

APPLICATION OVERVIEW

The **Call for Projects** will **open on April 26, 2021**, with applications **due no later than 3 p.m. on June 21, 2021** to Josh Schwenk, DRCOG, at jschwenk@drcog.org.

- Project sponsors must have attended one of the mandatory [TIP submittal training workshops](#) associated with the previous 20-23 TIP back in 2018. If you are aware no one from your agency attended or are unsure, please contact [staff](#).
- Projects requiring CDOT and/or RTD concurrence must provide their official response within their application submittal. The CDOT/RTD concurrence request is due to CDOT/RTD no later than May 5, with CDOT/RTD providing a response no later than June 4. The concurrence form can be found [here](#).
- Each eligible project sponsor may submit a maximum of one application for consideration. The final panel recommendation will be capped at approximately \$15 million in DRCOG funding requests.
- Individual appropriate applications and other data to assist you in filling out your requests can be found [here](#). If applicants need additional data from DRCOG for the completion of their application, they must contact DRCOG staff **no later than June 1** with their request.
- 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.
- Detailed information about sponsor and project eligibility for each share is contained within the [2020-2023 TIP Policy](#).

APPLICATION FORM OUTLINE

The application contains three parts: *base project information* (Part 1), *evaluation questions* (Part 2), and *data calculation estimates* (Part 3). DRCOG staff will review submitted applications for eligibility and provide an initial score to a Project Review Panel. The panel will review and rank eligible applications that request funding. Sponsors with top tier submittals will be invited to make presentations to the Project Review Panel to assist in the final recommendation to the TAC, RTC, and DRCOG Board.

Part 1 | Base Information

Applicants will enter **foundational** information for their *project/program/study* (hereafter referred to as *project*) in Part 1, including a Problem Statement, project description, and concurrence documentation from CDOT and/or RTD, if applicable. Part 1 will not be scored.

Part 2 | Evaluation Criteria, Questions, and Scoring

This part includes four sections (A-D) for the **applicant to provide qualitative and quantitative responses** to use for scoring projects. The outcomes from Part 3 should guide the applicant’s responses in Part 2.

Scoring Methodology: Each section will be scored using a scale of *High-Medium-Low*, relative to other applications received. The four sections in Part 2 are weighted and scored as follows:

Section A. Regional Significance of Proposed Projects 40%

High	The project will significantly address a clearly demonstrated major regional problem and benefit people and businesses from multiple subregions.
Medium	The project will either moderately address a major problem or significantly address a moderate-level regional problem.
Low	The project will address a minor regional problem.

Section B. Metro Vision TIP Focus Areas 30%

High	The project will significantly improve the safety and/or security, significantly increase the reliability of the transportation network, and benefit a large number and variety of users (including vulnerable populations*).
Medium	The project will moderately improve the safety and/or security, moderately increase the reliability of the transportation network, and benefit a moderate number and variety of users (including vulnerable populations*).
Low	The project will minimally improve the safety and/or security, minimally increase the reliability of the transportation network, and benefit a limited number and variety of users (including vulnerable populations*).

**Vulnerable populations include: Individuals with disabilities, persons over age 65, and low-income, minority, or linguistically-challenged persons.*

Section C. Consistency & Contributions to Transportation-focused Metro Vision Objectives 20%

Metro Vision guides DRCOG’s work and establishes shared expectations with our region’s many and various planning partners. The plan outlines broad outcomes, objectives, and initiatives established by the DRCOG Board to make life better for the region’s residents. The degree to which the outcomes, objectives, and initiatives identified in Metro Vision apply in individual communities will vary. Metro Vision has historically informed other DRCOG planning processes, such as the TIP.

High	The project will significantly address Metro Vision transportation-related objectives and is determined to be in the top third of applications based on the magnitude of benefits.
Medium	The project will moderately address Metro Vision transportation-related objectives and is determined to be in the middle third of applications based on the magnitude of benefits.
Low	The project will slightly or not at all address Metro Vision transportation-related objectives and is determined to be in the bottom third of applications based on the magnitude of benefits.

Section D. Leveraging of non-Regional Share funds (“overmatch”) 10%

Scores are assigned based on the percent of outside funding sources (non-Regional Share).

% of Outside Funding (non-Regional Share)	High	80% and above
	Medium	60-79%
	Low	59% and below

Part 3 | Project Data – Calculations and Estimates

Based on the applicant’s project elements, sponsors will complete the appropriate sections to estimate usage or benefit values. Part 3 is not scored, and the quantitative responses should be used to back-up the applicant’s qualitative narrative.

Part 1

Base Information

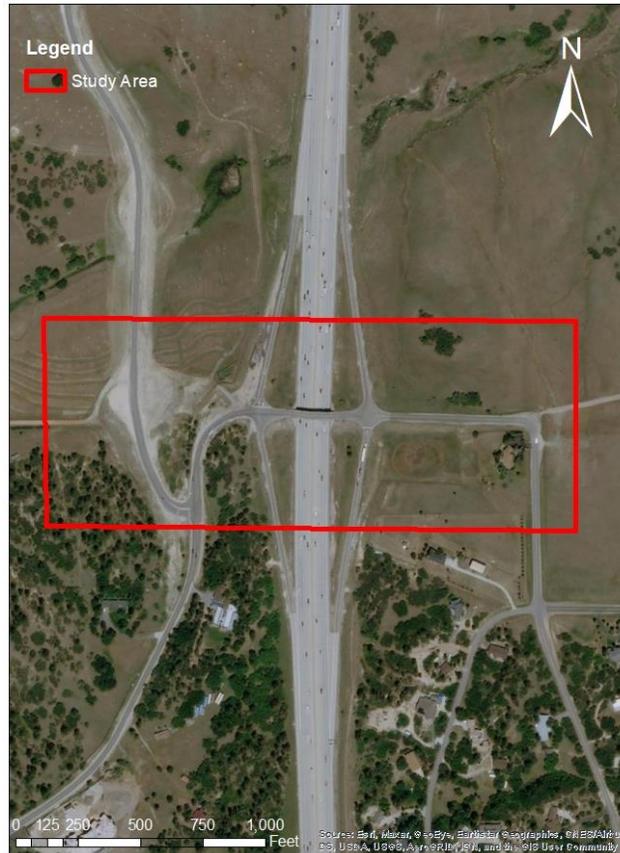
1. Project Title

Happy Canyon Interchange Preconstruction Activities

2. Project Start/End points or Geographic Area

Provide a map with submittal, as appropriate

See attached Project Map



3. Project Sponsor (entity that will construct/ complete and be financially responsible for the project)

City of Castle Pines, Colorado

4. Project Contact Person, Title, Phone Number, and Email

Larry Nimmo, Public Works Director, 303.705.0216, larry.nimmo@castlepinesco.gov

5. Does this project touch CDOT Right-of-Way, involve a CDOT roadway, access RTD property, or request RTD involvement to operate service?

Yes No

If yes, provide applicable concurrence documentation with submittal

6. What planning document(s) identifies this project?

[DRCOG 2050 RTP](#)

Local plan:

Castle Pines Master Transportation Plan, Castle Pines Comprehensive Plan, Douglas County Transportation Plan, Castle Pines Parks and Recreation Plan

Other(s):

CDOT I 25 Planning and Environmental Linkage

Provide link to document/s and referenced page number if possible, or provide documentation with submittal

7. Identify the project's key elements.

- Rapid Transit Capacity (2050 FC RTP)
- Transit Other:
- Bicycle Facility
- Pedestrian Facility
- Safety Improvements
- Roadway Capacity or Managed Lanes (2050 FC RTP)
- Roadway Operational

Grade Separation

- Roadway
- Railway
- Bicycle
- Pedestrian
- Roadway Pavement Reconstruction/Rehab
- Bridge Replace/Reconstruct/Rehab
- Study
- Design
- Other:

8. Problem Statement What specific Metro Vision-related regional problem/issue will the transportation project address?

The Happy Canyon Bridge is nearing the end of its life and is very close (64.7% out of 60%) to being structurally deficient and unsafe. Current traffic conditions are expected to deteriorate to level of service F by 2040 if nothing is done to the interchange configuration and bridge. The existing bridge and interchange configuration has conflict points especially for turning movements which will exacerbate with higher levels of traffic due to surrounding development causing the interchange to become more unsafe over time. Additional funding is needed to take the Happy Canyon Bridge and Interchange Replacement Project to a higher level of design (15%). The City of Castle Pines in partnership with Douglas County and CDOT are seeking \$400,000 in federal funds to be added to the DRCOG Regional project waiting list. A local match by the City of Castle Pines and Douglas County each contributing \$200,000 in FY 2022-23, for a total Local Match of 50% or \$400,000. The DRCOG TIP Grant funding will be used for pre-construction activities for the following: update traffic modeling for DRCOG 2050 Focus Model (incorporating adjacent local land use changes); update screening alternatives for ultimate interchange configuration and select an alternative to carry forward into NEPA; update / refine 15% conceptual design plans for NEPA and initiate subsurface utility engineering (SUE); and update the project cost estimate and develop a funding plan per CDOT 1601 standard to implement the selected improvements. Castle Pines, Douglas County, and CDOT want to maintain momentum towards a full bridge and interchange replacement project at the Happy Canyon Interchange.

9. Define the scope and specific elements of the project.

Happy Canyon Bridge and Interchange pre-construction activities include:

1. Provide a Traffic modeling update for DRCOG 2050 Focus Model incorporating adjacent local land use changes. The build-out of development approved (or pending approval) by the Town of Castle Pines will generate over 112,000 daily one-way external trips. The existing DRCOG model underestimates the amount of traffic that is expected to be seen over the next 20 years. The project team will provide existing and future year revised residential, commercial, office, and industrial estimates for build and no-build conditions. The model will identify community, safety, and operational impacts on the state highway and surrounding transportation network. The project team will work with a consultant to have the traffic modeling updated.
2. Update screening alternatives for ultimate interchange configuration, the project will look at multiple interchange configurations including Single Point Urban Interchange, Multi-roundabout, Directional, and Diamond. The project team will also consider stop control vs. signalized traffic control.
3. Selection of an alternative to carry forward into NEPA, the project team will utilize stakeholder and public feedback, a fatal flaws analysis, and a set of comparison criteria as directed by CDOT to find the optimal interchange design that provides the best performance and longevity per dollar, and to which degree the preferred alternative satisfies the Purpose and Need requirements of the project.

4. Update and refinement of the 15% conceptual design plans for NEPA, the conceptual design for the bridge and interchange will be developed and provided with layout sheets, including conceptual design for the bridge structure and interchange, and will include plan views and renderings.
5. Initiation of subsurface utility engineering (SUE), the project team will hire a contractor to conduct subsurface utility investigation to ensure correct horizontal and vertical subsurface utility data.
6. Develop project cost estimates, the project team will prepare preliminary construction cost estimates, compile and provide preliminary quantities.
7. Development of a funding plan to implement selected improvements consistent with the Fiscally Constrained RTP and CDOT 1601 process, the project team will develop a plan for expenditure based on project phases and schedule. The funding plan will reflect the project scope, responsibilities, schedule, estimate of cost, revenue funding plan, risk/mitigation strategies for the bridge/interchange reconstruction project, and recommend potential grants to supplement funding.

10. What is the status of the proposed project?

The Happy Canyon Bridge and Interchange Replacement project is currently at a conceptual design level, this project would update and refine to a 15% design.

11. Would a smaller federal funding amount than requested be acceptable, while maintaining the original intent of the project?

Yes No

If yes, define smaller meaningful limits, size, service level, phases, or scopes, along with the cost for each.

Phase 1 - Model Update

Task A - Provide a Traffic modeling update for DRCOG 2050 Focus Model incorporating adjacent local land use changes. The existing model underestimates the amount of traffic that is expected to be seen over the next 20 years. Provide existing and future year revised residential, commercial, office, and industrial estimates for build and no-build conditions. Work with a consultant to have the traffic modeling updated. Cost Estimate: \$50,000

Phase 2 - Alternatives screening and selection

Task A - Update screening alternatives for ultimate interchange configuration, the project will look at multiple interchange configurations including Single Point Urban Interchange, Multi-roundabout, Directional, and Diamond. The project team will also consider stop control vs. signalized traffic control. Cost Estimate: \$100,000

Task B - Selection of an alternative to carry forward into NEPA, the project team will utilize stakeholder and public feedback, a fatal flaws analysis, and a set of comparison criteria as directed by CDOT to find the optimal interchange design that provides the best performance and longevity per dollar, and to which degree the preferred alternative satisfies the Purpose and Need requirements of the project. Cost Estimate: \$200,000

Phase 3 - Design Update and Renderings

Task A - Update and refinement of the 15% conceptual design plans for NEPA, the conceptual design for the bridge and interchange will be developed and provided with layout sheets, including conceptual

design for the bridge structure and interchange, and will include plan views and renderings. Cost Estimate: \$100,000

Phase 4 - Preliminary Engineering and Cost Estimates

Task A - Initiation of subsurface utility engineering (SUE), the project team will hire a contractor to conduct subsurface utility investigation to ensure correct horizontal and vertical subsurface utility data. Cost Estimate: \$150,000

Task B - Develop project cost estimates, the project team will prepare preliminary construction cost estimates, compile and provide preliminary quantities. Cost Estimate: \$100,000

Phase 5 - Funding Plan

Task A - Development of a funding plan to implement selected improvements, the project team will develop a plan for expenditure based on project phases and schedule. The funding plan will reflect the project scope, schedule, estimate of cost, revenue funding plan, risk/mitigation strategies for the bridge/interchange reconstruction project, and recommend potential grants to supplement funding. Cost Estimate: \$100,000

A. Project Financial Information and Funding Request

1. Total Project Cost		\$800,000
2. Total amount of DRCOG Regional Share Funding Request <i>(no greater than \$20 million and not to exceed 50% of the total project cost)</i>	\$400,000	50% of total project cost
3. Outside Funding Partners (other than DRCOG Regional Share funds) List each funding partner and contribution amount.	\$\$ Contribution Amount	% of Contribution to Overall Total Project Cost
Douglas County	\$200,000	25%
City of Castle Pines	\$200,000	25%
	\$	
	\$	
	\$	
	\$	
Total amount of funding provided by other funding partners <i>(private, local, state, Subregion, or federal)</i>	\$400,000	

Funding Breakdown (year by year)*

**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 an inflation factor of 3% per year from 2021..*

	FY 2022	FY 2023	FY 2024	FY 2025	Total
Federal Funds	\$200,000	\$200,000	\$	\$	\$400,000

State Funds	\$	\$	\$	\$	\$0
Local Funds	\$200,000	\$200,000	\$	\$	\$400,000
Total Funding	\$400,000	\$400,000	\$0	\$0	\$800,000
4. Phase to be Initiated <i>Choose from Design, ENV, ROW, CON, Study, Service, Equip. Purchase, Other</i>	Study	Other	Choose an item	Choose an item	

5. By checking this box, the applicant’s Chief Elected Official (Mayor or County Commission Chair) or City/County Manager for local governments or Agency Director or equivalent for others, has certified it allows this project request to be submitted for DRCOG-allocated funding and will follow all DRCOG policies and state and federal regulations when completing this project, if funded.



Part 2 Evaluation Criteria, Questions, and Scoring

A. Regional significance of proposed project

WEIGHT **40%**

Provide **qualitative and quantitative** (derived from Part 3 of the application) responses to the following questions on the regional significance of the proposed project.

1. Why is this project regionally important?

The Happy Canyon Bridge and Intechange spans I 25 the busisest Interstate Freeway in Colorado on the south side of the Denver Metro Region. The Happy Canyon Interchange is identified as a DRCOG Fiscally Constrained Project.

2. Does the proposed project cross and/or benefit multiple **municipalities**? If yes, which ones and how?

No

3. Does the proposed project cross and/or benefit another **subregion(s)**? If yes, which ones and how?

The City of Castle Pines and the Happy Canyon Interchange project is part of the Douglas County Subregion, however this project does not cross any subregional boundaries.

4. How will the proposed project address the specific transportation problem described in the **Problem Statement** (as submitted in Part 1, #8)?

HC Interchange Preconstruction Project progresses towards replacing a soon to be structurally deficient bridge and upgrading a new development adjacent interchange. Project also will include safer movements, reduce 27 crashes, and save 8 hours of delay

5. One foundation of a sustainable and resilient economy is physical infrastructure and transportation. How will the **completed** project allow people and businesses to thrive and prosper?

The upgrade of this bridge and intersection to a stronger structure capable of conveying heavier traffic volumes and accommodating bikes and peds will attract people to live, work, and locate their businesses in Castle Pines.

6. How will connectivity to different travel modes be improved by the proposed project?

Castle Pines has a planned transit service connector using the Happy Canyon bridge as part of a route to the Ridge Gate LRT Station, a rebuilt bridge and interchange will also allow bike/ped access across I-25, currently no ped access exists

7. Describe funding and/or project partnerships (other subregions, regional agencies, municipalities, private, etc.) established in association with this project.

Funding includes a 50% local match provided by Douglas County and Castle Pines, each putting up \$200,000. CDOT Region 1 is also in concurrence with the Happy Canyon Preconstruction Project.

B. DRCOG Board-approved Metro Vision TIP Focus Areas

WEIGHT **30%**

Provide **qualitative and quantitative** (derived from Part 3 of the application) responses to the following questions on how the proposed project addresses the three DRCOG Board-approved Focus Areas (in bold).

1. Describe how the project will **improve mobility infrastructure and services for vulnerable populations (including improved transportation access to health services)**.

A new Happy Canyon bridge will improve infrastructure and access to healthcare services for vulnerable populations, healthcare providers are 1.2 miles from the Happy Canyon Interchange.

2. Describe how the project will increase reliability of existing multimodal transportation network.

Currently there is no bicycle or pedestrian access across the Happy Canyon Bridge, the resulting bridge and interchange upgrade will add bike/ped and transit access to the Happy Canyon Interchange.

3. Describe how the project will improve transportation safety and security.

This project is the first step towards a rebuilt bridge and interchange that is more reliable, better lit, safer, has better signage, and is more reliable for the travelling public.

C. Consistency & Contributions to Transportation-focused Metro Vision Objectives

WEIGHT **20%**

Provide **qualitative and quantitative** responses (derived from Part 3 of the application) to the following items on how the proposed project contributes to Transportation-focused Objectives (in bold) in the adopted Metro Vision plan. Refer to the expanded Metro Vision Objective by clicking on links.

[MV objective 2](#)

Contain urban development in locations designated for urban growth and services.

1. Will this project help focus and facilitate future growth in locations where urban-level infrastructure already exists or areas where plans for infrastructure and service expansion are in place?

Yes No

Describe, including supporting quantitative analysis

The nearby Canyons master-planned development is being constructed and contains significant urban-level infrastructure, the Happy Canyon interchange will serve this new community as a primary southern access point, and new development west of I 25 as well

[MV objective 3](#)

Increase housing and employment in urban centers.

2. Will this project help establish a network of clear and direct multimodal connections within and between urban centers, or other key destinations?

Yes No

Describe, including supporting quantitative analysis

Approved development represents entitlements for 4,300 residential units, a 2,500-student high school, and approx 2.1 million sqft of commercial space. The HC interchange will enhance connectivity between these areas and includes bike/ped access.

[MV objective 4](#)

Improve or expand the region’s multimodal transportation system, services, and connections.

3. Will this project help increase mobility choices within and beyond the region for people, goods, or services?

Yes No

Describe, including supporting quantitative analysis

Completion of the HC Interchange includes new bike and ped access across the bridge, and lays the foundation for a planned circulator shuttle to RidgeGate station. Current HC bridge is not Bike/Ped or ADA compliant and does not currently carry transit.

MV objective 6a	Improve air quality and reduce greenhouse gas emissions.	
<p>4. Will this project help reduce ground-level ozone, greenhouse gas emissions, carbon monoxide, particulate matter, or other air pollutants?</p> <p>Describe, <i>including supporting quantitative analysis</i></p> <p>This project will provide more efficient travel patterns and will accomodate projected future volumes with less engine idle time than the current interchange configuration would handle if forced to remain the same in a no-build condition.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
MV objective 7b	Connect people to natural resource or recreational areas.	
<p>5. Will this project help complete missing links in the regional trail and greenways network or improve other multimodal connections that increase accessibility to our region’s open space assets?</p> <p>Describe, <i>including supporting quantitative analysis</i></p> <p>Yes, the HC interchange project, once completed will provide bike/ped access across I-25, and is listed in the 2017 Castle Pines Parks and Rec Plan as a proposed future trail connection, the plan mentions that interchange rebuild should include bike/ped.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
MV objective 10	Increase access to amenities that support healthy, active choices.	
<p>6. Will this project expand opportunities for residents to lead healthy and active lifestyles?</p> <p>Describe, <i>including supporting quantitative analysis</i></p> <p>Yes, the additional bike/ped connectivity brought by the completion of the HC interchange project will greatly increase residents accessibility to nearby parks and trails and allow people using active transportation to cross I-25 more safely and easily.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
MV objective 13	Improve access to opportunity.	
<p>7. Will this project help reduce critical health, education, income, and opportunity disparities by promoting reliable transportation connections to key destinations and other amenities?</p> <p>Describe, <i>including supporting quantitative analysis</i></p> <p>The HC interchange reconstruction will provide more efficient and reliable transportation connections within the City of Castle Pines through an upgraded bridge and interchange crossing I 25, and an increased amount of local transportation connections.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
MV objective 14	Improve the region’s competitive position.	
<p>8. Will this project help support and contribute to the growth of the region’s economic health and vitality?</p> <p>Describe, <i>including supporting quantitative analysis</i></p> <p>The HC Interchange serves existing and future development, provides access to jobs, healthcare, parks, trails, emergency services, provides ADA accessibility, access to planned transit, municipal services, connection to retail, healthy food, and events.</p>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
D. Project Leveraging		WEIGHT 10%

9. What percent of outside funding sources (non-DRCOG-allocated Regional Share funding) does this project have?	50%	80%+ outside funding sources High 60-79%Medium 59% and belowLow
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Part 3

Project Data Worksheet – Calculations and Estimates

(Complete all subsections applicable to the project)

A. Transit Use

1. Current ridership weekday boardings	0
2. Population and Employment Population data is computed using ArcGIS and census data. For each block group, the shape area is calculated and a 1-mile buffer is created around the central location at the Happy Canyon interchange. The buffer is intersected with each block group and population and employment are estimated by the size of the intersection. To calculate population, household data is used. The average number of persons per household is determined to be 3.08 according to the ACS.	

Year	Population within 1 mile	Employment within 1 mile	Total Pop and Employ within 1 mile
2020	2378	974	3352
2040	4907	1344	6251

Transit Use Calculations	Year of Opening	2040 Weekday Estimate
3. Enter estimated additional daily transit boardings after project is completed. <i>(Using 50% growth above year of opening for 2040 value, unless justified)</i> <i>Provide supporting documentation as part of application submittal</i>	0	0
4. Enter number of the additional transit boardings (from #3 above) that were previously using a different transit route. <i>(Example: {#3 X 25%} or other percent, if justified)</i>	0	0
5. Enter number of the new transit boardings (from #3 above) that were previously using other non-SOV modes (walk, bicycle, HOV, etc.) <i>(Example: {#3 X 25%} or other percent, if justified)</i>	0	0
6. = Number of SOV one-way trips reduced per day (#3 – #4 – #5)	0	0
7. Enter the value of {#6 x 9 miles} . (= the VMT reduced per day) <i>(Values other than the default 9 miles must be justified by sponsor; e.g., 15 miles for regional service or 6 miles for local service)</i>	0	0
8. = Number of pounds GHG emissions reduced (#7 x 0.95 lbs.)	0	0
9. If values would be distinctly greater for weekends, describe the magnitude of difference:		
10. If different values other than the suggested are used, please explain here:		

B. Bicycle Use

1. Current weekday bicyclists	~15
2. Population and Employment	

Year	Population within 1 mile	Employment within 1 mile	Total Pop and Employ within 1 mile
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2020	2378	974	3352
2040	4907	1344	6251

Bicycle Use Calculations	Year of Opening	2040 Weekday Estimate
3. Enter estimated additional weekday one-way bicycle trips on the facility after project is completed.	30	40
4. Enter number of the bicycle trips (in #3 above) that will be diverting from a different bicycling route. (Example: {#3 X 50%} or other percent, if justified)	3	4
5. = Initial number of new bicycle trips from project (#3 – #4)	15	25
6. Enter number of the new trips produced (from #5 above) that are replacing an SOV trip. (Example: {#5 X 30%} (or other percent, if justified)	5	7
7. = Number of SOV trips reduced per day (#5 - #6)	10	18
8. Enter the value of {#7 x 2 miles} . (= the VMT reduced per day) (Values other than 2 miles must be justified by sponsor)	20	36
9. = Number of pounds GHG emissions reduced (#8 x 0.95 lbs.)	19	34.2
10. If values would be distinctly greater for weekends, describe the magnitude of difference: Our estimate is that values double on the weekends due to trail and park access and demand.		
11. If different values other than the suggested are used, please explain here:		

C. Pedestrian Use	
1. Current weekday pedestrians (include users of all non-pedaled devices)	0
2. Population and Employment	

Year	Population within 1 mile	Employment within 1 mile	Total Pop and Employ within 1 mile
2020	2378	974	3352
2040	4907	1344	6251

Pedestrian Use Calculations	Year of Opening	2040 Weekday Estimate
3. Enter estimated additional weekday pedestrian one-way trips on the facility after project is completed	7	12
4. Enter number of the new pedestrian trips (in #3 above) that will be diverting from a different walking route (Example: {#3 X 50%} or other percent, if justified)	0	5
5. = Number of new trips from project (#3 – #4)	7	7

6. Enter number of the new trips produced (from #5 above) that are replacing an SOV trip. (Example: {#5 X 30%} or other percent, if justified)	2	2
7. = Number of SOV trips reduced per day (#5 - #6)	5	5
12. Enter the value of {#7 x .4 miles} . (= the VMT reduced per day) (Values other than .4 miles must be justified by sponsor)	2	2
8. = Number of pounds GHG emissions reduced (#8 x 0.95 lbs.)	1.9	1.9
9. If values would be distinctly greater for weekends, describe the magnitude of difference: Our estimate is that values double on the weekends due to trail and park access and demand.		
10. If different values other than the suggested are used, please explain here:		

D. Vulnerable Populations		
	Vulnerable Populations	Population within 1 mile
Use Current Census Data	1. Persons over age 65	475
	2. Minority persons	317
	3. Low-Income households	28
	4. Linguistically-challenged persons	3
	5. Individuals with disabilities	80
	6. Households without a motor vehicle	14
	7. Children ages 6-17	539
	8. Health service facilities served by project	1

E. Travel Delay (Operational and Congestion Reduction)	
Sponsor must use industry standard Highway Capacity Manual (HCM) based software programs and procedures as a basis to calculate estimated weekday travel delay benefits. <i>DRCOG staff may be able to use the Regional Travel Model to develop estimates for certain types of large-scale projects.</i>	
1. Current ADT (average daily traffic volume) on applicable segments	7000 (2017) W of I25 1500 (2017) E of I25
2. 2040 ADT estimate	11,000 W of I25 1,500 E of I25
3. Current weekday vehicle hours of delay (VHD) (before project)	38

Travel Delay Calculations	Year of Opening
4. Enter calculated future weekday VHD (after project)	37
5. Enter value of {#3 - #4} = Reduced VHD	1
6. Enter value of {#5 X 1.4} = Reduced person hours of delay (Value higher than 1.4 due to high transit ridership must be justified by sponsor)	1

<p>7. After project peak hour congested average travel time reduction per vehicle (includes persons, transit passengers, freight, and service equipment carried by vehicles). If applicable, denote unique travel time reduction for certain types of vehicles</p>	8
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8. If values would be distinctly different for weekend days or special events, describe the magnitude of difference.

9. If different values other than the suggested are used, please explain here:

F. Traffic Crash Reduction

<p>1. Provide the current number of crashes involving motor vehicles, bicyclists, and pedestrians (<i>most recent 5-year period of data</i>)</p>		<p>Sponsor must use industry accepted crash reduction factors (CRF) or accident modification factor (AMF) practices (<i>e.g., NCHRP Project 17-25, NCHRP Report 617, or DiExSys methodology</i>).</p>
<p>Fatal crashes</p>	0	
<p>Serious Injury crashes</p>	0	
<p>Other Injury crashes</p>	7	
<p>Property Damage Only crashes</p>	27	
<p>2. Estimated reduction in crashes <u>applicable to the project scope</u> (<i>per the five-year period used above</i>)</p>		
<p>Fatal crashes reduced</p>	0	
<p>Serious Injury crashes reduced</p>	0	
<p>Other Injury crashes reduced</p>	6	
<p>Property Damage Only crashes reduced</p>	22	

G. Facility Condition

Sponsor must use a current industry-accepted pavement condition method or system and calculate the average condition across all sections of pavement being replaced or modified.
Applicants will rate as: Excellent, Good, Fair, or Poor

Roadway Pavement

<p>1. Current roadway pavement condition</p>	Fair
<p>2. Describe current pavement issues and how the project will address them. In need of capital preventive maintenance to avoid deteriorating to the poor classification.</p>	
<p>3. Average Daily User Volume</p>	7,000

Bicycle/Pedestrian/Other Facility

<p>4. Current bicycle/pedestrian/other facility condition</p>	Poor
<p>5. Describe current condition issues and how the project will address them. Bridge structure has significant deterioration along span and at ends where loads are transferred, concrete is broken and rebar is exposed, bridge deck pavement is deteriorated, bridge curbing is cracked with rust strains indicating rebar is compromised</p>	

6. Average Daily User Volume	15
H. Bridge Improvements	
1. Current bridge structural condition from CDOT 64.7	
2. Describe current condition issues and how the project will address them. Project will advance the HC bridge and interchange project into a further phase of planning, alternatives screening and selection, environmental work, geotechnical investigation, develop cost estimates, funding plan, and other preliminary engineering.	
3. Other functional obsolescence issues to be addressed by project Bridge structure has significant deterioration along span and at ends where loads are transferred, concrete is broken and rebar is exposed, bridge deck pavement is deteriorated, bridge curbing is cracked with rust strains indicating rebar is compromised	
4. Average Daily User Volume over bridge	7,000
I. Other Beneficial Variables <i>(identified and calculated by the sponsor)</i>	
1. Increased safety once project is completed	
2. Increased connectivity once project is completed	
3. Increased ADA accessibility once project is completed	
J. Disbenefits or Negative Impacts <i>(identified and calculated by the sponsor)</i>	
1. Increase in VMT? <i>If yes, describe scale of expected increase</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
VMT is expected to increase regardless of HC project due to construction of surrounding development, and increases in local population. Scale of expected increase is estimated at 1.2% annually.	
2. Negative impact on vulnerable populations	
3. Other: Construction impacts will include reduced air quality during the construction process due to dust, particulates, and diesel exhaust.	