

APPLICATION OVERVIEW

What: The Call for Projects for the FY 2024-2027 Regional Transportation Operations and Technology Set-Aside

Funding Available: at least \$16,000,000

Call Dates: June 1, 2023 until July 7, 2023, 5 pm

Application Submittals: submit the items below to Jerry Luor (jluor@drcog.org)

1. REQUIRED: a **single PDF document** containing 1) this application (**before saving to PDF, press Ctrl-A to select all, and F9 to update all formulas**), 2) one location map/graphic, 3) cost estimate (your own or the CDOT [cost estimate form](#)), 4) CDOT/RTD concurrence response (if applicable), 5) completed CDOT SEA-Local Agency Template, 6) project support form(s), and 7) any required documentation based on the application text (i.e., FHWA emissions calculators). Please DO NOT attach additional cover pages, embed graphics in the application, or otherwise change the format of the application form.
2. OPTIONAL: Submit **one additional** PDF document containing any supplemental materials, if applicable.
3. REQUIRED: Submit a single zipped GIS shapefile of your project. At a minimum, the shapefile should consist of project limits and planned equipment locations.

Other Notable items:

- **Eligibility:** Projects must align with the eligibility guidelines in the [Policies for FY2024-2027 TIP Set-Aside Programs](#). Proposed work on roadways must primarily be located on the [DRCOG Regional Roadway System](#) to be eligible for funding (the DRCOG RRS can also be viewed within the [DRCOG Data Tool](#)).
- **Call-for-Projects Pre-Application Webinar:** To be eligible to submit an application, at least one person from your agency must have attended the Regional Transportation Operations and Technology Set-Aside Pre-Application Webinar on April 26, 2023.
- **Application Data:** To assist sponsors in filling out the application, DRCOG has developed the [DRCOG Data Tool](#). A link to the instructions is also included. Additionally, sponsors may download datasets to run their own analyses from this same site.
- **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.
- **Evaluation Process:** DRCOG staff will post all applications. DRCOG staff will assemble an evaluation panel to review and make recommendations for funding, including a ranked waiting list. The recommended list of projects will be presented to the Regional Transportation Operations Working Group and Advanced Mobility Partnership Working Group prior to action by the DRCOG committees and Board.
- If you have any questions or need assistance, contact gmackinnon@drcog.org or jluor@drcog.org.

APPLICATION FORMAT

The Regional Transportation Operations and Technology set-aside 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-E) 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 [DRCOG Data Tool](#) as well as other relevant data resources.

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. Deployment of RTO&T Initiatives in RTO&T Strategic Plan 30%

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

5	The project implements or advances several Primary initiatives.
4	The project implements or advances one Primary initiative
3	The project implements or advances several Secondary initiatives.
2	The project implements or advances one Secondary initiative.
1	The project implements or advances one or more Tertiary initiatives.
0	The project implements no initiatives.

Section B. Regional Impact of Proposed Project 25%

Projects will be evaluated on the degree to which they address a significant 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 subregional problem and benefit people and businesses in multiple communities.
4	The project benefits will significantly address a major subregional problem primarily benefiting people and businesses in one community.
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 C. Metro Vision Regional Transportation Plan Priorities 25%

The TIP set-aside'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 D. Financial Leveraging5%

Scores are assigned based on the percent of other non-federal funding sources.

Score	% non-Federal Funds
5	36% and above
4	31 - 35.9%
3	26 - 30.9%
2	21 - 25.9%
1	17.21 - 20.9%*
0	17.21%

*(includes 100% eligible projects with no match)

Section E. Project Readiness15%

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	US 287 Traffic Signal Equipment and Detection Expansion	
2. Project Location <i>Provide a map, as appropriate (see Page 1)</i>	Start point: 300.847 MP End point: 303.138 MP OR Geographic Area: See Attached	
3. Project Sponsor <i>(entity that will be financially responsible for the project)</i>	Katrina Klobberdanz - Colorado Department of Transportation - Region 4	
4. Project Contact Person:		
Name: Jonathan Woodworth		Title: Traffic Operations Engineer
Phone: 970-415-1029		Email: Jonathan.Woodworth@state.co.us
5. Required Concurrence and Project Support: Does this project touch CDOT Right-of-Way, involve a CDOT roadway, connect to a CDOT system, access RTD property, or request RTD involvement to operate service? Does this project directly involve other local agency partners.		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, provide a completed Peer Agency Support Form for each partner.</i>
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>	If this project is listed in the DRCOG 2050 Metro Vision Regional Transportation Plan (2050 MVRTP) , provide the staging period: N/A	
	Local/Regional plan:	Planning Document Title: Regional ITS Architecture plan Adopting agency (local agency Council, CDOT, RTD, etc.): CDOT Provide date of adoption by council/board/commission, if applicable: N/A
	Please describe public review/engagement to date:	None – only stakeholder review as part of the project
	Other pertinent details:	Referencing the CDOT Statewide ITS Architecture plan for Colorado Department of Transportation Region 4, this project will involve service package TM03 – Traffic Signal Control. This service package is described in Appendix A of the Regional ITS Architecture plan.
7. Identify the project's key phases and the anticipated schedule of phase milestones. (phases and dates should correspond with the "Phase to be Initiated" in the Funding Breakdown table below)		
Phases to be included:	Major phase milestones:	Anticipated completion date (based on October 2023 DRCOG approval date): (MM/YYYY)
<input type="checkbox"/> Preconstruction <input type="checkbox"/> Construction <input type="checkbox"/> Both		
REQUIRED FOR ALL PHASES	Intergovernmental Agreement (IGA) executed with CDOT/RTD (Assumed process is 4-9 months; any work performed before execution is NOT reimbursable)	N/A
<input type="checkbox"/> Design	Design contract Notice to Proceed (NTP) issued (if using a consultant):	N/A
	Design scoping meeting held with CDOT (if no consultant):	N/A
	FIR (Field Inspection Review):	N/A
	FOR (Final Office Review):	N/A

<input type="checkbox"/> Environmental	Environmental contract Notice to Proceed (NTP) issued (if using a consultant):	N/A
	Environmental scoping meeting held with CDOT (if no consultant):	N/A
<input type="checkbox"/> Right-of-Way	Initial set of ROW plans submitted to CDOT:	N/A
	Estimated number of parcels to acquire: <input type="text" value="Enter Number"/>	
	ROW acquisition completed:	N/A
<input type="checkbox"/> Construction	Required clearances:	N/A
	Project publicly advertised:	N/A
<input type="checkbox"/> Study	Kick-off meeting held after consultant NTP (or internal if no consultant):	N/A
<input checked="" type="checkbox"/> Equipment Purchase (Procurement)	RFP/RFQ/RFB (bids) issued:	2/2024
<input checked="" type="checkbox"/> Other Phase not Listed Describe: Implementation	First invoice submitted to CDOT/RTD:	5/2024

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

This proposed project will expand advanced detection and upgrade existing infrastructure along US 287 at the intersections of US-287 & Dillon Rd SE, US-287 & Dillon Rd NW, US-287 & Medtronic Dr, US-287 & South Point Dr, US-287 & CO42, CO42 & Autumn Ridge Blvd, US-287 & Public Rd, and US-287 & South Boulder Rd. Various locations will include all or some of the equipment as reflected in the estimate. The project aims to continue improving the operations, safety, and environment of US-287 by pursuing the following goals:

Implement an advanced signal control system that will improve corridor operations by reducing travel times.

Improve operations to reduce costs in the form of travel time, driver delay, fuel consumption, and costs related to staff to maintenance and signal retiming.

Reducing the level of emissions produced by vehicles will create a greener environment for the community. If vehicles are experiencing shorter trip times and fewer stops, the vehicles will produce lower pollution levels.

US-287 is also a DRCOG Regional Route of Significance and the proposed new detection and signal component upgrades will enable CDOT Region 4 to activate advanced traffic controller features such as Automated Traffic Signal Performance Measures (ATSPM) data collection and analysis, cycle split failure monitoring, turning movement counts, bicycle and pedestrian detection, and others in line with regional objectives. These features can also be used to diagnose timing and phasing issues at the proposed intersections, reducing the need for technicians to visit the intersections to diagnose problems creating a safer environment for CDOT Region 4 technicians.

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

Roadway

- ☒ Operational Improvements
- ☐ General Purpose Capacity (2050 MVRTP)
- ☐ Managed Lanes (2050 MVRTP)
- ☐ Pavement Reconstruction/Rehab
- ☐ Bridge Replace/Reconstruct/Rehab

Grade Separation

- ☐ Roadway
- ☐ Railway
- ☐ Bicycle
- ☐ Pedestrian

Regional Transit¹

- ☐ Rapid Transit Capacity (2050 MVRTP)
- ☐ Mobility Hub(s)
- ☐ Transit Planning Corridors
- ☐ Transit Facilities (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: *The upgraded equipment and detection will enable advanced detection as it relates to pedestrians and bicyclists. This will improve the operations of the corridor for all forms of travel and multi-modal in nature.*

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.

CDOT R4 is looking at upgrading existing hardware that has passed its expiration date at the following intersections: US-287 & Dillon Rd SE, US-287 & Dillon Rd NW, US-287 & Medtronic Dr, US-287 & South Point Dr, US-287 & CO42, CO42 & Autumn Ridge Blvd, US-287 & Public Rd, and US-287 & South Boulder Rd.

The new equipment (Intelight Controller, Iteris Next System, Cienna Network Switch, Clary UPS, and PTZ) will enable advanced traffic responsive capabilities, particularly at highway and interstate interchanges, and will enable full corridor management at CDOT owned traffic signals along US-287. The new advanced detection will enable Active Traffic System Performance Measures (ATSPM) to be collected and analyzed. The new equipment will also enable CDOT to program their signals to be responsive to demand in realtime at each intersection and to coordinate the corridors at Region 4 signals. Additionally, the proposed systems will be used to classify and detect bicycles at the intersections in keeping with DRCOG regional objectives.

CDOT is willing to work with DRCOG to adjust the scope of the proposed expansions to match the budget constraints of the RTO&T program.

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 E below.*

CDOT is prepared to procure the needed systems to upgrade this corridor. Once procured, CDOT Region 4 will handle the installation process. CDOT will be obtaining the Vantage Next Detection Systems through a separate effort. This project will procure the other needed equipment (Intelight Controller, Cienna Network Switch, Clary UPS, and PTZ) as well as provide installation of equipment. This project will also install the separately obtained detection systems.

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: [Click or tap here to enter text.](#)

Outline the differences between the scope outlined above and the reduced scope: [Click or tap here to enter text.](#)

Project Financial Information and Funding Request (All funding amounts in \$1,000s)		
<i>To update the formulas below, enter your information, highlight the formulas, and press F9 or right-click and select Update Field.</i>		
Total amount of Federal Funding Request (in \$1,000's) (Not to exceed 82.79% of the total project cost)	\$103,850	59.7% of total project cost
Match Funds (in \$1,000's) List each funding source and contribution amount.	Contribution Amount	% Contribution to Overall Project Total
CDOT	\$70,000	40.3%
Click or tap here to enter text.	\$Match Amount	0.0%
Click or tap here to enter text.	\$Match Amount	0.0%
Click or tap here to enter text.	\$Match Amount	0.0%
Click or tap here to enter text.	\$Match Amount	0.0%
Click or tap here to enter text.	\$Match Amount	0.0%
Total Match (private, local, state, regional, or federal)	\$ 70,000	40.3%
Project Total	\$ 173,850	

Funding Breakdown (in \$1,000s) (by program year)¹ (Total funding should match the Project Total from above)

To update the formulas below, enter your information, highlight the formulas (or Ctrl-A), and press F9. OR close and reopen the file.

	FY 2024	FY 2025	FY 2026	FY 2027	Total
DRCOG Requested Funds	\$103,850	\$0	\$0	\$0	\$103,850
CDOT or RTD Supplied Funds ²	\$70,000	\$0	\$0	\$0	\$ 70,000
Local Funds (Funding from sources other than DRCOG, CDOT, or RTD)	\$0	\$0	\$0	\$0	\$ 0
Total Funding	\$173,850	\$ 0	\$ 0	\$ 0	\$173,850
Phase to be Initiated	Equipment Purchase (Procurement)	Select Phase	Select Phase	Select Phase	
Notes:	<ol style="list-style-type: none">1. Fiscal years are October 1 through September 30 (e.g., FY 2024 is October 1, 2023 through September 30, 2024). The proposed funding plan is not guaranteed if the project is selected for funding. While DRCOG attempts to accommodate applicants' requests, final funding will be assigned at DRCOG's discretion. 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. Deployment of RTO&T Initiatives in RTO&T Strategic Plan

WEIGHT

30%

Select the initiatives to be deployed or advanced by this proposed project. It is possible to select more than one initiative.

Primary initiatives

- Develop a Regional Situational Awareness platform. ☐
- Develop processes to share traffic camera view and control between jurisdictions and public safety. ☐
- Develop a Regional Performance Monitoring Data Archive platform. ☐
- Develop strategies and processes to coordinate performance-based management. ☒
- Deploy additional supporting transportation surveillance and control systems and infrastructure. ☒
- Develop Traffic Incident Management standard operating procedures. ☐
- Standardize and implement transit signal priority performance management and system optimization procedures. ☐

Secondary initiatives

- Develop evacuation and recovery plans and exercises. ☐
- Develop processes to coordinate traveler information messaging across the region. ☐
- Develop active work zone monitoring and management in the field. ☐
- Deploy additional safety-focused technology applications ☐
- Expand the Regional Performance Monitoring Data Archive platform. ☐
- Expand the Regional Situational Awareness platform. ☐
- Expand transit signal priority deployment. ☐

Tertiary initiatives

- Develop a Regional Multimodal Traveler Information platform. ☐
- Develop a process to monitor regional parking availability, capacity and pricing. ☐
- Develop a multimodal trip planner and reservation/ payment system. ☐
- Develop and deploy dynamic ride-sharing. ☐
- Develop and implement curbside management standards. ☐
- Develop continuity of operations plans. ☐

Describe how this project will deploy, advance or achieve the selected initiatives.

This update directly works with the metro vision Travel Time Variation (TTV) measure and the Person Delay Measure. We are wanting to better address the travel time along this corridor and this update will be able to provide that with the new technology.

The Regional Transportation Operations and Technology Strategic Plan emphasizes a data management concept that requires interagency information sharing. Describe in detail how this project will share data with other regional entities.

This system will include Ethernet video and connect to existing node buildings in Region 4 via radio communication system already in existence on the highway. The ATSCS devices will primarily be operated and maintained by CDOT R4 maintenance staff through local machines. The information collected from this equipment would present a possibility to share with other local agencies for collaboration for corridor operations as it relates to traffic data.

B. Regional Impact of Proposed Project

WEIGHT

25%

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

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

This project is important because the selected corridor US-287 is within the DRCOG Regional Roadway System, and CDOT's Regional Routes of Significance, but also is in an area that is developing quickly, and this route is becoming increasingly congested. The existing equipment was not Region 4 standard and was, until recently, managed by CDOT Region 1. By updating this equipment to be consistent with Region 4 equipment, the corridor will see increased performance due to consistent application of technology that will also benefit the communities and population that utilize these corridors.

The new equipment (Intelight Controller, Iteris Next System, Cienna Network Switch, Clary UPS, and PTZ) will enable Active Traffic System Performance Measures (ATSPM) to be collected and analyzed. The new equipment will enable CDOT to coordinate US-287 and react more quickly to needed changes. Additionally, the proposed systems will be used to classify and detect bicycles at the intersections in keeping with DRCOG regional objectives.

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.*

Implementing a better signal control system that will better monitor traffic conditions and relay the needed information to the CDOT signal team. A system that is operating correctly will reduce driver frustration, which in turn will reduce the number of signal timing complaints. Having a system that provides accurate counts will be able to provide engineers with information needed for future growth and planning purposes.

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.

City of Longmont, City of Lafayette, County of Boulder – See number 2 for benefit

4. Disproportionately Impacted and Environmental Justice Communities

This data is available in the [DRCOG Data Tool](#). Completing the below table and referencing relevant quantitative data in your response is required.

To update the formulas below, enter your information, highlight the formulas (or Ctrl-A), and press F9. OR close and reopen the file.

Use 2015-2019 American Community Survey Data (Use a 0.5 mile buffer distance) [Equity data tab]	DI & EJ Population Groups	Number within ½ mile	% of Total	Regional %
	a. Total population	5361	-	-
	b. Total households	2155	-	-
	c. Individuals with low-income	1066	20%	20%
	d. Individuals of color	1386	26%	33%
	e. Adults age 60 and over	880	16%	13%
	f. Youth under 18	1393	26%	16%
	g. Individuals with limited English proficiency	293	5%	3%
	h. Individuals with a disability	377	7%	9%
	i. Households that are housing cost-burdened	450	21%	32%
	j. Households without a motor vehicle	89	4%	5%

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 disproportionately impacted and environmental justice population groups identified in the table above, *including the required quantitative analysis*:

Improve transportation system performance and reliability.

Improve transportation safety and security.

Improve bicycle and pedestrian accessibility.

5. How will this project move the subregion toward achieving the shared [regional transportation outcomes](#) established in [Metro Vision](#) in terms of...

- Land Use, community, urban development, housing, employment? *(Improve the diversity and livability of communities. Contain urban development in locations designated for urban growth and services. Increase housing and employment in urban centers. Diversify the region’s housing stock. Improve the region’s competitive position.)*
 - N/A
- Multimodal transportation, safety, reliability, air quality? *(Improve and expand the region’s multimodal transportation system, services, and connections. Operate, manage, and maintain a safe and reliable transportation system. Improve air quality and reduce greenhouse gas emissions. Reduce the risk of hazards and their impact.)*
 - It is assumed that TTI and PTI will improve due to improved monitoring on the corridor. Although it is not possible to quantify the exact amount of improvement that will result, it is reasonable to expect at least 3 percent decrease (improvement) in TTI and PTI based on existing average speeds on the corridors in relation to the average speed limit and the anticipated improvement due to travel time monitoring on the corridor. For example, the average speed limit on the corridors is 55 mph and the average speed during peak periods (AM and PM) is 49 mph or TTI of 1.2. The anticipated increase in average speed to 51.5 mph will result in TTI of 1.11, which is about 8 percent improvement.
- Connection/accessibility to particular locations supporting healthy and active choices? *(Connect people to natural resource and recreational areas. Increase access to amenities that support healthy, active choices. Improve transportation connections to health care facilities and service providers. Improve access to opportunity.)*
 - N/A

6. Items marked with an asterisk (*) below are available in the DRCOG Data Tool.

- Is there a DRCOG designated urban center within ½ mile of the project limits?*
- Does the project connect two or more urban centers?*
- Is there a transit stop or station within ½ mile of the project limits?*
- Is the project in a locally-defined priority growth and development area and/or an area with zoning that supports compact, mixed-use development patterns and a variety of housing options?

☐ Yes ☒ No If yes, please provide the name: [Click or tap here to enter text.](#)

☐ Yes ☒ No If yes, please provide the names: [Click or tap here to enter text.](#)

Bus stop: ☒ Yes ☐ No If yes, how many:8

Rail station: ☐ Yes ☒ No If yes, how many: [Click or tap here to enter text.](#)

If yes, provide a link to the relevant planning document:

If yes, provide how the area is defined in the relevant planning document:

Provide households and employment data* [Population and Employment tab]	2020	2050
Jobs within ½ mile	269	578
Households within ½ mile	432	1185

Describe how this project will improve transportation options in and between key geographic areas including DRCOG-defined urban centers, multimodal corridors, mixed-use areas, Transit Oriented Development (transit near high-density development), or locally defined priority growth areas, *including the required quantitative analysis:*

The new equipment (Intelight Controller, Iteris Next System, Cienna Network Switch, Clary UPS, and PTZ) will enable ATSPM capability. This system is centered around both a video detection camera for stop bar detection and a radar unit for advanced detection to detect approaching vehicles at over 500 feet from the sensor. The detection will expand functionality for bike and ped usage as it relates to corridor operations and allow greater compatibility with these modes of travel.

Utilizing the advanced algorithms in the radar unit, the system tracks all approaching vehicles, providing extremely accurate range and speed data of each individual vehicle. As the vehicles pass through up to five user- configured areas-of-interest, or trip lines, the system provides enhanced precision throughout the radar unit’s detection area. Vehicles then enter the detection area of the video camera as they reach the stop bar, thus the system provides total coverage for all vehicles approaching the intersection.

The system provides the user with the ability to configure five trip lines within the radar detection zone at a specific distance from the stop bar, a minimum and maximum speed threshold, and a defined trip line width. As a vehicle enters each of the trip line areas, the system determines if that vehicle is within the configured speed threshold. If it is, then the vehicle is most likely within the dilemma zone criteria, and an output is sent to the controller with the required extension timing for that vehicle to reach the next trip line area. This continues through each trip line until the vehicle has slowed down and hasn’t reached the next trip line in the required time before the extension has run out, or the vehicle has gone fast enough to have made it through the yellow light before it turned red.

Combined with the video detection area at the stop bar, the use of the trip lines within the system allows the user to create total dilemma zone coverage to ensure that high speed vehicles are detected, and the proper outputs are sent to the controller, so that vehicles can get through the yellow light safely, or are ensured to stop in enough time.

7. Describe how this project will improve **access** and **connections** to key employment centers or subregional destinations. In your answer, define the key destination(s) and clearly explain how the project improves **access** and/or **connectivity**.

Greater corridor efficiency and lower travel times. Enhanced dilemma zone detection.

Enables reporting of some ATSPMs and traffic responsive capabilities.

Regional transportation network optimization and ITS device deployment.

8. Congestion Mitigation Process Mobility Score

*Completing the below table and referencing relevant quantitative data in your response is required. In the **DRCOG Data Tool**, use a **0.02 mile buffer distance**.*

Provide congestion mobility parameters* [Congestion Mobility Score tab]	2021
Sum: length-weighted score	10.0
Sum: miles	5
Congestion Mobility Score	2.00

(The Congestion Mobility Score will automatically calculate based on values entered. If this has not updated, select the box and click F9)

C. Metro Vision Regional Transportation Plan Priorities

WEIGHT

25%

- ***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 is available from the [DRCOG Data Tool](#).
- 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 an interchange project that incorporates transit and freight improvements, etc.

- What modes will project improvements directly address?
☒ Walking ☒ Bicycling ☒ Transit ☒ SOV ☒ Freight ☒ Other: [All corridor operations](#)
- List the elements of this project which will address the above modes (i.e., sidewalk, shared use path, bus stop improvements, new general purpose or managed lanes, etc.): [Corridor Operations Improvement and ability to detect other modes of travel \(bike/peds\) and provide counts/direction of travel for each mode for existing and future planning efforts.](#)
- Will the completed project be a complete street as described in the [Regional Complete Streets Toolkit](#)? [Complete Streets Typology](#) is available in the [DRCOG Data Tool](#).
☐ Yes ☒ No If yes, describe how it implements the Toolkit's strategies in your response. [Click or tap here to enter text.](#)
- Does this project improve travel time reliability and reduce delay?
☒ Yes ☐ No
- Does this project improve asset management of roadway infrastructure, active transportation facilities, and/or transit facilities or vehicle fleets?
☒ Yes ☐ No
- Does this project implement resilient infrastructure that helps the subregion mitigate natural and/or human-made hazards?
☒ Yes ☐ No

Question: Describe how this project will help increase mobility choices for people, goods, and/or services. Please include quantitative information, including any items referenced above, in your response. *Note that the proposed roadway operational improvements must be primarily on the DRCOG [Regional Roadway System](#) and/or [Regional Managed Lanes System](#).*

By installing the new equipment (Intelight Controller, Iteris Next System, Cienna Network Switch, Clary UPS, and PTZ) we will be Implementing a better signal control system that will better monitor traffic conditions.

With the new equipment, there will be better detection and operations as it relates to various modes of transportation (ie bike/ped). This will allow for greater choice of travel mode if the operations are improved for all modes of travel.

Question: Describe how this project will help improve asset reliability and availability. Please include quantitative information in your response (for example, reduce mean time to repair and increase mean time between failures).

Advanced Dilemma-Zone Detection uses comprehensive detection equipment to measure vehicle speeds and flows. Based on the number of vehicles expected to be in the dilemma zone in the immediate future and the number of minor-street vehicles waiting to travel through the intersection, the Advanced Dilemma-Zone

Detection system attempts to identify when

- (1) the fewest passenger cars will be in the dilemma zone, and
- (2) no heavy vehicles will be in the dilemma zone.

The Advanced Dilemma-Zone Detection system has several benefits relative to traditional multiple detector systems, which have upstream detection for vehicles in the dilemma zone but do not take the speed or size of individual vehicles into account. These benefits include:

- Reducing the frequency of red-light violations;
- Reducing the frequency of crashes associated with the traffic signal phase change (for example, rear-end and angle crashes);
- Reducing delay and stop frequency on the major road; and
- Maintaining or reducing overall intersection delay.

Question: Describe how this project will reduce delays and improve travel time reliability. Please include quantitative information in your response (for example, vehicle-hours traveled and travel time index).

This project aims to reduce delays and improve travel time reliability by incorporating new equipment to replace antiquated equipment along the corridor we will be replacing the following Intelight Controllers, Iteris Next System, Cienna Network Switch, Clary UPS, and PTZ. Here's how this technology can contribute to these goals:

1. Video detection systems can provide real-time data on traffic conditions by analyzing live video feeds from strategically placed cameras. This allows transportation authorities to monitor traffic flow, identify congestion hotspots, and quickly respond to incidents or changing conditions. By having immediate and accurate information, appropriate measures can be taken to mitigate delays and manage traffic effectively.
2. Video detection technology can help identify incidents such as accidents, breakdowns, or road debris quickly. Authorities can then be promptly notified, enabling them to respond swiftly and efficiently to clear the incident, redirect traffic, and restore normal flow, minimizing delays.
3. Video detection technology can accurately measure queue lengths at intersections or congestion points. This information helps transportation authority's assess the severity of congestion and implement appropriate measures, such as adjusting signal timings, deploying additional resources, or providing alternate routes to alleviate delays and improve travel time reliability.
4. By utilizing video detection data, transportation agencies can conduct comprehensive performance measurement and analysis. They can track and evaluate key metrics such as travel times, average speeds, and congestion patterns. This data-driven approach enables authorities to identify recurring issues, assess the effectiveness of implemented measures, and make data-informed decisions to further optimize the transportation system.
5. Video detection technology allows for proactive traffic management strategies. By leveraging the real-time data provided by video feeds, transportation authorities can anticipate and mitigate potential congestion points. They can take preventive measures such as adjusting signal timings, deploying additional personnel or resources, or providing real-time traffic information to drivers, thus reducing delays and improving travel time reliability.

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.

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	NOx	VOCs	PM 10	CO ₂ e
	5.888	0	.737	Enter Data	9021

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 describe your methodology and sources in your narrative below.

Question: Describe how this project helps reduce congestion and air pollutants, including but not limited to carbon monoxide, ground-level ozone precursors, particulate matter, and greenhouse gas emissions. Please include quantitative information, including any items referenced above, in your response.

3% improvement in TTI and 3% improvement in PTI.

It is assumed that TTI and PTI will improve due to improved monitoring on the corridor. Although it is not possible to quantify the exact amount of improvement that will result, it is reasonable to expect at least 5 percent decrease (improvement) in TTI and PTI based on existing average speeds on the corridors in relation to the average speed limit and the anticipated improvement due to travel time monitoring on the corridor. For example, the average speed limit on the corridors is 55 mph and the average speed during peak periods (AM and PM) is 48 mph or TTI of 1.2. The anticipated increase in average speed to 51.5 mph will result in TTI of 1.11, which is about 8 percent improvement.

Regional Transit	<p>Expand and improve the subregion'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, etc. <i>Note:</i> 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.</p>
<p><u>Items marked with an asterisk (*) below are available in the DRCOG Data Tool.</u></p> <ul style="list-style-type: none"> Does this project implement a portion of the regional bus rapid transit (BRT) network (as defined in the 2050 MVRTP)?* <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, which specific corridor will this project focus on: Click or tap here to enter text. Does this project involve a regional transit planning corridor (as defined in the 2050 MVRTP)?* <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, which specific corridor will this project focus on: US-287 Does this project implement a mobility hub (as defined in the 2050 MVRTP)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Does this project improve connections between transit and other modes? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, please describe in your response. Does this project improve transit travel time reliability? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, please describe in your response. Corridor reliability and lane by lane measuring Does this project add and/or improve transit access to or within a DRCOG-defined urban center?* <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <p>Question: Describe how this project improves connections to or expands the subregion's transit system, as outlined in the 2050 MVRTP. Also describe how this project improves transit travel time reliability. Please include quantitative information, including any items referenced above, in your response. <i>Note that rapid transit improvements must be on the Regional Rapid Transit System.</i></p> <p>N/A</p>	

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.	
	Items marked with an asterisk (*) below are available in the DRCOG Data Tool .	
<ul style="list-style-type: none"> 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?* <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Does this project implement a safety countermeasure listed in the countermeasure glossary? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Will this project result in a reduction of average roadway clearance time and incident clearance time and/or secondary incidents? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Will this project result in a reduction of first responder struck-bys? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 		
Provide the current number of crashes involving motor vehicles, bicyclists, and pedestrians* (using the 2016-2020 period – in the DRCOG Data Tool , use a 0.02 mile buffer distance) [Crash Severity 2016-2020 tab] NOTE: if constructing a new facility, report crashes along closest existing alternative route		Sponsor must use industry accepted crash modification factors (CMF) or crash reduction factor (CRF) practices (e.g., CMF Clearinghouse , NCHRP Report 617 , or DiExSys methodology).
Fatal crashes	4	
Serious Injury crashes	6	
Other: Non-Serious Injury and Property Damage Only crashes	129	
Estimated reduction in crashes applicable to the project scope (per the five-year period used above)		Provide the methodology and sources below:
Fatal crashes reduced	1	CMF Clearinghouse - CMF ID: 4855 (CRF% = 11.3)
Serious Injury crashes reduced	1	
Other: Non-Serious Injury and Property Damage Only crashes	14	
<p>Question: Describe how this project will implement safety improvements (roadway, active transportation facility, etc.), particularly improvements in line with the recommendations in Taking Action on Regional Vision Zero. Please include quantitative information, including any items referenced above, in your response. <i>Note that any improvements on roadways must be primarily on the DRCOG Regional Roadway System.</i></p> <p>Adding the ATSCS there is built in functionality embedded within the processor, that will allow us to detect bicycles simultaneously with vehicles. By providing the ability to differentiate bicycles, we can program the signal timing for accommodation of the slower moving bicycles to get through the intersection before the phase changes, ensuring a safer passage.</p> <p>The advanced dilemma zone detection will allow for reduction in crashes by adjusting the signal timing to accommodate vehicles going through the intersection.</p> <p>It will also give us detailed metrics on pedestrian movements throughout the intersection.</p> <p>Question: Describe how this project will reduce average incident duration, secondary incidents and first responder struck-bys. Please include quantitative information in your response. A “responder struck-by” incident is a collision between a motor vehicle in transit and a responder working a roadway incident. The responder may be a nonmotorist, an occupant of a stopped response vehicle or an unoccupied response vehicle.</p> <p>N/A</p>		

Freight	<p>Maintain efficient movement of goods within and beyond the subregion.</p> <p>(drawn from 2050 MVRTP priorities; Regional Multimodal Freight Plan; Colorado Freight Plan, federal freight reliability performance measure; Metro Vision objective 14)</p> <p>Examples of Project Elements: bridge improvements, improved turning radii, increased roadway capacity, etc.</p>
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Items marked with an asterisk (*) below are available in the DRCOG Data Tool.

- Is this project located in or impact access to a [Freight Focus Area](#)?*

☐ Yes ☒ No If yes, please provide the name: [Click or tap here to enter text.](#)
- 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 below.
- Is the project located on the [Tier 1 or Tier 2 Regional Highway Freight Vision Network](#)?*

☐ Yes ☒ No
- 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 ☐ Highway Bottleneck

☐ Low-Clearance or Weight-Restricted Bridge

 Please provide the location(s) being addressed: [Click or tap here to enter text.](#)
- 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 below.

Question: Describe how this project will improve the efficient movement of goods. In your response, identify those improvements identified in the [Regional Multimodal Freight Plan](#), include quantitative information, and include any items referenced above. *Note that any improvements on roadways must be primarily on the DRCOG [Regional Roadway System](#).*

[Freight improvements will be cohesive to overall new system](#)

Active Transportation	Expand and enhance active transportation travel options. (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.	
Items marked with an asterisk (*) below are available in the DRCOG Data Tool.		
<ul style="list-style-type: none"> Does this project close a gap or extend a facility on a Regional Active Transportation Corridor or locally-defined priority corridor?* Does this project improve pedestrian accessibility and connectivity in a pedestrian focus area?* Does this project improve active transportation choices in a short trip opportunity zone?* Does this project include a high-comfort bikeway (like a sidepath, shared-use path, separated bike lane, bicycle boulevard)? 		
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, please describe in your response.		
Bicycle Use <i>NOTE: if constructing a new facility, report bike usage along closest existing alternative route</i> To update the formulas below, enter your information, highlight the formulas (or Ctrl-A), and press F9. OR close and reopen the file.		
1. Current Average Single Weekday Bicyclists:	N/A	
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.	N/A	N/A
3. Enter number of the bicycle trips (in #2 above) that will be diverting from a different bicycling route. (Example: {#2 X 50%} or other percent, if justified on line 10 below)	N/A	N/A
4. = Initial number of new bicycle trips from project (#2 – #3)	0	0
5. Enter number of the new trips produced (from #4 above) that are replacing a trip made by another non-SOV mode (bus, carpool, vanpool, walking, etc.). (Example: {#4 X 30%} or other percent, if justified on line 10 below)	N/A	N/A
6. = Number of SOV trips reduced per day (#4 - #5)	0.00	0.00
7. Enter the value of {#6 x 2 miles}. (= the VMT reduced per day) (Values other than 2 miles must be justified by sponsor on line 10 below)	N/A	N/A
8. = Number of pounds GHG emissions reduced (#7 x 0.95 lbs.)	0.00	0.00
9. If values would be distinctly greater for weekends, describe the magnitude of difference: N/A		
10. If different values other than the suggested are used, please explain here: N/A		
Pedestrian Use <i>NOTE: if constructing a new facility, report pedestrian usage along closest existing alternative route</i> To update the formulas below, enter your information, highlight the formulas (or Ctrl-A), and press F9. OR close and reopen the file.		
1. Current Average Single Weekday Pedestrians (including users of non-pedaled devices such as scooters and wheelchairs):	N/A	
Pedestrian Use Calculations	Year of Opening	2050 Weekday Estimate
2. Enter estimated additional average weekday pedestrian one-way trips on the facility after project is completed	N/A	N/A
3. Enter number of the new pedestrian trips (in #2 above) that will be diverting from a different walking route (Example: {#2 X 50%} or other percent, if justified on line 10 below)	N/A	N/A
4. = Number of new trips from project (#2 – #3)	0	0
5. 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.). (Example: {#4 X 30%} or other percent, if justified on line 10 below)	N/A	N/A
6. = Number of SOV trips reduced per day (#4 - #5)	0.00	0.00
7. 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)	N/A	N/A

8.	= Number of pounds GHG emissions reduced (#7 x 0.95 lbs.)	0.00	0.00
9.	If values would be distinctly greater for weekends, describe the magnitude of difference: N/A		
10.	If different values other than the suggested are used, please explain here: N/A		

Question: Describe how this project helps expand the active transportation network, closes gaps, improves comfort, and/or improves connections to key destinations, particularly improvements in line with the recommendations in the [Denver Regional Active Transportation Plan](#). Please include quantitative information, including any items referenced above, in your response.

N/A

D. Financial Leveraging		WEIGHT	5%
What percent of outside funding sources (non-federal funds) does this project have? <i>(Match percentage will automatically calculate based on values entered in the Funding Request table. If this has not updated, select the box to the right and click F9.)</i> [*includes 100% eligible projects with no match]	Enter score: <div>40.3%</div>	36%+ outside funding sources 5 31 - 35.9%..... 4 26 - 30.9%..... 3 21 - 25.9%..... 2 17.21 - 20.9%* 1 17.21%..... 0	
E. Project Readiness		WEIGHT	15%
<i>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.</i>			
Subsection 1. Avoiding Pitfalls and Roadblocks			
<p>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?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A (for projects which do not require engineering services)</p> <p>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:</p> <p>N/A</p> <p>Please describe the status to date on each, including 1) anticipated/known pitfalls/roadblocks, and 2) mitigation activities taken to date:</p> <ul style="list-style-type: none"> Utilities: N/A Railroad: N/A Right-of-Way: N/A Environmental/Historic: N/A Other: N/A 			
<p>b. Have additional project risks been identified?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A</p> <p>If yes, please provide a brief description of the known risks and planned mitigation activities.</p> <p>Lead times on equipment, construction installation</p>			
<p>c. Is this application for a single project phase only (i.e., design, environmental, ROW acquisition, construction only, study, equipment purchase, etc.)?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>If yes, are the other prerequisite phases complete? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</p>			
<p>d. Will this project seek a Finding in the Public Interest as part of equipment procurement?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>If yes, please provide an explanation of the need for a Finding in the Public Interest. Do not reference specific products trade names.</p> <p>Will be utilizing existing FiPis and state award agreements</p>			

e. 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

Is existing equipment within ROW? ☒ Yes ☐ No ☐ N/A

Will subsurface utility engineering be a factor in this project? ☐ Yes ☒ No

Has subsurface utility engineering been accounted for in the project scoping, phasing and estimate? ☐ Yes ☐ No ☒ N/A

f. 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 ☐ N/A

g. Have other stakeholders in your project been identified and involved in project development?

☐ Yes ☐ No ☒ N/A

If yes, who are the stakeholders?

N/A

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

N/A

Subsection 2. Local Match Availability

a. Is all the local match identified in your application currently available and not contingent on any additional decisions, and if a partnering agency is also committing match, do you have a commitment letter?

☒ Yes ☐ No

Please describe:

Installation costs will be managed in house to CDOT using existing funds

b. Is all funding for this project currently identified in the sponsor agency's Capital Improvement Program (CIP)?

☐ Yes ☒ No

Please describe:

Click or tap here to enter text.

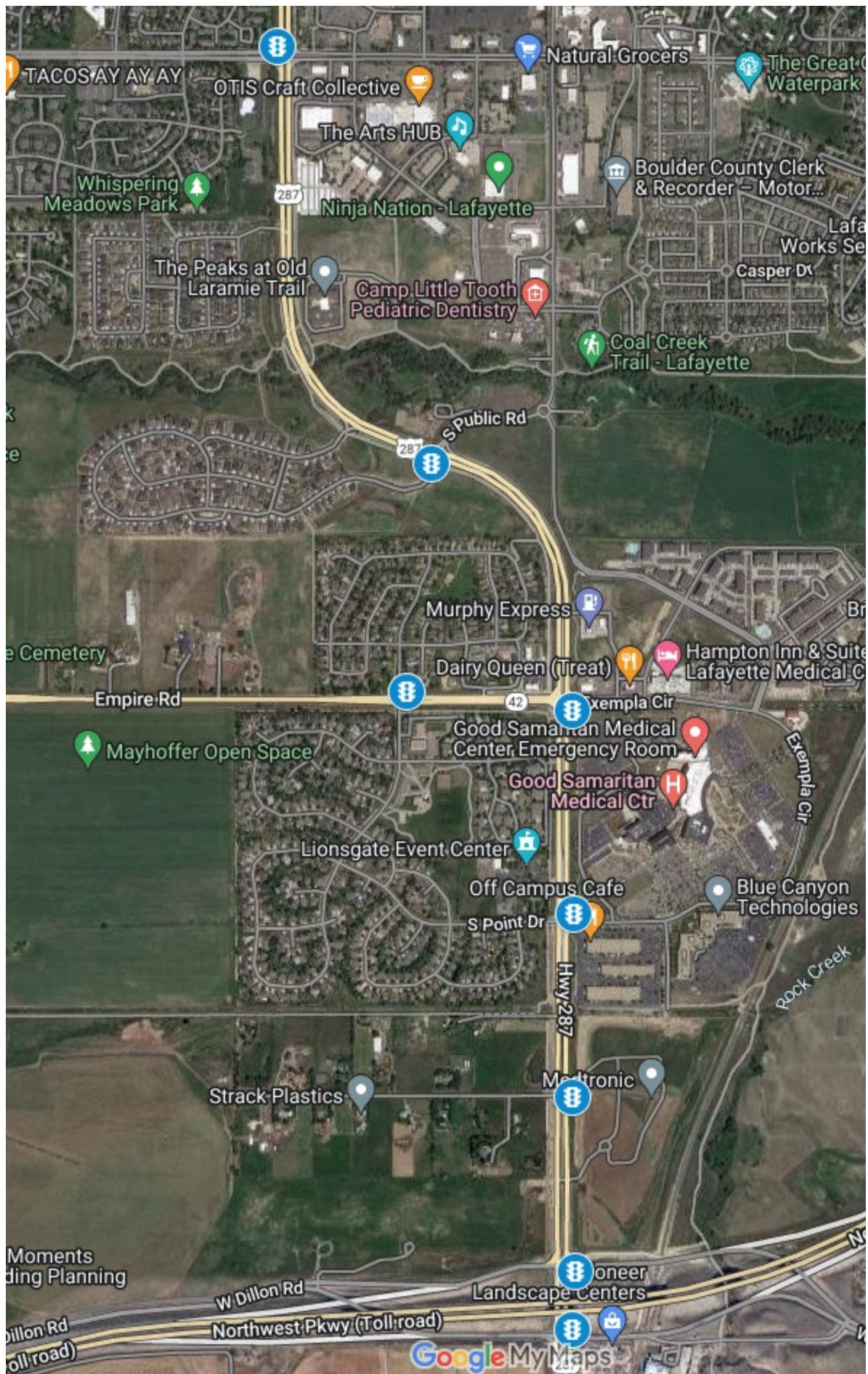
Subsection 3. Systems Engineering Analysis Documentation

Systems Engineering Analysis (SEA) is a federally required process for deployment of transportation technology projects using funds from the Highway Trust Fund. CDOT established and administers a formal [SEA process](#) for transportation technology projects in the state, including local agency projects.

Please complete at least the first seven sections of the required [SEA-Local Agency Template](#). Submit the completed form with this application.

Submit completed applications to jluor@drcog.org no later than 5pm on July 7, 2023.

Prior to submitting, press Ctrl+A to select all, then press F9 to update all formulas. You can then print to PDF.



Engineer's Detailed Estimate Method

Project Name: US 287 Traffic Signal Equipment and Detection Expansion
 Road/Facility Name: CDOT Region 4
 Route Number: 287

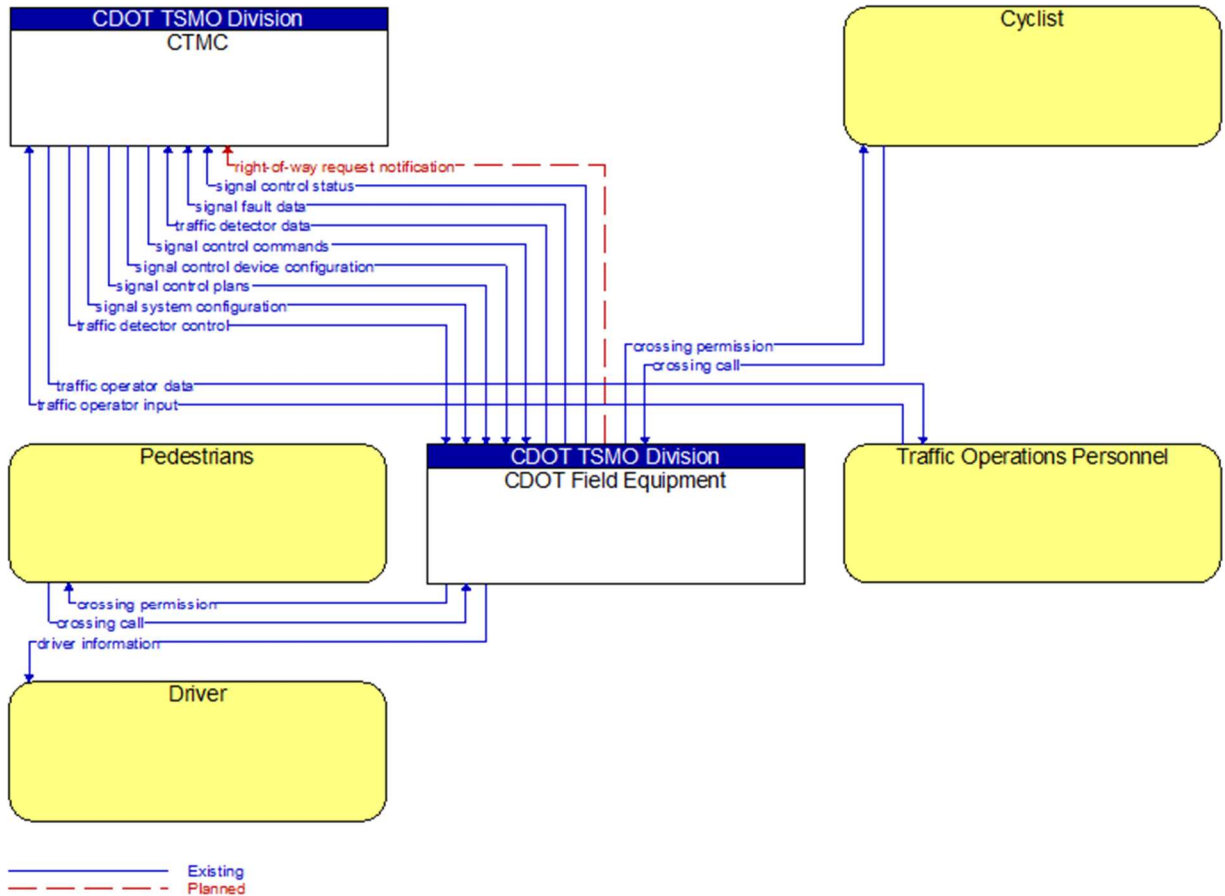
Quantity	Item	Unit Cost	Percentage Range	Percentage Selected	Costs
Bid Items (estimate)					
	7 Traffic Controller (Intelight)	\$ 3,200.00			\$ 22,400
	8 Cienna Switch	\$ 2,400.00			\$ 19,200
	8 PTZ CCTV Camera	\$ 2,700.00			\$ 21,600
	7 UPS (universal Power Supply)	\$ 4,300.00			\$ 30,100
	8 Radios	\$ 1,100.00			\$ 8,800
	7 Cable Cat-5 (wiring per intersection)	\$ 250.00			\$ 1,750
	28 Installation of Iteris Systems (per camera) and equipment	\$ 2,500.00			\$ 70,000
					\$ -
					\$ -
					\$ -
				Subtotal	\$ 173,850 (A)
Striping			0-5% of (A)	0 %	\$ -
				Subtotal	\$ 173,850 (B)
Construction Signing and Traffic Control (Default – 20%)			5-25% of (B)	0 %	\$ -
				Subtotal	\$ 173,850 (C)
Mobilization (Round up to next \$1,000) (Default – 7%)			3-10% of (C)	0 %	\$ -
TOTAL COST OF CONSTRUCTION BID ITEMS (CBI)					\$ 173,850
Force Account Items					
Utilities			1-3% of CBI	0 %	\$ -
Contingencies			5-15% of CBI	0 %	\$ -
TOTAL OF CONSTRUCTION ITEMS (CI)					\$ 173,850
CDOT Construction Engineering (CE) plus CE Indirects			26% of CI	0 %	\$ -
Preliminary Engineering (PE)					
Entity Preliminary Engineering (including systems engineering and design) [if applicable]					\$ -
Consultant Preliminary Engineering (including systems engineering and design) [if applicable]					\$ -
Right-of-Way Acquisition					\$ -
CDOT Preliminary Engineering (PE) [if applicable]					\$ -
CDOT Preliminary Engineering Indirects (25% of CDOT PE) [if applicable]					\$ -
TOTAL COST					\$ 173,850

DRCOG Regional ITS Architecture Outputs

CDOT Region 4 Advanced Detection Expansion Project

Data Flow Diagram

TM03-02 CDOT Traffic Signal Control



DRCOG Regional ITS Architecture Outputs

List of Project Stakeholders

- CDOT Region 4

Stakeholder Roles and Responsibilities

Deploy and maintain interconnected traffic signal system elements along state highways.
Operate and maintain CTMC (including CTMS and support infrastructure).
Coordinate center-to-center communications and protocol development.
Coordinate traffic incident management roadway response from CTMC.
Monitor arterial operations to both track congestion and employ traffic signal system management.
Deploy, operate, and maintain backbone communications system connecting with other traffic management centers.
Deploy, operate, and maintain traffic and travel time monitoring system elements (including communications infrastructure) on freeways and major state highways.
Deploy, operate, and maintain a regional transportation operations display. This display will be a critical component for the support of Regional Traffic Management.
Deploy, operate, and maintain travel time monitoring and display system.

Colorado Department of Transportation
Jonathan Woodworth

Mon, 1/29/2024

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[illegible]

NOTE: If a Risk is realized and results in a change to the project, the change should then be tracked on the AID-Change Log

CDOT- Project Risk Assessment Tool