



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

## APPLICATION OVERVIEW

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**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 \$24,903,000 for Adams 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](mailto: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](mailto:joann.mattson@state.co.us); CDOT Region 4 – Josie Hadley, [josie.hadley@state.co.us](mailto:josie.hadley@state.co.us); RTD – Chris Quinn, [chris.quinn@rtd-denver.com](mailto: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](mailto: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](mailto: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](mailto: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 <b>substantially</b> address a <b>major</b> regional or subregional problem and benefit people and businesses in multiple subregions.
4	The project benefits will <b>significantly</b> address a <b>major</b> subregional problem primarily benefiting people and businesses in one subregion.
3	The project benefits will either <b>moderately</b> address a <b>major</b> subregional problem or <b>significantly</b> address a <b>moderate</b> -level subregional problem.
2	The project benefits will <b>moderately</b> address a <b>moderate</b> -level subregional problem.
1	The project benefits will address a <b>minor</b> subregional problem.
0	The project does not address a subregional problem.

**Section B. Metro Vision Regional Transportation Plan Priorities .....50%**

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 <b>substantial</b> benefits in the 2050 MVRTP priority area and is determined to be in the <b>top fifth</b> of applications based on the magnitude of benefits in that priority area.
4	The project provides demonstrable <b>significant</b> benefits in the 2050 MVRTP priority area.
3	The project provides demonstrable <b>moderate</b> benefits in the 2050 MVRTP priority area and is determined to be in the <b>middle fifth</b> of applications based on the magnitude of benefits in that priority area.
2	The project provides demonstrable <b>modest</b> benefits in the 2050 MVRTP priority area.
1	The project provides demonstrable <b>slight</b> benefits in the 2050 MVRTP priority area and is determined to be in the <b>bottom fifth</b> 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	<b>Substantial</b> readiness is demonstrated and all known obstacles that are likely to result in project delays have been mitigated.
4	<b>Significant</b> readiness is demonstrated and several known obstacles that are likely to result in project delays have been mitigated.
3	<b>Moderate</b> readiness is demonstrated and some known obstacles that are likely to result in project delays have been mitigated.
2	<b>Slight</b> readiness is demonstrated and some known obstacles that are likely to result in project delays have been mitigated.
1	<b>Few</b> mitigation or readiness activities have been demonstrated.
0	<b>No</b> mitigation or readiness activities have been demonstrated.

## Project Information

1. Project Title		Bridge Street Intersection Safety & Trail Project	
2. Project Location <i>Provide a map, as appropriate (see Page 1)</i>		Start point: S. 22 <sup>nd</sup> Ave End point: N. 42 <sup>nd</sup> Ave OR Geographic Area:	
3. Project Sponsor <i>(entity that will be financially responsible for the project)</i>		City of Brighton	
4. Project Contact Person:			
Name	Christopher Montoya	Title	Assistant Director of Public Works
Phone	303-655-2037	Email	cmontoya@brightonco.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>
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>	<input checked="" type="checkbox"/> <a href="#">DRCOG 2050 Metro Vision Regional Transportation Plan (2050 MVRTP)</a>		
	Provide MVRTP staging period, if applicable capital project:		
	<input checked="" type="checkbox"/> Local/Regional plan:	Planning Document Title: <a href="#">Transportation Master Plan</a> Adopting agency (local agency Council, CDOT, RTD, etc.): <a href="#">City Council of Brighton</a> Provide date of adoption by council/board/commission, if applicable: 2016	
	Please describe public review/engagement to date:	<a href="#">Community meetings/workshops</a>	
Other pertinent details:			
7. Identify the project's <b>key phases and the anticipated schedule of phase milestones.</b> (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)		
<input checked="" type="checkbox"/> Design	Design contract Notice to Proceed (NTP) issued (if using a consultant):	10/2021	
	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:	06/2023
<input checked="" type="checkbox"/> Construction	FIR (Field Inspection Review):	12/2022
	FOR (Final Office Review):	02/2023
	Required clearances:	
	Project publicly advertised:	3/2023
<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 type="checkbox"/> Other:	First invoice submitted to CDOT/RTD:	

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

Bridge Street is a key arterial that extends east to west across multiple jurisdictions and is connected to the future planned State Highway 7 BRT. As a former state highway, the roadway has not been fully developed or modified to accommodate multi-modal traffic and lacks efficiency at multiple intersections, including pedestrian access and safety. Intersection improvements and a trail on the south side of the roadway will provide transportation to all modes of traffic and improve safety along the corridor for both pedestrians and motorists.

**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 Transit<sup>1</sup>**

- 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:

<sup>1</sup>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.

**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.**

The specific elements will include the following: Pedestrian signal improvements, intersection improvements, traffic signal equipment, crosswalks, ADA curb ramps, multi-modal trail, and the additional of turn lanes at intersections. Other considerations to incorporate are fiber optic for traffic signal communications, transit stop enhancements for improved access and experience, along with all inherent work to complete the scope of work.

**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 in design phase

**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: 1,500,000.00

Outline the differences between the scope outlined above and the reduced scope: The City of Brighton would proceed to carry out the remaining balance of the project and other capital projects would be delayed in order to prioritize this project.

**Project Financial Information and Funding Request**

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

<p><b>Total amount of Subregional Share Funding Request (in \$1,000's)</b>  <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 <b>only state MMOF funds</b> (requires minimum 50% local funds)<sup>1</sup></p>	<p><b>\$3150</b></p>	<p><b>70.00%</b> of total project cost</p>
<p><b>Match Funds (in \$1,000's)</b> List each funding source and contribution amount.</p>	<p><b>Contribution Amount</b></p>	<p><b>% Contribution to Overall Project Total</b></p>
<p>City of Brighton Capital Improvements Fund</p>	<p>\$1,350</p>	<p>30%</p>
<p></p>	<p>\$</p>	<p>0%</p>
<p><b>Total Match</b> <i>(private, local, state, another subregion, or federal)</i></p>	<p><b>\$1,350</b></p>	<p><b>30.00%</b></p>

**Project Total****\$4,500****Notes:**

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.

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

	FY 2023	FY 2024	FY 2025	Total
<b>DRCOG Requested Funds</b>	\$1,000	\$2,000	\$150	\$3,150
<b>CDOT or RTD Supplied Funds<sup>2</sup></b>	\$	\$	\$	\$0
<b>Local Funds (Funding from sources other than DRCOG, CDOT, or RTD)</b>	\$675	\$675	\$	\$1,350
<b>Total Funding</b>	\$1,675	\$2,675	\$150	\$4,500
<b>Phase to be Initiated</b>	Construction	Construction	Construction	
<b>Notes:</b>	<ol style="list-style-type: none"> <li>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.</li> <li>2. Only enter funding in this line if CDOT and/or RTD specifically give permission via concurrence letters or other written source.</li> </ol>			
<b>Affirmation:</b>	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.

Bridge Street is the major east to west corridor within the City, as well as extending across multi-jurisdictions to the west and connecting to the future State Highway 7 BRT. The corridor is tracking to have up to 25,000 average daily traffic, whereas just a decade ago only had approximately 12,000 average daily traffic, creating an almost 7% increase annually in traffic along this corridor. During this decade, Brighton contained several residential developments offering affordable housing in comparison to surrounding metropolitan areas and providing housing accessibility. The corridor an essential east to west connection from Brighton to Boulder, where the only other roadway that provides this access is located at 120<sup>th</sup> Avenue which is around 5 miles away and then Baseline Rd the north about 1 mile away, yet is not expanded and has no multi-modal or trail connectivity. With Bridge Street at the heart of the City of Brighton, it provides connectivity to many facilities and allows as a conduit for the traveling public extending into Lochbuie and Adams County.

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 access to the transportation system will provide a new 4,300 feet trail that directly connects to the heart of the City of Brighton, where no current existing access for multi-modal or pedestrians currently exists. An additional four intersections would be improved, providing 16 new pedestrian access points to the new trail system with safety features and ADA accessibility. Furthermore, there are 17 RTD bus stops that are not fully accessible and will provide an improved route to these facilities. The intersection improvements will enhance the Level of Service at multiple intersections. There is currently 161 average daily bus trips within the corridor.

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.

Lochbuie, Weld County, Adams County are anticipated to benefit as well from the proposed intersection improvements. Furthermore, this will enhance the overall connectivity to the State Highway 7 BRT that is currently in preliminary design process and intended to connect to this segment of Bridge Street at US85, extending west to Boulder and providing a transit and multi-modal corridor for several jurisdictions.

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 Community Survey Data	a. Total population	17616	-	-
	b. Total households	5,518	-	-
	c. Individuals of color	8,044	46%	33%
	d. Low-Income households	325	6%	9%
	e. Individuals with limited English proficiency	873	5%	3%
	f. Adults age 65 and over	2,152	12%	13%

<b>(In the TIP Data Tool, use a 0.5 mile buffer)</b>	g. Children age 5-17	3,368	19%	16%
	h. Individuals with a disability	647	4%	9%
	i. Households without a motor vehicle	162	3%	5%
	j. Households that are housing cost-burdened	1,175	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:

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 expand the transportation network to provide improved access to all modes of transportation and specifically enhanced access for pedestrians, multi-modal, and transit.
  - Contain urban development in locations designated for urban growth and services. N/A
  - Increase housing and employment in urban centers. N/A
  - Improve and expand the region’s multimodal transportation system, services, and connections. This is the highest priority and focus of the project including enhanced safety of the intersection.
  - Operate, manage, and maintain a safe and reliable transportation system. The intersection improvements will enhance the corridor for safety and operational conditions with new signals and equipment.
  - Improve air quality and reduce greenhouse gas emissions. The improvements will improve the level of service. The improved level of service will reduce delays and congestion, reducing emissions.
  - Connect people to natural resource and recreational areas. The trail will be the primary east to west trail connection within a significant radius and will provide access to trails, parks, and the central downtown area.
  - Reduce the risk of hazards and their impact. N/A
  - Increase access to amenities that support healthy, active choices. Through reducing car dependency and single-occupancy vehicle trips and implements additional access to the Fulton Ditch Trail, which connects to the Brighton Recreation Center. This will have the effect of providing further connectivity to our city’s recreational facilities as well as supporting active modes of transportation
  - Improve transportation connections to health care facilities and service providers.
  - Diversify the region’s housing stock. Multimodal improvements along the corridor will promote walkability in an area that is anticipated to have mixed-use zoning and affordable housing developments.
  - Improve access to opportunity.
  - 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? 14
- 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	6,915	12,198
Jobs within ½ mile	4,972	6,642
Household density (per acre) within ½ mile	2.19	3.32
Job density (per acre) within ½ mile	2.19	2.15

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

While not within 1/2 mile of a DRCOG designated urban center, the proposed project limits are 1 1/2 miles from downtown Brighton, identified by DRCOG as an urban center. Currently, in the area limits, there is a mobile home park as well as multifamily housing that is anticipated to be built along the corridor. It will improve traffic flow along Bridge Street and increase ridership for bus routes with safe transportation. Additionally, it will provide safer walking for children who attend the two schools in the project location. Identified in Brighton's comprehensive land use plan as additionally, Adams County identifies the area as an enterprise zone. Through this project and expected micromobility arrival, Brighton can focus on ensuring that this urbanized area can support the expected population growth while still providing all the elements of a complete street: safety, connections to transit, and walkability

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**.

As identified in the project area, the sidewalk along Brighton's South Side will provide greater connection with commercial areas such as Prairie Center and Brighton's downtown as well as numerous recreational facilities Brighton's Benedict Park and the Fulton Ditch Trail

## 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.): [Shared use multi-modal path and bus stop improvements](#).
- 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:*

This project specifically provides access to transit via a trail system that also provides the use for multi-modal options of travel. Additionally, this project focuses on improving intersections along the corridor, which are the few remaining intersections that need signalization improvements, with the exception of a few older locations from the CDOT transfer to the City of Brighton and the warrant of new signals from growth.

Furthermore, the use of improved and new signalized intersections will promote and improve pedestrian safety with ADA accessibility and a focus on pedestrian and multi-modal priority.

## 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	NOx	VOCs	PM 10
	21.63	0.02	0.01	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 current intersection conditions of the project have numerous approaches that experience total delays in excess of 20 seconds, with a few outliers of 35 to 89 seconds, in addition to a number of lane approaches with a Level of Service (LOS) of D and F. Upon completion of the project, all approaches will be at a LOS of C or better and the average delay will decrease by approximately just over 20%. Additionally, the signalized intersections are projected to operate at generally a LOS of C or better into the year of 2045.

The project is still in the preliminary design phases and not all the additional information is available at this time. Using the available data for traffic counts, intersection analysis, and initial preliminary engineering for the traffic analysis, a conservative approach was taken for intersection modifications and adaptive intersections. Only 3 primary intersections were considered. (Bridge Street & Tower, Bridge Street & Telluride, and Bridge Street & N. 42<sup>nd</sup> Ave.)

**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? [Arapahoe/SH-7](#)
- 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: [Downtown Brighton Activity 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:*

Currently, there are RTD stations along Bridge Street that are unsafe for pedestrians, are located too close to the road, and are not ADA accessible. This limits the potential ridership of the RTD line along Bridge Street, which serves as an important connector to not just Brighton, but to other cities in the Denver Metropolitan Area.

**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	5	
Other Injury crashes	67	
Property Damage Only crashes	412	
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	0.00	NCHRP Report 617 Crash Reduction Factors
Serious Injury crashes reduced	1.00	
Other Injury crashes reduced	3.00	
Property Damage Only crashes reduced	21.00	

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

A variety of methods are intended for the intersection improvements. We don't have adequate crash reporting to know the specific causes of all crashes. Based on the proposed improvements, the following features are planned to be added: Access control for a trailer park with a proposed roundabout where no intersection control currently exists (Treatment: Add roundabout)(Pending design approach), standardize our signal change intervals (Treatment: Modify Signal Change Interval), modification for turning vehicles including left-turn phases and right turn on reds (Treatments: Modify Left-Turn Phase and No turn on red), installing marked cross walks and adding pedestrian leading phases, installation of left turn and right turn lanes (Treatment: Installation of exclusive Left Turn Lane and Right Turn Lane and finally installation of new traffic signals (Treatment: install traffic signal at urban intersection). Given the limited data available for evaluation, we have averaged the crash reduction factor to a mere 5% reduction and applied this accordingly. It is anticipated that the total improvements will most likely result in an approximate average of around 12-15% crash reduction factor.

## 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:*

[Intersection improvements will have the effect of more efficiently facilitating flow along the corridor.](#)

<b>Active Transportation</b>	<b>Expand and enhance active transportation travel options.</b> <small>(drawn from <a href="#">2050 MVRTP priorities</a>; <a href="#">Denver Regional Active Transportation Plan</a>; &amp; <a href="#">Metro Vision objectives 10 &amp; 13</a>)  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:	50	
Bicycle Use Calculations	<b>Year of Opening</b>	<b>2050 Weekday Estimate</b>
2. Enter estimated additional average weekday one-way bicycle trips on the facility after project is completed.	70	140
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>	35	70
4. = Initial number of new bicycle trips from project (#2 – #3)	35	70
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>	10.50	21.00
5. = Number of SOV trips reduced per day (#4 - #5)	24.50	49.00
6. Enter the value of <b>{#6 x 2 miles}</b> . (= the VMT reduced per day) <i>(Values other than 2 miles must be justified by sponsor on line 10 below)</i>	49.00	98.00
7. = Number of pounds GHG emissions reduced (#7 x 0.95 lbs.)	46.55	93.10
8. If values would be distinctly greater for weekends, describe the magnitude of difference:  It is not anticipated that there will be significantly greater traffic on this trail on the weekend.		
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):	60	
Pedestrian Use Calculations	<b>Year of Opening</b>	<b>2050 Weekday Estimate</b>
3. Enter estimated additional average weekday pedestrian one-way trips on the facility after project is completed	80	160
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>	40	80
5. = Number of new trips from project (#2 – #3)	40	80
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>	12.00	24.00
7. = Number of SOV trips reduced per day (#4 - #5)	28.00	56.00

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)	11.20	22.40
9. = Number of pounds GHG emissions reduced (#7 x 0.95 lbs.)	10.64	21.28
10. If values would be distinctly greater for weekends, describe the magnitude of difference:  It is not anticipated that there will be significantly greater traffic on this trail on the weekend		
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:*

Through estimates of pedestrian and bicycle activity in this area, intersection improvements along Bridge Street, along with the proposed sidewalk along its south side, will likely increase the population who choose to use active modes of transportation and reduce single-occupancy vehicle trips. Bridge Street intersects with the Fulton Ditch Trail, a popular trail in Brighton and there are children who attend Eagle Ridge Academy and Pennock Elementary School. It is estimated that this will have additional positive externalities of reducing greenhouse gas emissions.

<b>C. Project Leveraging</b>	<b>WEIGHT</b>	<b>10%</b>
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<p>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></p>	<b>30.00%</b>	<table style="width: 100%; border-collapse: collapse;"> <tr><td>60%+ outside funding sources .....</td><td>5 pts</td></tr> <tr><td>50-59.9% .....</td><td>4 pts</td></tr> <tr><td>40-49.9% .....</td><td>3 pts</td></tr> <tr><td>20-39.9% .....</td><td>2 pts</td></tr> <tr><td>10.1-19.9% .....</td><td>1 pt</td></tr> <tr><td>10%.....</td><td>0 pts</td></tr> </table>	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
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													

<b>D. Project Readiness</b>	<b>WEIGHT</b>	<b>10%</b>
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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:  
 N/A
- Please describe the status to date on each, including 1) anticipated/known pitfalls/roadblocks, and 2) mitigation activities taken to date:
- Utilities: N/A
  - Railroad: N/A
  - Right-of-Way: N/A
  - Environmental/Historic: N/A
  - Other: :N/A
- 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: [Choose an item](#)
- 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? [The process of contacting property owners and impacted parties has commenced. Some properties have not yet been contact for impacts.](#)

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:

[This project will be funded through our general fund and funds have already been allocated.](#)

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

Yes  No

Please describe:

[This project is identified in our 5-year CIP and budget allocations have been planned.](#)

## 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 project currenty is at about 30% design. A public process has not been contemplated as an essential need since the scope would be limited to standard roadway widening. It is anticipated that as the project design progresses, an open house would be made available.](#)

- 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.

[ROW acquisition and identification is still in the preliminary stages. Property owners will be contacted and notified of the property impacts during the ROW acquisition process.](#)

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

**Bridge Street Intersection & Trail Project**  
**from Fulton Ditch (22nd Avenue) to 42nd Avenue 60% Design Engineer's Estimate**

**06/21/2022**

CITY ITEM NO.	CDOT ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	ITEM COST
1	201-00000	Clearing and Grubbing	LS	1	\$ 10,000.00	\$ 10,000.00
2	202-00010	Removal of Tree	EACH	2	\$ 700.00	\$ 1,400.00
3	202-00031	Removal of Fire Hydrant	EACH	1	\$ 2,000.00	\$ 2,000.00
4	202-00035	Removal of Pipe	LF	10	\$ 26.00	\$ 260.00
5	202-00037	Removal of End Section	EACH	0	\$ 500.00	\$ 0.00
6	202-00175	Removal of Concrete	SY	110	\$ 20.00	\$ 2,200.00
7	202-00203	Removal of Curb & Gutter	LF	200	\$ 12.00	\$ 2,400.00
8	202-00220	Removal of Asphalt Mat	SY	1200	\$ 12.00	\$ 14,400.00
9	202-00240	Removal of Asphalt Mat (Planing)	SY	5000	\$ 6.00	\$ 30,000.00
10	202-00250	Removal of Pavement Marking	SF	150	\$ 2.00	\$ 300.00
11	202-00810	Removal of Ground Sign	EACH	2	\$ 125.00	\$ 250.00
12	202-01000	Removal of Fence	LF	100	\$ 5.00	\$ 500.00
13	202-04000	Plug Culvert	EACH	0	\$ 960.00	\$ 0.00
14	203-00060	Embankment Material (Complete In Place)	CY	200	\$ 15.00	\$ 3,000.00
15	203-01597	Potholing	HOURL	100	\$ 300.00	\$ 30,000.00
16	208-00002	Erosion Log Type 1 (12 Inch)	LF	300	\$ 5.00	\$ 1,500.00
17	208-00020	Silt Fence	LF	200	\$ 2.00	\$ 400.00
18	208-00035	Aggregate Bag	LF	100	\$ 20.00	\$ 2,000.00
19	208-00045	Concrete Washout Structure	EACH	2	\$ 3,500.00	\$ 7,000.00
20	208-00050	Storm Drain Inlet Protection	EACH	10	\$ 300.00	\$ 3,000.00
21	208-00070	Vehicle Tracking Pad	EACH	2	\$ 2,000.00	\$ 4,000.00
22	210-04010	Adjust Sanitary Manhole	EACH	3	\$ 2,800.00	\$ 8,400.00
23	210-04015	Modify Sanitary Manhole (Rotate)	EACH	1	\$ 4,500.00	\$ 4,500.00
24	210-04050	Adjust Water Valve	EACH	5	\$ 600.00	\$ 3,000.00
25	212-00006	Seeding (Native)	ACRE	0.20	\$ 2,000.00	\$ 400.00
26	212-00032	Soil Conditioning	ACRE	0.20	\$ 4,000.00	\$ 800.00
27	304-06000	Aggregate Base Course (Class 6)	TON	300	\$ 20.00	\$ 6,000.00
28	306-01000	Reconditioning	SY	100	\$ 5.00	\$ 500.00
29	403-00720	Hot Mix Asphalt (Patching)(Asphalt)	TON	120	\$ 120.00	\$ 14,400.00
30	403-33741	Hot Mix Asphalt (Grading S) (75) (PG 64-22)	TON	605	\$ 80.00	\$ 48,400.00
31	403-34741	Hot Mix Asphalt (Grading SX) (75) (PG 64-22)	TON	250	\$ 85.00	\$ 21,250.00
32	412-01000	Concrete Pavement (10 Inch Depth)	SY	200	\$ 150.00	\$ 30,000.00
33	503-00036	Drilled Shaft (36 Inch)	LF	56	\$ 500.00	\$ 28,000.00
34	503-00042	Drilled Shaft (42 Inch)	LF	68	\$ 750.00	\$ 51,000.00
35	503-00048	Drilled Shaft (48 Inch)	LF	63	\$ 900.00	\$ 56,700.00
36	607-01050	Fence Wire With Metal Posts	LF	3917	\$ 3.00	\$ 11,751.00
37	607-11455	Fence (wood)	LF	291	\$ 12.00	\$ 3,492.00

CITY ITEM NO.	CDOT ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	ITEM COST
38	608-00006	Concrete Sidewalk (6 Inch)	SY	10325	\$ 50.00	\$ 516,250.00
36	608-00010	Concrete Curb Ramp	SY	442	\$ 275.00	\$ 121,550.00
39	609-21010	Curb & Gutter Type 2 (Section I-B)	LF	13484	\$ 16.00	\$ 215,744.00
40	609-21020	Curb & Gutter Type 2 (Section II-B)	LF	12406	\$ 18.00	\$ 223,308.00
41	610-00035	Median Cover Material (Concrete)(Special)	SF	9590	\$ 15.00	\$ 143,850.00
42	613-00206	2 Inch Electrical Conduit (Bored)	LF	985	\$ 25.00	\$ 24,625.00
43	613-00200	2 Inch Electrical Conduit (Plastic)	LF	740	\$ 20.00	\$ 14,800.00
44	613-00306	3 Inch Electrical Conduit (Bored)	LF	1970	\$ 25.00	\$ 49,250.00
45	613-01300	3 Inch Electrical Conduit (Plastic)	LF	1080	\$ 30.00	\$ 32,400.00
46	613-07003	Type Three Pull Box	EACH	9	\$ 3,500.00	\$ 31,500.00
47	613-07004	Type Four Pull Box	EACH	3	\$ 4,000.00	\$ 12,000.00
48	613-10000	Wiring (Traffic Signal)	LS	1	\$ 40,000.00	\$ 40,000.00
36	613-80130	Service Meter Cabinet	EACH	3	\$ 4,500.00	\$ 13,500.00
39	614-00011	Sign Panel (Class I)	SF	110	\$ 45.00	\$ 4,950.00
40	614-00037	Sign Panel (Special)(Street Name)	EACH	11	\$ 4,000.00	\$ 44,000.00
36	614-01573	Steel Sign Support (2 1/2 Inch Round)(Post & Slip Base)	EACH	37	\$ 400.00	\$ 14,800.00
49	614-70112	Pedestrian Signal Face (16) (Countdown)	EACH	26	\$ 600.00	\$ 15,600.00
50	614-70336	Traffic Signal Face (12-12-12)	EACH	39	\$ 1,000.00	\$ 39,000.00
51	614-70448	Traffic Signal Face (12-12-12-12)	EACH	4	\$ 1,200.00	\$ 4,800.00
52	614-72855	Traffic Signal Controller & Cabinet	EACH	3	\$ 30,000.00	\$ 90,000.00
53	614-72863	Pedestrian Push Button Post Assembly	EACH	16	\$ 2,300.00	\$ 36,800.00
54	614-72866	Fire Prevention Unit and Timer	EACH	6	\$ 4,500.00	\$ 27,000.00
55	614-72895	Vehicle Detection System (Single Camera)	EACH	11	\$ 8,400.00	\$ 92,400.00
56	614-81130	Traffic Signal-Light Pole Steel (1-30 Foot Mast Arm)	EACH	2	\$ 27,000.00	\$ 54,000.00
57	614-81140	Traffic Signal-Light Pole Steel (1-40 Foot Mast Arm)	EACH	2	\$ 30,000.00	\$ 60,000.00
58	614-81145	Traffic Signal-Light Pole Steel (1-45 Foot Mast Arm)	EACH	3	\$ 35,000.00	\$ 105,000.00
59	614-81150	Traffic Signal-Light Pole Steel (1-50 Foot Mast Arm)	EACH	1	\$ 39,000.00	\$ 39,000.00
60	614-81160	Traffic Signal-Light Pole Steel (1-60 Foot Mast Arm)	EACH	3	\$ 50,000.00	\$ 150,000.00
61	614-86800	Uninterrupted Power Supply	EACH	3	\$ 8,000.00	\$ 24,000.00
62	614-87690	Ethernet Switch	EACH	4	\$ 6,000.00	\$ 24,000.00
63	614-87401	Fiber Optic Cable (24 Strand)	LF	200	\$ 25.00	\$ 5,000.00
64	619-78048	6 Inch Fire Hydrant	EACH	1	\$ 7,500.00	\$ 7,500.00
65	619-06060	6 inch Ductile Iron Pipe	LF	15	\$ 200.00	\$ 3,000.00
66	625-00000	Construction Surveying	LS	1	\$ 45,000.00	\$ 45,000.00
67	626-00000	Mobilization	LS	1	\$ 200,000.00	\$ 200,000.00
68	626-01103	Public Information Services (Tier III)	LS	1	\$ 5,000.00	\$ 5,000.00
69	627-00005	Epoxy Pavement Marking	GAL	60	\$ 150.00	\$ 9,000.00
70	627-01010	Preformed Plastic Pavement Marking (Type I)(Inlaid)	SF	200	\$ 15.00	\$ 3,000.00
71	630	Traffic Control	LS	1	\$ 125,000.00	\$ 125,000.00
<b>Subtotal Construction Bid Items</b>						<b>\$ 3,069,830.00</b>
<b>Contingency</b>						<b>\$ 460,474.50</b>

<b>TOTAL ESTIMATED CONSTRUCTION BID ITEMS COST</b>						<b>\$ 3,530,304.50</b>
<b>Street Lighting (Paid Separately to United Power by City of Brighton)</b>						
	202-00700	Removal of Light Standard	EACH	2	\$ 350.00	\$ 700.00
	202-00705	Removal of Light Standard Foundation	EACH	2	\$ 600.00	\$ 1,200.00
	210-00750	Reset Light Standard	EACH	2	\$ 1,000.00	\$ 2,000.00
	613-00200	2" Electrical Conduit (Plastic)	LF	1000	\$ 4.75	\$ 4,750.00
	613-07023	Pull Box (11"x18"x12")	EACH	5	\$ 365.00	\$ 1,825.00
	613-07023	Pull Box (24"x36"x24")	EACH	5	\$ 785.00	\$ 3,925.00
	613	Wiring	LS	1	\$ 40,000.00	\$ 40,000.00
	613-03501	Luminaire (LED)	EACH	10	\$ 1,150.00	\$ 11,500.00
	613	Light Standard Steel (30 Foot)	EACH	10	\$ 3,250.00	\$ 32,500.00
	613	Light Standard Foundation	EACH	10	\$ 1,250.00	\$ 12,500.00
	-	Service Meter Cabinet	EACH	3	\$ 6,500.00	\$ 19,500.00
<b>Subtotal Street Lighting</b>						<b>\$ 130,400.00</b>
<b>Contingency Total Street Lighting</b>						<b>\$ 26,080.00</b>
<b>Total Street Lighting</b>						<b>\$ 156,480.00</b>
<b>Right of Way</b>						
	-	Partial ROW Acquisition	SF	41813	\$ 6.00	\$ 250,878.00
	-	Temporary Construction Easement	SF	83308	\$ 1.00	\$ 83,308.00
	-	Permanent Drainage Easement	SF	3900	\$ 6.00	\$ 23,400.00
<b>Subtotal ROW</b>						<b>\$ 357,586.00</b>
<b>Contingency</b>						<b>\$ 53,637.90</b>
<b>Total ROW</b>						<b>\$ 411,223.90</b>
<b>TOTAL ESTIMATED PROJECT COST WITH CONTINGENCY</b>					<b>\$</b>	<b>3,944,516.90</b>

1	Construction Costs (Bid Package)	\$ 3,530,304.50
2	Lighting (Trail Location - S. Side Bridge St)	\$ 156,480.00
3	ROW Acquisition Costs	\$ 411,223.90
<b>GRAND TOTAL PROJECT COSTS</b>		<b>\$ 4,098,008.40</b>

# Intersection Improvements

This calculator will estimate the emission reductions resulting from improving traffic signals at a four-way intersection

## INPUT

### EXISTING CONDITIONS

Evaluation Year	2021	
Area Type	Urban	
Business District	No	
Total peak hours per day(AM+PM)	4	
Existing Intersection is	Un-signalized	
	<b>Roadway 1</b>	<b>Roadway 2</b>
Average Annual Daily Traffic volume (AADT) (both directions)	15,000	350
Peak-hour Volume (both directions)	1,000	60
Number of Lanes (one direction)	1	1
Truck Percentage	6%	6%
Existing Delay per Vehicle	8	20
Existing Left-turn Phase	No	No
Existing Right-turn Phase	No	No

Use the table below to estimate delay (HCM 2010, Exhibit 21-1)

LOS	Delay (s/veh)	
	Unsignalized Intersection	Signalized Intersections
A	0 - 10	0 - 10
B	>10 - 15	>10 - 20
C	>15 - 25	>20 - 35
D	>25 - 35	>35 - 55
E	>35 - 50	>55 - 80
F*	>50	>80

\*LOS F typically indicates that traffic demand has exceeded capacity

### PROPOSED CONDITIONS

Cycle Length	60 seconds	
	<b>Roadway 1</b>	<b>Roadway 2</b>
Number of Left-Turn Lanes to Add (one direction)	1	1
Left-turn Phase	No	Yes
Right-turn Phase	No	No
Ratio of Green Time per Cycle Time	0.5	0.5

## OUTPUT

### PERFORMANCE

	PEAK-HOUR		OFF-PEAK		
	1	2	1	2	
Existing Capacity (both directions)	1,698	1,698	1,698	1,698	veh/hr
Proposed Capacity (both directions)	2,547	2,426	2,547	2,426	veh/hr
Volume (both directions)	1,000	60	550	6	veh/hr
Delay Reduction per vehicle	-1.3	12.4	-0.3	-0.4	sec/veh
	<b>Roadway 1</b>	<b>Roadway 2</b>			
Roadway Intersection Delay Reduction per day	-2.3	0.8			hours
Total Intersection Delay Reduction per day	-1.5				hours

### EMISSION REDUCTIONS

Pollutant	Peak Hours	Off-Peak Hours	Daily Total
	Kilograms/day	Kilograms/day	Kilograms/day
Carbon Monoxide (CO)	-0.003	0.000	-0.003
Particulate Matter <2.5 µm (PM <sub>2.5</sub> )	0.000	0.000	0.000
Particulate Matter <10 µm (PM <sub>10</sub> )	0.000	0.000	0.000
Nitrogen Oxide (NO <sub>x</sub> )	-0.002	0.000	-0.002
Volatile Organic Compounds (VOC)	0.000	0.000	0.000
Carbon Dioxide Equivalent (CO <sub>2e</sub> )	-2.198	-0.003	-2.201
Total Energy Consumption (MMBTU)	-0.029	0.000	-0.029

## Navigator

Intersection Improvements

Traffic Signal Synchronization

Roundabouts

# Traffic Signal Synchronization

This calculator will estimate the emission reductions resulting from synchronizing the traffic signals along a previously unsynchronized corridor.

## Navigator

Intersection Improvements

**Traffic Signal Synchronization**

Roundabouts

### INPUT

Evaluation Year	Select	
Area Type	Select	
Corridor Length	1	miles
Number of Signalized Intersections	2	
Number of Lanes (one direction)	1	
Posted Speed Limit	0	miles per hour (1 - 75 MPH)
Average Cycle Length	90	seconds
Truck Percentage	6%	
Annual Average Daily Traffic (AADT) (both directions)	0	veh/day
Peak-hour Volume (both directions)	0	veh/hr
Existing Corridor Travel Time	0	minutes
Total peak hours per day (AM+PM)	4	

### OUTPUT

#### PERFORMANCE

	PEAK-HOUR	OFF-PEAK	
Volume (both directions)			veh/hr
Existing Average Speed			miles per hour
Travel Time Savings			minutes
Proposed Average Speed			miles per hour

#### EMISSION REDUCTIONS

Pollutant	Peak-hour Kilograms/day	Off-Peak Kilograms/day	Total Kilograms/day
Carbon Monoxide (CO)	0.000	0.000	0.000
Particulate Matter <2.5 µm (PM <sub>2.5</sub> )	0.000	0.000	0.000
Particulate Matter <10 µm (PM <sub>10</sub> )	0.000	0.000	0.000
Nitrogen Oxide (NOx)	0.000	0.000	0.000
Volatile Organic Compounds (VOC)	0.000	0.000	0.000
Carbon Dioxide Equivalent (CO <sub>2e</sub> )	0.000	0.000	0.000
Total Energy Consumption (MMBTU)	0.000	0.000	0.000

# Roundabouts

This calculator will estimate the emission reductions resulting from building a roundabout at an intersection

## Navigator

[Intersection Improvements](#)

[Traffic Signal Synchronization](#)

**[Roundabouts](#)**

## INPUT

### EXISTING CONDITIONS

Evaluation Year

Area Type

Business District

Total peak hours per day(AM+PM)  hours

Existing intersection is

Use the table below to estimate delay (HCM 2010, Exhibits 18-4, 19-1)

Level of Service Reference Table

LOS	Delay (s/veh)	
	Unsignalized Intersection	Signalized Intersection
A	0 - 10	0 - 10
B	>10 - 15	>10 - 20
C	>15 - 25	>20 - 35
D	>25 - 35	>35 - 55
E	>35 - 50	>55-80
F*	>50	>80

\*LOS F typically indicates that traffic demand has exceeded capacity

Please input approaches in COUNTERCLOCKWISE direction for existing intersection. If the intersection only has three approaches, put '0' for 'Average Annual Daily Traffic (AADT)' for Approach 4

	Approach 1	Approach 2	Approach 3	Approach 4	
Average Annual Daily Traffic volume (AADT)	0	0	0	0	
Peak-hour Volume	0	0	0		veh/hr
Truck Percentage	6%	6%	6%		
Existing Delay per Vehicle	0	0	0		sec/veh
Number of Lanes	1	1	1		
Existing Intersection % Left Turns	0%	0%	0%		
Existing Intersection % Right Turns	0%	0%	0%		

Number of Circulating Roundabout Lanes

## OUTPUT

Calculate Output

### PERFORMANCE

Approach	PEAK-HOUR				OFF-PEAK				
	1	2	3	4	1	2	3	4	
Proposed Capacity									veh/hr
Volume									veh/hr
Delay Reduction per vehicle									sec/veh

Approach Delay Reduction per day  hours

Total Roundabout Delay Reduction per day  hours

### EMISSION REDUCTIONS

Pollutant	Peak-hour Kilograms/day	Off-Peak Kilograms/day	Total Kilograms/day
Carbon Monoxide (CO)	0.000	0.000	0.000
Particulate Matter <2.5 µm (PM <sub>2.5</sub> )	0.000	0.000	0.000
Particulate Matter <10 µm (PM <sub>10</sub> )	0.000	0.000	0.000
Nitrogen Oxide (NOx)	0.000	0.000	0.000
Volatile Organic Compounds (VOC)	0.000	0.000	0.000
Carbon Dioxide Equivalent (CO <sub>2</sub> e)	0.000	0.000	0.000
Total Energy Consumption (MMBTU)	0.000	0.000	0.000