitative data should be included within narrative responses.

5	The project benefits will substantially address a major regional or subregional problem and benefit people and businesses in multiple subregions.
4	The project benefits will significantly address a major subregional problem primarily benefiting people and businesses in one subregion.
3	The project benefits will either moderately address a major subregional problem or significantly address a moderate -level subregional problem.
2	The project benefits will moderately address a moderate -level subregional problem.
1	The project benefits will address a minor subregional problem.
0	The project does not address a subregional problem.

Section B. Metro Vision Regional Transportation Plan Priorities50%

The TIP’s investments should implement the 2050 Metro Vision Regional Transportation Plan (2050 MVRTP) regional project and program investment priorities, which contribute to addressing the Board-adopted Metro Vision objectives and the federal performance-based planning framework required by the Federal Highway Administration and Federal Transit Administration as outlined in current federal transportation legislation and regulations. Therefore, projects will be evaluated on the degree to which they address the six priorities identified in the 2050 MVRTP: safety, active transportation, air quality, multimodal mobility, freight, and regional transit. It is anticipated that projects may not be able to address all six priorities, but it’s in the applicant’s interest to address as many priority areas as possible. Relevant quantitative data is required to be included within narrative responses. The table below demonstrates how each priority area will be scored.

5	The project provides demonstrable substantial benefits in the 2050 MVRTP priority area and is determined to be in the top fifth of applications based on the magnitude of benefits in that priority area.
4	The project provides demonstrable significant benefits in the 2050 MVRTP priority area.
3	The project provides demonstrable moderate benefits in the 2050 MVRTP priority area and is determined to be in the middle fifth of applications based on the magnitude of benefits in that priority area.
2	The project provides demonstrable modest benefits in the 2050 MVRTP priority area.
1	The project provides demonstrable slight benefits in the 2050 MVRTP priority area and is determined to be in the bottom fifth of applications based on the magnitude of benefits in that priority area.
0	The project does not provide demonstrable benefits in the 2050 MVRTP priority area.

Section C. Project Leveraging (“overmatch”) 10%
 Scores are assigned based on the percent of other funding sources (non-Subregional Share funds).

Score	% non-Subregional Share funds
5	60% and above
4	50-59.9%
3	40-49.9%
2	20-39.9%
1	10.1-19.9%
0	10%

Section D. Project Readiness 10%

Be sure to answer ALL questions. While “Yes” answers will generally reflect greater readiness, opportunities are given to provide additional details to assist reviewers in fully evaluating the readiness of your project.

5	Substantial readiness is demonstrated and all known obstacles that are likely to result in project delays have been mitigated.
4	Significant readiness is demonstrated and several known obstacles that are likely to result in project delays have been mitigated.
3	Moderate readiness is demonstrated and some known obstacles that are likely to result in project delays have been mitigated.
2	Slight readiness is demonstrated and some known obstacles that are likely to result in project delays have been mitigated.
1	Few mitigation or readiness activities have been demonstrated.
0	No mitigation or readiness activities have been demonstrated.

Project Information

1. Project Title		Colorado Boulevard Multimodal Improvements	
2. Project Location <i>Provide a map, as appropriate (see Page 1)</i>		Start point: Colorado Blvd and Arapahoe Rd End point: Colorado Blvd and Dry Creek Rd OR Geographic Area:	
3. Project Sponsor <i>(entity that will be financially responsible for the project)</i>		City of Centennial	
4. Project Contact Person:			
Name	Jeff Dankenbring	Title	Public Works Director
Phone	303-754-3458	Email	jdankenbring@centennialco.gov
5. Required CDOT and/or RTD Concurrence: Does this project touch CDOT Right-of-Way, involve a CDOT roadway, access RTD property, or request RTD involvement to operate service?		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>If yes, provide applicable concurrence documentation</i>	
		<input type="checkbox"/> DRCOG 2050 Metro Vision Regional Transportation Plan (2050 MVRTP) Provide MVRTP staging period, if applicable capital project:	
		<input checked="" type="checkbox"/> Local/Regional plan:	Planning Document Title: Centennial Transportation Master Plan Adopting agency (local agency Council, CDOT, RTD, etc.): City Council of the City of Centennial Provide date of adoption by council/board/commission, if applicable: May 2, 2022
6. What planning document(s) identifies this project? <i>Provide link to document(s) and referenced page number if possible, or provide documentation in the supplement</i>		Centennial took a comprehensive, community engagement approach to engage key stakeholders and a broad cross-section of the public and community over a year-long planning period. Community members and stakeholders were asked to evaluate and provide input on potential projects, consider a series of transportation tradeoffs, and participate in a transportation funding exercise. The planning process involved three phases of the engagement period: <ul style="list-style-type: none">• Phase One: Spanned from early May to mid-July and focused on values and needs. Outreach through this initial phase aimed to notify the public about the Centennial TMP update and sought to understand community values and transportation gaps and needs.• Phase Two: Extended from early August to mid-September, presented community members and stakeholders opportunities to evaluate transportation and mobility tradeoffs and provided feedback on initial project ideas.• Phase Three: Occurred in March/April 2022, and engagement centered on validation. The City prompted community members and stakeholders to review and comment on the draft TMP and confirm that the plan reflects the community's stated values and	

		<p>priorities. City conducted stakeholder interviews, public meetings, open houses, and maintained a project website to collect comments.</p> <p>In addition, extensive public outreach was conducted as part of the 2021 Colorado Boulevard Orchard Road to County Line Road Multimodal Corridor Study, as described in Section D below.</p>
	Other pertinent details:	<p>Link to TMP (see p. 75 for project details and map): centennial-tmp_may-2022.pdf (centennialco.gov)</p>

7. Identify the project’s key phases and the anticipated schedule of phase milestones.
 (phases and dates should correspond with the Funding Breakdown table below)

Phases to be included:	Major phase milestones:	Anticipated completion date (based on 9/21/2022 DRCOG approval date): (MM/YYYY)
<u>FOR ALL PHASES</u>	Intergovernmental Agreement (IGA) executed (with CDOT/RTD; assumed process is 4-9 months)	02/2023
<input type="checkbox"/> Design	Design contract Notice to Proceed (NTP) issued (if using a consultant):	
	Design scoping meeting held with CDOT (if no consultant):	
<input type="checkbox"/> Environmental	Environmental contract Notice to Proceed (NTP) issued (if using a consultant):	
	Environmental scoping meeting held with CDOT (if no consultant):	
<input type="checkbox"/> Right-of-Way	Initial set of ROW plans submitted to CDOT:	
	ROW acquisition completed: Estimated number of parcels to acquire:	
<input checked="" type="checkbox"/> Construction	FIR (Field Inspection Review):	10/2023
	FOR (Final Office Review):	03/2024
	Required clearances:	08/2024
	Project publicly advertised:	09/2024
<input type="checkbox"/> Study	Kick-off meeting held after consultant NTP (or internal if no consultant):	
<input type="checkbox"/> Bus Service	Service begins:	
<input type="checkbox"/> Equipment Purchase (Procurement)	RFP/RFQ/RFB (bids) issued:	
<input checked="" type="checkbox"/> Other: RFR	First invoice submitted to CDOT/RTD:	1/2025

8. **Problem Statement:** What specific subregional problem/issue will the transportation project address?

Current roadway conditions contribute to an uncomfortable and potentially dangerous environment for pedestrians and cyclists, including schoolchildren. In the neighborhoods surrounding the project area, local residents have expressed concern about safe routes for those who choose to walk or roll to neighborhood destinations, including Newton Middle School, businesses, and parks. Currently, bicycle facilities along and near the corridor are limited and pedestrian crossings are rare. Moreover, vehicles frequently exceed the speed limit on Colorado Boulevard, traveling at an average speed of 40 to 45 mph, with at least 15% of drivers exceeding 46 mph. Up to 92 percent of all drivers exceed the speed limit in the corridor. The roadway in its current form has excess capacity for vehicles, which encourages these dangerous driver behaviors.

Centennial lacks multimodal transportation options in many areas, including key corridors that have the potential to connect community members to destinations such as schools, parks, trails, places of worship, and businesses. In this area, Centennial exhibits a typical suburban road network, consisting of few straight arterials and many winding and cul-de-sac neighborhood streets. The bicycle infrastructure that exists typically snakes through back roads or along circuitous water routes. Currently, no north-south bicycle facilities exist that allow for bicycle movement between the neighborhoods along Colorado Boulevard.

The 2050 Metro Vision Regional Transportation Plan recognizes the need to promote livability in our communities, while also improving the region's multimodal system and increasing access to opportunities that promote health and active choices. Providing a safe, direct bicycle and pedestrian route along Colorado Boulevard will improve neighborhood access to local businesses and opportunities along major cross streets while also improving access to Newton Middle School for students and allowing users to access major regional trails without driving a car. Providing pedestrian and bicycle access along this arterial will ensure a direct and convenient connection that gives residents a reason to leave their car at home.

9. Identify the project's **key elements**. A single project may have multiple project elements.

Roadway

Operational Improvements

Grade Separation

- Roadway
- Railway
- Bicycle
- Pedestrian

Regional Transit¹

- Rapid Transit Capacity (2050 MVRTP)
- Mobility Hub(s)
- Transit Planning Corridors
- Transit Facilities/Service (Expansion/New)

Safety Improvements

Active Transportation Improvements

- Bicycle Facility
- Pedestrian Facility

Air Quality Improvements

Improvements Impacting Freight

Multimodal Mobility (i.e., accommodating a broad range of users)

Complete Streets Improvements

Study

Other, briefly describe:

¹For any project with transit elements, the sponsor must coordinate with RTD to ensure RTD agrees to the scope and cost. Be sure to include RTD's concurrence in your application submittal.

10. Define the **scope and **specific elements** of the project (including any elements checked in #9 above).**

***DO NOT** include scope elements that will not be part of the DRCOG funded project or your IGA scope of work (i.e., adjacent locally funded improvements or the project merits and benefits). Please keep the response to this question tailored to details of the scope only and no more than five sentences.*

While the scope for the project is still under development, the project will include the following key elements to improve multimodal connectivity (please also see the attached PDF map for details on the project area and cross sections):

Important aspects of the project include a "road diet," limiting the road to three lanes of vehicle traffic, and a protected bicycle and pedestrian corridor, either a widened multimodal sidepath, raised bike lanes, or a similar element to support separation between motorized and non-motorized traffic along the corridor. The three lanes for vehicular traffic will consist of one through lane in each direction (northbound and southbound) with the third center lane providing for left turn storage for either direction at intersections, as appropriate.

The City of Centennial plans to take a phased approach to the project, focusing for this first phase on the portion of Colorado Boulevard between Dry Creek Road on the south and Arapahoe Road on the north. Future phases could include improvements to support multimodal travel between Orchard Road and Arapahoe Road and/or Dry Creek Road and County Line Road, but those elements are not part of the current TIP request.

11. What is the current status of the proposed scope as defined in Question 10 above? *Note that overall project readiness is addressed in more detail in Section D below.*

Currently the project is in the planning phase. Extensive public involvement has been conducted as part of the Colorado Boulevard, Orchard Road to County Line Road, Multimodal Corridor Study, released in June 2021, and the project is in the Centennial Transportation Master Plan, released in May 2022. The project will combine elements of at least two different alternatives (alternatives 3 and 4) proposed in the June 2021 Colorado Boulevard study, and the scope is still in development. Future project phases could also address multimodal connectivity along Colorado Boulevard to the north and south of the project area as described in question 10.

12. Would a smaller DRCOG-allocation than requested be acceptable, while maintaining the original intent of the project?

Yes No

*If yes, smaller meaningful limits, size, service level, phases, or scopes, along with the cost, **MUST** be defined.*

Smaller DRCOG funding request: 90% of \$4,123,600 (see attached estimate, Arapahoe Road to Easter Avenue)

Outline the differences between the scope outlined above and the reduced scope: A smaller funding allocation would allow the City of Centennial to make multimodal improvements on Colorado from Arapahoe Road on the north to Easter Avenue on the south, identified with a supplemental cost estimate. Future project phases could include improvements from Easter Avenue to Dry Creek Road. While these improvements would address neighborhood access to Newton Middle School and potentially slow vehicles somewhat, they would not support as many pedestrians and cyclists as the full project described above, and some cyclists and pedestrians, including children traveling to school, would still be forced to walk alongside car traffic.

Project Financial Information and Funding Request

(All funding amounts in \$1,000s)

<p>Total amount of Subregional Share Funding Request (in \$1,000's) <i>(No less than \$100,000 and not to exceed 90% of the total project cost)</i></p> <p><input type="checkbox"/> Check box if requesting only state MMOF funds (requires minimum 50% local funds)¹</p>	<p>\$7,394</p>	<p>90.00% of total project cost</p>
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<p>Match Funds (in \$1,000's) List each funding source and contribution amount.</p>	<p>Contribution Amount</p>	<p>% Contribution to Overall Project Total</p>
Centennial	\$822	10%
	\$	0%
	\$	0%
	\$	0%
	\$	0%
	\$	0%

<p>Total Match <i>(private, local, state, another subregion, or federal)</i></p>	<p>\$822</p>	<p>10.00%</p>
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<p>Project Total</p>	<p>\$8,216</p>
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<p>Notes:</p>	<p>1. Per CDOT action, the following jurisdictions are only required to provide 25% match on the MMOF funds: Englewood, Jamestown, and Wheat Ridge. The following jurisdictions are not required to provide a match on the MMOF funds: Federal Heights, Lakeside, Larkspur, Sheridan, and Ward. All sponsors will still be required to have 20% match on any added federal funds.</p>
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Funding Breakdown (in \$1,000s) (by program year)¹ (Total funding should match the Project Total from above)

	FY 2023	FY 2024	FY 2025	Total
DRCOG Requested Funds	\$ <input type="text"/>	\$ <input type="text"/>	\$7,394	\$7,394
CDOT or RTD Supplied Funds²	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>	\$0
Local Funds (Funding from sources other than DRCOG, CDOT, or RTD)	\$ <input type="text"/>	\$ <input type="text"/>	\$822	\$822
Total Funding	\$0	\$0	\$8,216	\$8,216
Phase to be Initiated	Choose an item	Choose an item	Construction	
Notes:	<ol style="list-style-type: none"> 1. Fiscal years are October 1 through September 30 (e.g., FY 2023 is October 1, 2022 through September 30, 2023). The proposed funding plan is not guaranteed if the project is selected for funding. While DRCOG will do everything it can to accommodate the applicants' request, final funding will be assigned at DRCOG's discretion within fiscal constraint. Funding amounts must be provided in year of expenditure dollars using a recommended 3% inflation factor. 2. Only enter funding in this line if CDOT and/or RTD specifically give permission via concurrence letters or other written source. 			
Affirmation:	By checking this box, the applicant's Chief Elected Official (Mayor or County Commission Chair/City or County Manager/Agency Director) has certified it allows this application to be submitted for potential DRCOG-allocated funding and will follow all local, DRCOG, state, and federal policies and regulations if funding is awarded. <input checked="" type="checkbox"/>			

Evaluation Questions

A. Subregional Impact of Proposed Project

WEIGHT

30%

Provide **qualitative and quantitative** responses to the following questions on the regional impact of the proposed project. Be sure to provide all required information for each question. Quantitative data from DRCOG is available [here](#).

1. Why is this project subregionally important? Relevant quantitative data in your response is required.

This project provides bicycling and pedestrian connectivity for over 600 students as well as parents and staff at Newton Middle School. The project also encourages active transportation and discourages speeding and single-occupancy vehicle (SOV) usage throughout the area. In addition, the project connects key natural and recreation areas along Colorado Boulevard, including regional trails, parks, and a golf course that are used by residents throughout the subregion. With a total population of 27,150 people including over 4,000 children, more than 6,000 seniors, and over 2,000 households that are housing cost-burdened, providing affordable, active, and safe transportation options connecting individuals and families to schools, recreation opportunities, and other community amenities is essential to the surrounding neighborhoods and the subregion as a whole.

2. How will the proposed project address the specific transportation problem described in the **Problem Statement** (as submitted in Project Information, #8)? Relevant quantitative data in your response is required.

The project will allow over 600 students at Newton Middle School to safely walk or roll to school via a separated pedestrian and bicycle pathway, protecting them from speeding vehicles along Colorado Boulevard. Limiting lanes in a "road diet" along Colorado Boulevard could also encourage slower speeds and safer travel for all users while nudging travelers toward a modal shift to healthy alternative transportation. With a crash reduction factor (CRF) of 18.9%, the project has the potential to reduce fatal crashes by .18 fatalities as well as reduce injury crashes by 1.89, a significant step in the efforts to make our roadways safer and in meeting the goal of zero deaths on our roadways in Centennial and the region.

These measures will also reduce harmful emissions and greenhouse gases as users transition to emissions-free transportation options such as walking and biking, with a reduction of at least 90 lbs of greenhouse gases each day by 2050 due to increases in walking and cycling resulting from the project.

In addition, the project will dramatically improve connectivity to the High Line Canal trail and other regional trail systems in the area as well as parks, churches, businesses, and other facilities in the neighborhood. Creating a safe multimodal corridor along Colorado Boulevard will allow trail users to easily connect to many different parks and regional trails, encouraging healthy living.

3. Does the proposed project benefit multiple municipalities and/or subregions? If yes, which ones and how? Also describe any funding partnerships (*other subregions, regional agencies, municipalities, private, etc.*) established in association with this project.

The project primarily benefits City of Centennial residents as well as park and trail users in the area, who come from many neighboring municipalities and subregions as well as Centennial. Centennial does not have funding partners for the project.

4. Describe how the project will improve access and mobility for each of the applicable disproportionately impacted and environmental justice population groups identified in the table below. This data is available in the TIP Data Tool.

Completing the below table and referencing relevant quantitative data in your response is required.

	DI and EJ Population Groups	Number within ½ mile	% of Total	Regional %
Use 2015-2019 American	a. Total population	27,150	-	-
	b. Total households	10,510	-	-

Community Survey Data (In the TIP Data Tool, use a 0.5 mile buffer)	c. Individuals of color	3,219	12%	33%
	d. Low-Income households	360	3%	9%
	e. Individuals with limited English proficiency	171	1%	3%
	f. Adults age 65 and over	5,672	21%	13%
	g. Children age 5-17	4,200	15%	16%
	h. Individuals with a disability	932	3%	9%
	i. Households without a motor vehicle	423	4%	5%
	j. Households that are housing cost-burdened	2,166	21%	32%

For Lines c. – i. use definitions in the [DRCOG Title VI Implementation Plan](#). For Line j., as defined in C.R.S. 24-38.5-302(3)(b)(i): “cost-burdened’ means a household that spends more than thirty percent of its income on housing.”

Describe how this project will improve access and mobility for each of the applicable groups, *including the required quantitative analysis*: With 4,200 children between the ages of 5 and 17 in the nearby area, children traveling to Newton Middle School will have a safer route to travel to school by foot, bicycle, or mobility device. In addition to keeping students safe, the improvements could also allow them to take on more active, healthy forms of transportation instead of riding to school in a vehicle while reducing vehicle usage for families.

In addition, there is a high population of seniors in the area relative to the region as a whole, with 5,672 seniors living nearby. These older adults will have access to safe pathways without the need to ride or drive in a vehicle, potentially increasing their quality of life, health, and even allowing them to stay in their homes longer and age in place as they will have more opportunities to access recreation, churches, and other community amenities without depending on a car.

The multimodal amenities could also be especially important for those with limited mobility, including some of the 932 individuals with a disability living in the area. Finally, the 432 households without a motor vehicle will benefit from better and safer access to school, churches, parks, and major nearby thoroughfares supporting transit routes, while 2,166 cost-burdened households in the area will be able to access amenities by foot or bicycle while saving money on vehicle maintenance and gas.

5. How will this project move the region toward achieving the shared [regional transportation outcomes](#) established in [Metro Vision](#)?
- Improve the diversity and livability of communities. The project will increase the livability of the community by improving access to schools, places of worship, parks, trails and businesses without a vehicle, especially for the many children and seniors who live in the area.
 - Contain urban development in locations designated for urban growth and services.
 - Increase housing and employment in urban centers. The project improves accessibility from the neighborhood to employment centers such as Newton Middle School and businesses along the corridor.
 - Improve and expand the region’s multimodal transportation system, services, and connections. The project will expand access to regional trails for cyclists as well as improve pedestrian connections along the Colorado Boulevard Corridor, which is a major thoroughfare.
 - Operate, manage, and maintain a safe and reliable transportation system.
 - Improve air quality and reduce greenhouse gas emissions. The project has the potential to result in a modal shift away from cars to walking and rolling, especially for families with students at Newton Middle School.
 - Connect people to natural resource and recreational areas. The project connects cyclists and pedestrians to an extensive trail system through the High Line Canal Trail, Little Dry Creek Trail, and Big Dry Creek Trail as well as nearby parks.
 - Reduce the risk of hazards and their impact. The project will improve safety for pedestrians and cyclists along a busy thoroughfare where drivers regularly exceed the speed limit.
 - Increase access to amenities that support healthy, active choices. The project will increase access to trails and parks as well as pedestrian walkways, helping residents and users to make healthy transportation choices.

- Improve transportation connections to health care facilities and service providers.
- Diversify the region’s housing stock.
- Improve access to opportunity. [The project improves access to Newton Middle School as well as businesses along major roadways in the area.](#)
- Improve the region’s competitive position.

6. Describe how the project will improve access to and/or connectivity between DRCOG-defined urban centers, multimodal corridors, mixed-use areas, Transit Oriented Development (transit near high-density development), or locally defined priority growth areas. Items marked with an asterisk (*) below are available in the TIP Data Tool.

- Is there a DRCOG designated urban center within ½ mile of the project limits?*
- Yes No If yes, please provide the name:
- Does the project connect two or more urban centers?*
- Yes No If yes, please provide the names:
- Is there a transit stop or station within ½ mile of the project limits?*
- Bus stop: Yes No If yes, how many? 8
- Rail station: Yes No If yes, how many?
- Is the project in a locally-defined priority growth and development area?
- Yes No
- If yes, provide a link to the relevant planning document:
- If yes, provide how the area is defined in the relevant planning document:
- Is the project in an area with zoning that supports compact, mixed-use development patterns and a variety of housing options?
- Yes No If yes, please provide the zoning district designation(s):

Provide households and employment data*	2020	2050
Households within ½ mile	10,510	10,872
Jobs within ½ mile	10,248	13,181
Household density (per acre) within ½ mile	2.80	2.90
Job density (per acre) within ½ mile	2.76	3.52

Describe how this project will improve access to and/or connectivity between the above identified areas, including the required quantitative analysis:

[With 10,510 households and 10,248 jobs within a half mile, there are many opportunities for local residents to access employment via alternative transportation. Job opportunities are expected to increase in the area by 2050, with as many as 13,181 jobs but still only 10,872 households within half a mile of the project area by 2050. With job density increasing more than housing density, it is essential to increase multimodal transportation options to avoid increasing vehicle traffic and greenhouse gas emissions. In addition, multimodal connections to nearby bus stops will allow residents and trail users to safely access affordable transportation to regional destinations.](#)

7. Describe how this project will improve **access** and **connections** to key employment centers or regional destinations, including health services; commerce, educational, cultural, and recreational opportunities; or other important community resources. In your answer, define the key destination(s) and clearly explain how the project improves **access** and/or **connectivity**.

[Regional destinations in the area include Newton Middle School and a variety of parks and trails. Key recreational destinations include the High Line Canal trail and the Little Dry Creek Trail, which crosses Colorado Boulevard just north of the project area, as well as the Big Dry Creek trail, which crosses Dry Creek Road just east of the project area. Additional nearby recreation destinations include South Suburban Golf Course, Little Dry Creek Park, Medema Park, and Cherry Knolls Park. Improving multimodal transportation options along Colorado Boulevard will allow Centennial residents and residents of neighboring subregions to take advantage of these educational](#)

and recreational opportunities without using a vehicle, therefore limiting greenhouse gas emissions and encouraging healthy, active transportation.

B. MVRTP Priorities

WEIGHT

50%

- **Qualitative and quantitative** responses are **REQUIRED** for the following items on how the proposed project contributes to the project and program investment priorities in the adopted 2050 Metro Vision Regional Transportation Plan. To be considered for full points, you must fully answer all parts of the question, including incorporating quantitative data into your answer. (see scoring section for details). Quantitative data from DRCOG is available [here](#).
- Checkboxes and data tables help to provide context and guide responses, but do not account for the full range of potential improvements and are not directly scored, but are required to be completed.
- Not all proposed projects will necessarily be able to answer all questions, however it is in the applicant's interest to address as many priority areas as possible.

Multimodal Mobility

Provide improved travel options for all modes.

(drawn from [2050 MVRTP priorities](#); [federal travel time reliability, infrastructure condition, & transit asset management performance measures](#); & [Metro Vision objective 4](#))

Examples of Project Elements: combinations of improvements that support options for a broad range of users, such as complete streets improvements, or a bicycle/pedestrian access to transit, etc.

How does this project help increase mobility choices for people, goods, and/or services? Note that any roadway operational improvements must be on the DRCOG [Regional Roadway System](#) and/or [Regional Managed Lanes System](#).

- What modes will project improvements directly address?
 Walking Bicycling Transit Roadway Operations Other:
- List the elements of this project which will address the above modes (i.e., sidewalk, shared use path, bus stop improvements, signal interconnection, etc.): [Sidewalks, shared use paths, and raised bikeways](#)
- Will the completed project be a complete street as described in the [Regional Complete Streets Toolkit](#)? This data is available in the TIP Data Tool.
 Yes No If yes, describe how it implements the Toolkit's strategies in your response.
- Does this project improve travel time reliability?
 Yes No
- Does this project improve asset management of active transportation facilities and/or transit vehicle fleets?
 Yes No
- Does this project implement resilient infrastructure that helps the region mitigate natural and/or human-made hazards?
 Yes No

Describe how this project increases mobility choices for all users, *include quantitative information, including any items referenced above, in your response:*

Colorado Boulevard is identified as a Neighborhood Connector Street in the Regional Complete Streets Toolkit. This typology gives high priority to sidewalks, lighting, and travel lanes. Currently, the street design prioritizes car traffic while putting pedestrians, cyclists, and other multimodal users at risk, which leads to speeding and crashes (including 1 fatality), as described in the problem statement, above, and safety section, below. The proposed changes will support DRCOG priorities for multimodal mobility by giving higher priority to pedestrian and bicycle traffic compared to the current state. According to the Regional Complete Streets Toolkit, cyclists and pedestrians should have high priority, while cars should have medium priority on a Neighborhood Connector Street. The proposed changes are consistent with that recommendation.

Air Quality

Improve air quality and reduce greenhouse gas emissions.

(drawn from [2050 MVRTP priorities](#); [state greenhouse gas rulemaking](#); [federal congestion & emissions reduction performance measures](#); [Metro Vision objectives 2, 3, & 6a](#))

Examples of Project Elements: active transportation, transit, or TDM elements; vehicle operational improvements; electric vehicle supportive infrastructure; etc.

How does this project help reduce congestion and air pollutants, including but not limited to, carbon monoxide, ground-level ozone precursors, particulate matter, and greenhouse gas emissions?

- Does this project reduce congestion?
 Yes No
- Does this project reduce vehicle miles traveled (VMT)?
 Yes No
- Does this project reduce single-occupant vehicle (SOV) travel?
 Yes No

Emissions Reduced (kg/day)	CO	NO _x	VOCs	PM 10
	0.58	0.04	0.04	0.00

Use the [FHWA CMAQ Calculators](#) or a similar reasonable methodology to determine emissions reduced. Base your calculations on the year of opening. Please attach a screenshot of your work (such as the FHWA calculator showing the inputs and outputs) as part of your submittal packet.

Note: if not using the FHWA Calculators, please note your methodology in your narrative below.

Describe how this project reduces air pollutants, *include quantitative information, including any items referenced above, in your response:*

The project could encourage students to walk or roll to Newton Middle School, which will eliminate some vehicle trips. In addition, it will improve conditions for cyclists traveling to and from local parks and regional trails near the corridor, which may encourage them to cycle through their entire trip rather than using a vehicle for the first and last mile. Non-motorized, emissions-free transportation could increase, while vehicle miles traveled will be reduced slightly. As a result, the project could lead to a reduction in emissions of up to .58kg of CO, .04kg of NO_x, and .04 kg of VOCs per day.

**Regional
Transit**

Expand and improve the region’s transit network.

(drawn from [2050 MVRTP priorities](#), [Coordinated Transit Plan](#), [RTD’s Regional Bus Rapid Transit Feasibility Study](#))

Examples of Project Elements: transit lanes, station improvements, new/expanded service, etc.

Note: For any project with transit elements, the sponsor must coordinate with RTD to ensure RTD agrees to the scope and cost. Be sure to include RTD’s concurrence in your application submittal.

How does this project improve connections to or expand the region’s transit system, as outlined in the [2050 MVRTP](#)? Note that rapid transit improvements must be on the [Regional Rapid Transit System](#). Items marked with an asterisk (*) below are available in the TIP Data Tool.

- Does this project implement a portion of the [regional bus rapid transit \(BRT\) network](#)?*
 Yes No If yes, which specific corridor will this project focus on?
- Does this project involve a [regional transit planning corridor](#)?*
 Yes No If yes, which specific corridor will this project focus on?
- Does this project implement a mobility hub as defined in the [2050 MVRTP](#)?
 Yes No
- Does this project improve connections between transit and other modes?
 Yes No If yes, please describe in your response.
- Is this project adding new or expanded transit service?
 Yes No If yes, who will operate the service?
- Does this project add and/or improve transit service to or within a DRCOG-defined urban center?*
 Yes No If yes, provide the name of the urban center:

Describe how this project improves connections to or expands the region’s transit system, *include quantitative information, including any items referenced above, in your response:*

This project does not directly impact transit, but improved pedestrian and bicycle connectivity along Colorado Boulevard could eventually support transit usage when paired with other multimodal improvements in the area in the long-term.

Safety **Increase the safety for all users of the transportation system.**
 (drawn from [2050 MVRTP priorities](#), [Taking Action on Regional Vision Zero](#), [CDOT Strategic Transportation Safety Plan](#), & [federal safety performance measures](#))
 Examples of Project Elements: bike/pedestrian crossing improvements, vehicle crash countermeasures, traffic calming, etc.

How does this project implement safety improvements (roadway, active transportation facility, etc.), particularly improvements in line with the recommendations in [Taking Action on Regional Vision Zero](#)? Note that any improvements on roadways must be on the DRCOG [Regional Roadway System](#). Items marked with an asterisk (*) below are available in the TIP Data Tool.

- Does this project address a location on the [DRCOG High-Injury Network or Critical Corridors](#) or corridors defined in a local Vision Zero or equivalent safety plan?*
 Yes No
- Does this project implement a safety countermeasure listed in the [countermeasure glossary](#)?
 Yes No

Provide the current number of crashes involving motor vehicles, bicyclists, and pedestrians* <i>(using the 2015-2019 period – in the TIP Data Tool, use a 0.02 mile buffer of your project)</i> <i>NOTE: if constructing a new facility, report crashes along closest existing alternative route</i>		Sponsor must use industry accepted crash reduction factors (CRF) or accident modification factor (AMF) practices (e.g., NCHRP Project 17-25, NCHRP Report 617, or DiExSys methodology).
Fatal crashes	1	
Serious Injury crashes	0	
Other Injury crashes	10	
Property Damage Only crashes	30	
Estimated reduction in crashes <u>applicable to the project scope</u> <i>(per the five-year period used above)</i>		Provide the methodology below:
Fatal crashes reduced	0.18	Reduction in crashes estimated based on published crash modification factors and past crash data history of corridor. Source: NCHRP Report 617
Serious Injury crashes reduced	0.00	
Other Injury crashes reduced	1.89	
Property Damage Only crashes reduced	5.67	

Describe how this project will improve safety, *include quantitative information, including any items referenced above, in your response:*

Conversion of an undivided four-lane road to three lanes and a two-way left-turn lane—a “Road Diet” will lead to dramatically fewer crashes, with a decrease in both fatal (.18 fewer fatal crashes) and other injury crashes (1.89 fewer other injury crashes) as well as a dramatic reduction in crashes causing property damage (5.67 fewer crashes). Making this investment will lead to a significant improvement in Centennial and metro area efforts to reduce injuries and deaths on our roadways.
 The CMF was developed for corridors predominately within suburban areas surrounding larger cities (average population of 269,000). Source: NCHRP 617

Freight

Maintain efficient movement of goods within and beyond the region.

(drawn from [2050 MVRTP priorities](#); [Regional Multimodal Freight Plan](#); [Colorado Freight Plan](#), [federal freight reliability performance measure](#); [Metro Vision objective 14](#))

Examples of Project Elements: roadway operational improvements, etc.

How does this project improve the efficient movement of goods, specifically improvements identified in the [Regional Multimodal Freight Plan](#)? Note that any improvements on roadways must be on the DRCOG [Regional Roadway System](#). Items marked with an asterisk (*) below are available in the TIP Data Tool.

- Is this project located in or impact access to a [Freight Focus Area](#)?*
 Yes No If yes, please provide the name:
- Is the project located on the [Tier 1 or Tier 2 Regional Highway Freight Vision Network](#)?*
 Yes No
- If this project is located in a [Freight Focus Area](#) does it address the relevant Needs and Issues identified in the Plan (see text located within each Focus Area)?
 Yes No If yes, please describe in your response.
- Check any items from the [Inventory of Current Needs](#) which this project will address:
 Truck Crash Location Rail Crossing Safety ([eligible locations](#))
 Truck Delay Truck Reliability
Please provide the location(s) being addressed:
- Does this project include any innovative or non-traditional freight supportive elements (i.e., curb management strategies, cargo bike supportive infrastructure, etc.)?
 Yes No If yes, please describe in your response.

Describe how this project will improve the movement of goods, *include quantitative information, including any items referenced above, in your response:*

Colorado Boulevard is not a major freight corridor, and this project is anticipated to have limited freight impacts. According to the Regional Complete Streets Toolkit, freight traffic should be low priority on neighborhood connector streets, the typology that applies to this corridor.

Active Transportation	Expand and enhance active transportation travel options. <small>(drawn from 2050 MVRTP priorities; Denver Regional Active Transportation Plan; & Metro Vision objectives 10 & 13) Examples of Project Elements: shared use paths, sidewalks, regional trails, grade separations, etc.</small>
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How does this project help expand the active transportation network, close gaps, improve comfort, and/or improve connections to key destinations, particularly improvements in line with the recommendations in the [Denver Regional Active Transportation Plan](#)? Items marked with an asterisk (*) below are available in the TIP Data Tool.

- Does this project close a gap or extend a facility on a [Regional Active Transportation Corridor](#) or locally-defined priority corridor?*
 Yes No
- Does this project improve pedestrian accessibility and connectivity in a [pedestrian focus area](#)?*
 Yes No
- Does this project improve active transportation choices in a [short trip opportunity zone](#)?*
 Yes No
- Does this project include a high-comfort bikeway (like a sidepath, shared-use path, separated bike lane, bicycle boulevard)?
 Yes No If yes, please describe in your response.

Bicycle Use

NOTE: if constructing a new facility, report bike usage along closest existing alternative route

1. Current Average Single Weekday Bicyclists:		11
Bicycle Use Calculations	Year of Opening	2050 Weekday Estimate
2. Enter estimated additional average weekday one-way bicycle trips on the facility after project is completed.	25	50
3. Enter number of the bicycle trips (in #2 above) that will be diverting from a different bicycling route. <i>(Example: {#2 X 50%} or other percent, if justified on line 10 below)</i>	12	25
4. = Initial number of new bicycle trips from project (#2 – #3)	13	25
1. Enter number of the new trips produced (from #4 above) that are replacing a trip made by another non-SOV mode (bus, carpool, vanpool, bike, etc.). <i>(Example: {#4 X 30%} or other percent, if justified on line 10 below)</i>	4.50	7.50
5. = Number of SOV trips reduced per day (#4 - #5)	8.50	17.50
6. Enter the value of {#6 x 2 miles} . (= the VMT reduced per day) <i>(Values other than 2 miles must be justified by sponsor on line 10 below)</i>	21.00	35.00
7. = Number of pounds GHG emissions reduced (#7 x 0.95 lbs.)	19.95	33.25
8. If values would be distinctly greater for weekends, describe the magnitude of difference: Possibly twice as high on weekends, as this route will provide access to the Highline Canal Trail which is extensively used for recreation.		
9. If different values other than the suggested are used, please explain here: n/a		

Pedestrian Use

NOTE: if constructing a new facility, report pedestrian usage along closest existing alternative route

2. Current Average Single Weekday Pedestrians (including users of non-pedaled devices such as scooters and wheelchairs):		258
Pedestrian Use Calculations	Year of Opening	2050 Weekday Estimate
3. Enter estimated additional average weekday pedestrian one-way trips on the facility after project is completed	500	1,000
4. Enter number of the new pedestrian trips (in #2 above) that will be diverting from a different walking route <i>(Example: {#2 X 50%} or other percent, if justified on line 10 below)</i>	250	500
5. = Number of new trips from project (#2 – #3)	250	500
6. Enter number of the new trips produced (from #4 above) that are replacing a trip made by another non-SOV mode (bus, carpool, vanpool, bike, etc.). <i>(Example: {#4 X 30%} or other percent, if justified on line 10 below)</i>	75.00	150.00
7. = Number of SOV trips reduced per day (#4 - #5)	175.00	350.00

8. Enter the value of {#6 x .4 miles}. (= the VMT reduced per day) (Values other than .4 miles must be justified by sponsor on line 10 below)	30.00	60.00
9. = Number of pounds GHG emissions reduced (#7 x 0.95 lbs.)	28.50	57.00
10. If values would be distinctly greater for weekends, describe the magnitude of difference: Values are likely higher on week days, as this route serves Newton Middle School.		
11. If different values other than the suggested are used, please explain here: n/a		

Describe how this project will expand the active transportation network, close gaps, improve comfort, and/or improve connections to key destinations, *include quantitative information, including any items referenced above, in your response:*

This project will include a high-comfort bikeway to allow cyclists separation from car traffic along the corridor. While the project is still in development, the City of Centennial has determined that it will include a protected bicycle and pedestrian corridor, which will be either a widened multimodal sidepath, raised bike lanes, or a similar element to support separation between motorized and non-motorized traffic along the corridor.

The Colorado Multimodal Corridor Project will improve connectivity for students and parents traveling to Newton Middle School, a key destination located within the project area. Newton Middle School serves over 600 students as well as employees, parents, volunteers, and visitors for sporting events and other special occasions. Many students already walk to school, and are among the 258 pedestrians currently using the corridor each day. The proposed improvements will encourage modal shift for parents and students located in adjacent neighborhoods, encouraging more students to walk or roll to school.

The project is also located near parks and trails, including the regional Highline Canal trail, which see significant usage from cyclists. Some of the 11 cyclists currently using the corridor each day are suspected to be traveling to or from these parks and trails. Installing a protected bikeway along Colorado Boulevard will improve comfort for cyclists and potentially encourage more active transportation in the area as cyclists accessing nearby trails use the corridor for direct access to recreation opportunities rather than driving to parking areas to access trails and parks.

C. Project Leveraging	WEIGHT	10%
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What percent of outside funding sources (non-Subregional Share funding) does this project have? <i>(number will automatically calculate based on values entered in the Funding Request table)</i>	10.00%	60%+ outside funding sources 5 pts 50-59.9% 4 pts 40-49.9% 3 pts 20-39.9% 2 pts 10.1-19.9% 1 pt 10%..... 0 pts
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D. Project Readiness	WEIGHT	10%
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Provide responses to the following items to demonstrate the readiness of the project. DRCOG is prioritizing those projects that have a higher likelihood to move forward in a timely manner and are less likely to experience a delay.

Section 1. Avoiding Pitfalls and Roadblocks

a. Has a licensed engineer (CDOT, consultant, local agency, etc.) reviewed the impact the proposed project will have on utilities, railroads, ROW, historic and environmental resources, etc. and have those impacts and pitfalls been mitigated as much as possible to date before this submittal?
 Yes No N/A (for projects which do not require engineering services)

If yes, please type in the engineer’s name below which certifies their review and that impacts have been evaluated and mitigated as much as possible before your application is submitted:
 Jeff Dankenbring (PE#33911) reviewed potential impacts and included time and plans for mitigation, which will be further developed and implemented with progress of the pre-construction phase of the project.
 Please describe the status to date on each, including 1) anticipated/known pitfalls/roadblocks, and 2) mitigation activities taken to date:

- Utilities: Utilities exist in the corridor which will require identification and management per Colorado 811 law during design and construction
- Railroad: n/a
- Right-of-Way: No additional right-of-way is required as the project will focus in existing right-of-way within the corridor.
- Environmental/Historic: Environmental clearance is expected to be a categorical exclusion, with no unusual issues.
- Other: [redacted]

b. Is this application for a single project phase only (i.e., design, environmental, ROW acquisition, construction only, study, bus service, equipment purchase, etc.)?
 Yes No

If yes, are the other prerequisite phases complete? Yes No N/A

If this project is for construction, please note the NEPA status: **Not Started**

c. Has all required ROW been identified? Yes No N/A
 Has all required ROW already been acquired and cleared by CDOT? Yes No N/A

d. Based on the current status provided in Project Information, question 11, do you foresee being able to execute your IGA by October 1 of your first year of funding (or if requesting first year funding, beginning discussions on your IGA as soon as possible), so you can begin your project on time?
 Yes No

Does your agency have the appropriate staff available to work on this project? Yes No

If yes, are they knowledgeable with the federal-aid process? Yes No

e. Have other stakeholders in your project been identified and involved in project development?
 Yes No N/A
If yes, who are the stakeholders?

Please provide any additional details on any of the items in Section 1, if applicable.

Section 2. Local Match

a. Is all the local match identified in your application currently available, and if a partnering agency is also committing match, do you have a commitment letter?
 Yes No
Please describe:
Centennial is committed to the TIP Call and funding the project in the subsequent years

b. Is all funding for this project currently identified in the sponsor agency's Capital Improvement Program (CIP)?
 Yes No
Please describe:
Centennial's CIP is committed to the project, possesses funding and will identify as needed in subsequent budgets.

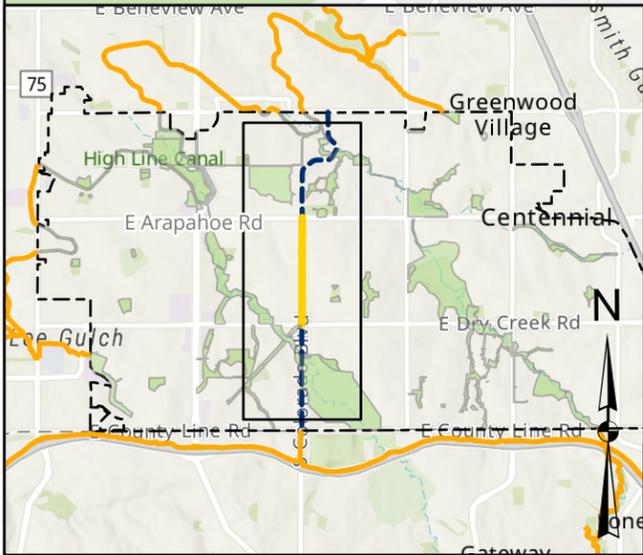
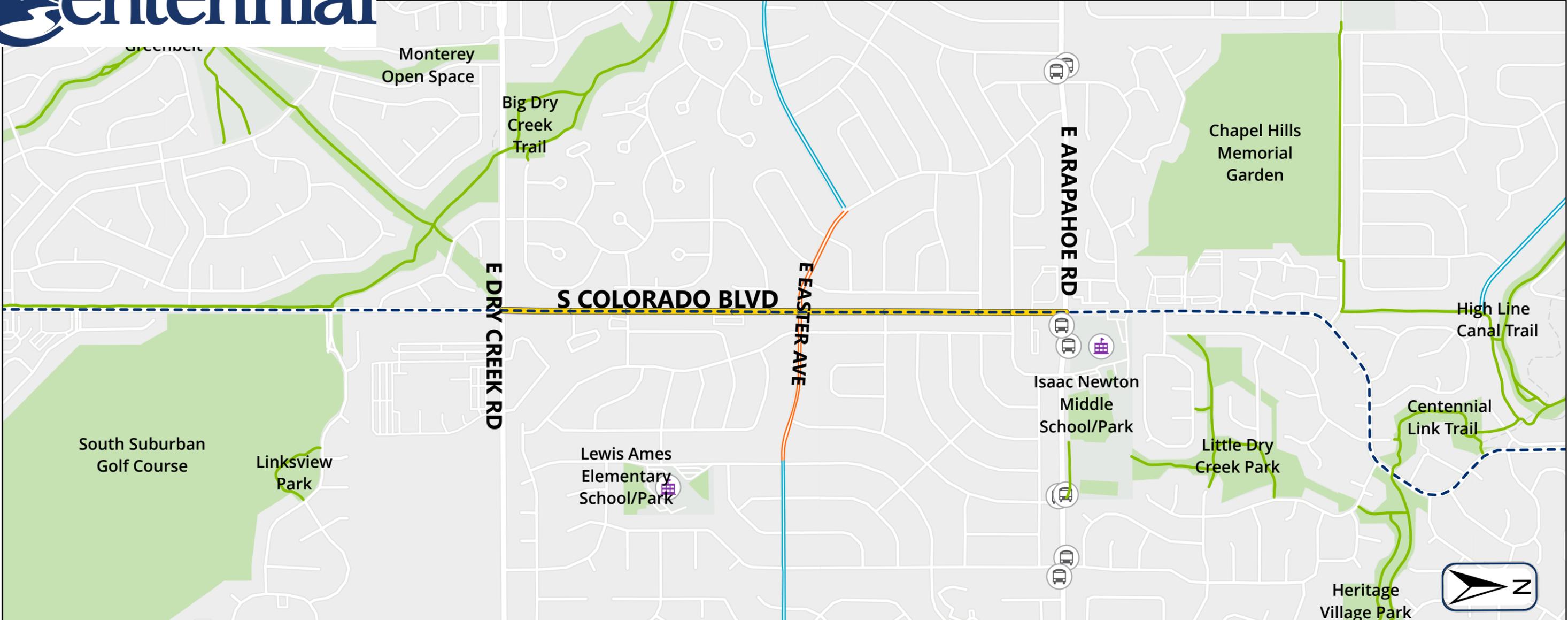
Section 3. Public Support

a. Has the proposed project previously been through a public review process (public comment period, public hearing, etc.)?
 Yes No
b. Has the public had access to translated project materials in relevant languages for the local community?
 Yes No
Please describe:
The Colorado Boulevard Orchard Road to County Line Road Multimodal Corridor Study was conducted in 2020 and 2021, and included public outreach and participation. Results indicated that the public was highly supportive of the project.

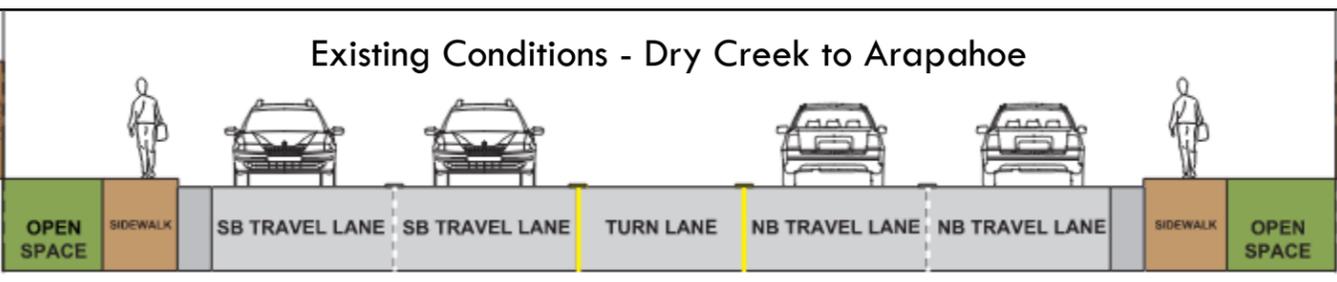
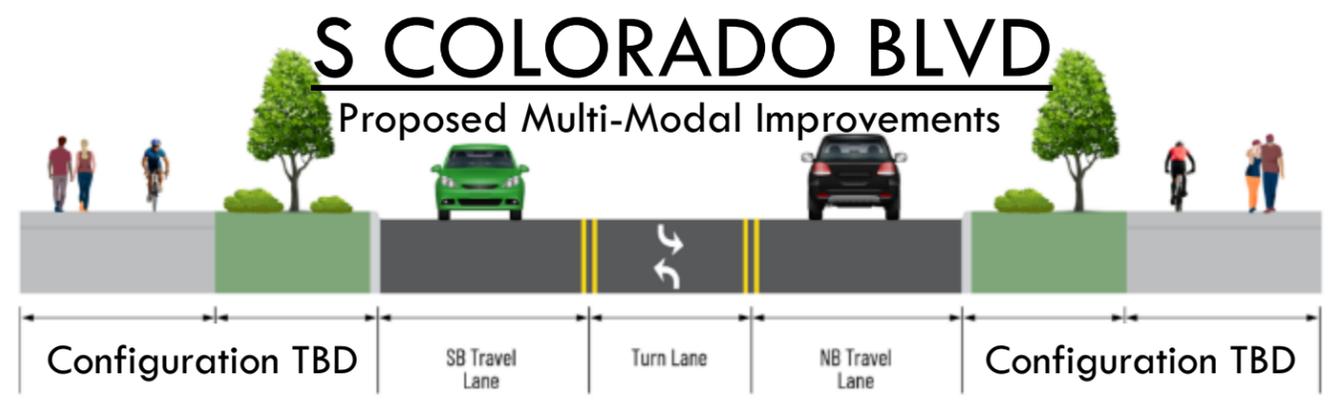
c. Have any adjacent property owners to the proposed project been contacted and provided with the initial project concept?
 Yes No N/A

Please provide any additional details on the items in Section 3, if applicable.
Extensive public outreach was conducted as part of the Colorado Boulevard Orchard Road to County Line Road Multimodal Corridor Study, released in 2021, including three pop up events to solicit feedback and a virtual public meeting in November 2020. The project team received 55 comments as part of the public meeting process. Participants indicated a preference for alternatives that involved more extensive interventions to support multimodal transportation, Alternatives 3 and 4 in the study. These alternatives include grade separation and barriers between pedestrian and bicycle traffic and vehicular traffic.

Submit completed applications through the [TIP Data Hub](#) no later than 3pm on June 24, 2022.



- City Boundary
- S Colorado Blvd - Multimodal Phase 1
- S Colorado Blvd - All Phases
- Centennial Parks Trails and Open Space
- Neighboring Trails



- MultiModal Phase 1
- S Colorado Blvd
- Centennial Parks, Trails, and Open Space
- RTD Bus Stops
- Schools

Existing Bike Paths

- Off-Street
- On-Street - Dedicated Lane
- On-Street - Shared Lane

0 0.23 0.45
Mi

Coordinate System: NAD 1983 2011 StatePlane Colorado Central FIPS 0502 Ft US

Esri Community Maps Contributors, City of Centennial, County of Arapahoe, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc., METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, Esri, NASA, NGA, USGS, FEMA, City of Centennial, County of Arapahoe, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc., METI/NASA, USGS, EPA, NPS, USDA

Colorado Boulevard Multimodal Improvements

Estimate of Construction Costs

Arapahoe Road to Dry Creek Road



Date Prepared: June 23, 2022

Item			Unit Cost	Quantity	Extended Cost	Notes
1	Clearing and Grubbing	LS	\$10,000.00	1	\$10,000	
2	Removal of Curb and Gutter	LF	\$30.00	10,500	\$315,000	
3	Removal of Asphalt Mat	SY	\$10.00	15,250	\$152,500	
4	Earthwork (CIP)	CY	\$30.00	14,000	\$420,000	
5	Aggregate Base Course (Class 6)	Ton	\$50.00	4,380	\$219,000	
6	Hot Mix Asphalt	Ton	\$150.00	800	\$120,000	
7	Concrete Sidewalk	SY	\$50.00	9,390	\$469,500	
8	Concrete Bike Lane	SY	\$50.00	9,390	\$469,500	
9	Curb and Gutter	LF	\$25.00	21,000	\$525,000	
10						
11						
12						
Total Major Items					\$2,700,500	
Total Major Items			% of Major Item Cost			
Total Major Items					\$2,700,500	A
Removals / Resets			% of A	5.0%	\$135,100	B-1
Landscaping			% of A	20.0%	\$540,100	B-2
Erosion Control			% of A	10.0%	\$270,100	B-3
Drainage / Dewatering			% of A	10.0%	\$270,100	B-4
Traffic Control / Detour			% of A	20.0%	\$540,100	B-5
Traffic - Striping			% of A	5.0%	\$135,100	B-6
Mobilization			% of A	12.0%	\$324,100	B-7
Misc. - Lighting/Commercial Signs/Curb Ramps			% of A	5.0%	\$135,100	B-8
Total of Bid Construction Items					\$5,050,300	B
Force Account Items			% of B	10.0%	\$505,100	C-1
Minor Contract Revisions			% of B	5.0%	\$252,600	C-2
Total of Bid Construction Items & Force Account Items					\$5,808,000	C
Construction Management/Materials Testing			% of C	15.0%	\$871,200	D-1
Total Construction Cost					\$6,679,200	D
Utility Relocations			% of D	3.0%	\$200,400	E-1
Contingency (Total Construction Cost)			% of D	20.0%	\$1,335,900	E-2
Total Project Cost Estimate					\$8,215,500	E

Opinion of Probable Construction Costs

In providing opinions of probable construction cost, the City has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinions of probable construction costs provided herein are to be made on the basis of our qualifications and experience. The City makes no warranty, expressed or implied, as to the accuracy of such opinions as compared to bid or actual costs.



Bicycle and Pedestrian Improvements

This calculator will estimate the reduction in emissions resulting from improvements to bicycle and pedestrian infrastructure and associated mode shift from passenger vehicles to bicycling or walking, including but not limited to sidewalks, dedicated bicycle infrastructure, improved wayfinding, mid-block crossing installations, bike share systems, and bike parking improvements.

Navigator

Bicycle and Pedestrian Improvements

INPUT

(1) What is your project evaluation year?

(2) Estimate the shift in daily motorized passenger vehicle trips to non-motorized travel due to the bicycle and pedestrian project.

Daily Passenger Vehicle Trips		
Before	After	Change
<input type="text" value="11400"/>	<input type="text" value="11315"/>	<input type="text" value="85"/>

(3a) Select the data type used for entering the typical one-way trip distance of passenger vehicles below:

Trip Distance Source

(3b) If you selected "Average" above, enter the typical one-way trip distance. If you selected "Distribution" above, enter the typical distribution of one-way trip distances.

Typical Trip Distance (miles one way)	Distribution of Trip Distances (daily fraction per mileage bin)					Sum
	$x < 1$	$1 \leq x < 2$	$2 \leq x < 3$	$3 \leq x < 4$	$4 \leq x \leq 5$	
<input type="text" value="1"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

OUTPUT

EMISSION REDUCTIONS

Pollutant	Total
Carbon Monoxide (CO)	0.587
Particulate Matter <2.5 μm (PM _{2.5})	0.001
Particulate Matter <10 μm (PM ₁₀)	0.004
Nitrogen Oxide (NOx)	0.044
Volatile Organic Compounds (VOC)	0.047
Carbon Dioxide Equivalent (CO ₂ e)	33.757
Total Energy Consumption (MMBTU/day)	0.433

*Units in kg/day unless otherwise noted