

Part 1**Base Information**

1. Project Title	I-25/Dry Creek Southbound Ramps		
2. Project <i>Start/End</i> points or Geographic Area <i>Provide a map with submittal, as appropriate</i>	Southbound I-25 On Ramp at Dry Creek Road		
3. Project Sponsor (<i>entity that will construct/ complete and be financially responsible for the project</i>)	Arapahoe County		
4. Project Contact Person, Title, Phone Number, and Email	Bryan Weimer, Director, Public Works and Development, 720-874-6500, BWeimer@arapahoegov.com		
5. Does this project touch CDOT Right-of-Way, involve a CDOT roadway, access RTD property, or request RTD involvement to operate service?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, provide applicable concurrence documentation with submittal</i>		
6. What planning document(s) identifies this project?	<input type="checkbox"/> DRCOG 2040 Fiscally Constrained Regional Transportation Plan (2040 FC RTP)		
	<input checked="" type="checkbox"/> Local plan:	I-25/Dry Creek Road Interchange and Corridor Study, page 34: http://www.arapahoegov.com/1427/I-25Dry-Creek-Rd-Interchange-Corridor-St	
	<input type="checkbox"/> Other(s):		
	<i>Provide link to document/s and referenced page number if possible, or provide documentation with submittal</i>		
7. Identify the project's key elements .			
<input type="checkbox"/> Rapid Transit Capacity (2040 FC RTP) <input type="checkbox"/> Transit Other: <input type="checkbox"/> Bicycle Facility <input type="checkbox"/> Pedestrian Facility <input checked="" type="checkbox"/> Safety Improvements <input type="checkbox"/> Roadway Capacity or Managed Lanes (2040 FC RTP) <input checked="" type="checkbox"/> Roadway Operational		Grade Separation <input type="checkbox"/> Roadway <input type="checkbox"/> Railway <input type="checkbox"/> Bicycle <input type="checkbox"/> Pedestrian <input type="checkbox"/> Roadway Pavement Reconstruction/Rehab <input type="checkbox"/> Bridge Replace/Reconstruct/Rehab <input type="checkbox"/> Study <input checked="" type="checkbox"/> Design <input checked="" type="checkbox"/> Transportation Technology Components <input type="checkbox"/> Other:	

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

Dry Creek Road is an important transportation corridor serving the growing business, commercial, and residential areas east and west of the I-25 corridor. Transportation improvements along the corridor are needed to address operations, safety, and local accessibility.

The Southbound I-25 On Ramp at Dry Creek Road project will address the following Metro Vision TIP Focus Areas (detailed in Part 2C of this application):

- Improving mobility infrastructure and services for vulnerable populations – by reducing congestion through the I-25/Dry Creek interchange intersections and improving access to/from the Dry Creek LRT Station;
- Increasing the reliability of the existing multimodal transportation network – with improved intersection efficiencies and reduced delay for drivers and transit users accessing the Dry Creek LRT Station; and
- Improving transportation safety and security – by reducing congestion-related vehicular crashes traveling through the I-25/Dry Creek interchange intersections.

Dry Creek Road currently carries approximately 30,700 vehicles per day west of Clinton Street. This high concentration of traffic is heavily influenced by the proximity of I-25. The corridor experiences recurring peak traffic patterns of commuters traveling to and from adjacent business parks, and traveling to and from the residential neighborhoods west of I-25.

Traffic along Dry Creek Road at the I-25 interchange is expected to increase significantly, with an almost 70% increase to over 52,000 vehicles per day immediately east of the interchange by 2040. Peak hour traffic operations are congested on the approaches to I-25 with low average travel speeds, poor levels of service, and long vehicle queues in the peak commuting directions of travel.

Peak period ramp metering of the Southbound I-25 On Ramp results in vehicle queues that frequently extend through the southbound ramp intersection at Dry Creek Road. This creates backups of the westbound left turns leading to the Southbound I-25 On Ramp during the PM peak hour in particular, with queues frequently exceeding the length of the left turn lanes and traffic slowing or stopped within the adjacent through traffic lanes. Traffic queues also form in the eastbound right turn lane at the on ramp with vehicles in the adjacent through lanes making last minute lane changes to enter the queue.

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

The *I-25/Dry Creek Road Interchange and Corridor Study*, completed in 2016, identifies the project recommendations. The ramp and intersection modifications are recommended to improve existing and future traffic flow and safety for the Southbound I-25 On Ramp and the Dry Creek interchange ramp intersections.

This project will move the recommendations forward through environmental clearance, preliminary engineering, final design, and construction. Specific elements include:

- Re-striping the Southbound I-25 On Ramp at Dry Creek to operate with a third lane on the approach to the ramp meter. During the ramp meter operations, the third lane will increase the storage capacity on the ramp to reduce queuing through the traffic signals on Dry Creek Road at the I-25 ramps.
- The third lane will also improve the flow and merging operations for the eastbound right turn lane from Dry Creek Road to access Southbound I-25.
- Median modifications at the westbound approach to the Northbound I-25 Ramps intersection to increase storage length for vehicles turning left to the Southbound I-25 On Ramp.

10. What is the status of the proposed project?

The *I-25/Dry Creek Road Interchange and Corridor Study*, completed in 2016, analyzed alternatives for improving traffic operations, safety, and multimodal accessibility at and surrounding the I-25/Dry Creek interchange. The study recommended the improvements to be included in the project. This project is the next step in implementation of improvements at the interchange.

11. Would a smaller DRCOG-allocated 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.

It is our understanding that reducing the amount of federal funding is considered at the end of the evaluation and recommendation process. However, if this were to occur there are several options that the funding partners would consider to move the project forward in some fashion. This could include reallocation of partnership funding for the various partners, value engineering, and potential modification of the scope but still meet the goals of the project.

A. Project Financial Information and Funding Request

1. Total Project Cost		\$2,000,000
2. Total amount of DRCOG Subregional Share Funding Request	\$1,380,000	69% of total project cost
3. Outside Funding Partners (other than DRCOG Subregional Share funds) List each funding partner and contribution amount.	\$\$ Contribution Amount	% of Contribution to Overall Total Project Cost
CDOT	\$300,000	15%
Arapahoe County	\$68,000	3.5%
Denver South TMA/SPIMD	\$136,000	7%
City of Centennial	\$68,000	3.5%
Inverness Metropolitan District	\$48,000	2%
	\$	
Total amount of funding provided by other funding partners (private, local, state, Regional, or federal)	\$620,000	

Funding Breakdown (year by year)*		<i>*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 2019.</i>			
	FY 2020	FY 2021	FY 2022	FY 2023	Total
Federal Funds	\$	\$1,380,000	\$	\$	\$1,380,000
State Funds	\$ 300,000	\$	\$	\$	\$300,000
Local Funds	\$320,000	\$	\$	\$	\$320,000
Total Funding	\$620,000	\$1,380,000	\$0	\$0	\$2,000,000
4. Phase to be Initiated Choose from Design, ENV, ROW, CON, Study, Service, Equip. Purchase, Other	Design, ENV, CON	CON	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. Subregional significance of proposed project

WEIGHT

40%

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

1. Why is this project important to your subregion?

Dry Creek Road is an important transportation corridor serving the growing business, commercial, and residential areas east and west of the I-25 corridor. Transportation improvements along the corridor are needed to address operations, safety, and local accessibility. Efficient access to I-25 is critical to the economic activity centers and residential areas surrounding the freeway in Arapahoe County and the City of Centennial. The I-25/Dry Creek Road interchange is an important connection to the regional transit links served by the Dry Creek LRT Station.

The I-25/Dry Creek Road interchange serves as an alternate route for congestion relief at the adjacent I-25 interchanges at Arapahoe Road to the north and County Line Road to the south. Maintaining redundant capacity at interchanges in the Denver Technology Center is essential for maintaining vehicular and multimodal mobility along I-25 in the southern Denver Metropolitan area.

The high concentration of traffic along Dry Creek Road through the project area is heavily influenced by the proximity of I-25. The corridor experiences recurring peak traffic patterns of commuters traveling to and from adjacent business parks, and traveling to and from the residential neighborhoods west of I-25. Safe and effective access to I-25 supports economic growth for the surrounding business community and quality of life for area residents.

Traffic along Dry Creek Road at the I-25 interchange is expected to increase significantly, with an almost 70% increase to over 52,000 vehicles per day immediately east of the interchange by 2040. Peak hour traffic operations are congested on the approaches to I-25 with low average travel speeds, poor levels of service, and long vehicle queues in the peak commuting directions of travel.

Peak period ramp metering of the Southbound I-25 On Ramp results in vehicle queues that frequently extend through the southbound ramp intersection at Dry Creek Road. This creates backups of the westbound left turns leading to the Southbound I-25 On Ramp during the PM peak hour in particular, with queues frequently exceeding the length of the left turn lanes and traffic slowing or stopped within the adjacent through traffic lanes. The project's operational improvements at the Southbound I-25 On Ramp will increase vehicular queue storage, reducing the queue length for the westbound left turn at the Southbound I-25 Ramps.

Dry Creek Road provides direct access to the Dry Creek LRT Station and queuing along Dry Creek Road from the Southbound I-25 On Ramp creates delays for transit users traveling to the LRT station for regional access to the RTD system. Improving flows along Dry Creek Road will improve access for the over 1,200 weekday transit boardings within the project area.

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

Yes, this project will reduce delay and improve mobility for the estimated 96,000 travelers through the I-25/Dry Creek Road interchange, to and from Arapahoe County, City of Centennial, City of Greenwood Village, City of Lone Tree, Douglas County, City and County of Denver, and beyond.

Reducing queues and congestion at the Dry Creek Road and Southbound I-25 Ramps intersection will support economic growth for the surrounding municipalities and improve the quality of life for area residents.

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

Yes, by improving operations at the Southbound I-25 On Ramp at Dry Creek Road the project will improve the connection for commuters living in the area surrounding the interchange destined for the employment centers along I-25 in the south Denver Metropolitan area and Douglas County. Maintaining operations along Southbound I-25 will improve access between the City and County of Denver, Arapahoe County, and Douglas County subregions.

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

Re-striping and minor ramp widening of the Southbound I-25 On Ramp at Dry Creek to operate with a third lane on the approach to the ramp meter will increase the vehicular storage capacity on the ramp. Storing more vehicles on the ramp will reduce queuing through the traffic signals on Dry Creek Road at the I-25 ramp intersections, reducing congestion-related and approach-turn vehicular crashes at the I-25/Dry Creek interchange intersections.

Median modifications at the westbound approach to the Northbound I-25 Ramps intersection will increase storage length for vehicles turning left to the Southbound I-25 On Ramp, which will move turning traffic out of the westbound through lanes.

The third lane on the ramp will also improve the flow and merging operations for the eastbound right turn lane from Dry Creek Road to access Southbound I-25, which will move turning traffic out of the eastbound through lanes, improving traffic flow along Dry Creek Road through the interchange.

Moving turning traffic out of the through lanes in both directions along Dry Creek Road will improve access to/from the Dry Creek LRT Station, encouraging use of the regional transit center.

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?

This project will reduce delay and improve mobility for the estimated 96,000 travelers through the I-25/Dry Creek Road interchange, supporting economic growth for the surrounding business community and quality of life for area residents. The operational improvements at the Southbound I-25 On Ramp and the resulting reduction in queues at the I-25 ramp intersections along Dry Creek Road will improve the attractiveness of the interchange area for businesses.

Improving access to the Dry Creek LRT Station will encourage more regional transit travel. According to the National Association of City Transportation Officials (NACTO), enhanced multimodal facilities can result in increased property values.

The reduction in vehicular queuing through the Southbound I-25 Ramps intersection will reduce congestion-related and approach-turn crashes during peak hours.

Furhtermore, with the opening of the new Arrow Building at Chester and Dry Creek, accessibility from this complex will be enhanced as the majority of the complex go south on I-25. The additional lane on the ramp will accommodate this demand as well as the westbound left turn competing demand.

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

Reduced congestion along Dry Creek Road will improve travel time reliability for the RTD Dry Creek and Inverness North FlexRide services, in addition to general vehicular access to the Dry Creek LRT Station, benefitting the over 1,200 weekday transit boardings within the project area. The improved transit accessibility will also enhance the overall multimodal connections beyond the Dry Creek LRT Station, encouraging more people to utilize transit for commuting and other daily trips.

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

Arapahoe County collaborated with CDOT, City of Centennial, and the Denver South TMA on the *I-25/Dry Creek Road Interchange and Corridor Study*, completed in 2016, and continues to work with agency stakeholders to prepare for the implementation of improvements recommended by the study.

CDOT has agreed to fund \$300,000 of the project and the Denver South TMA will match Arapahoe County's and Centennial's combined contribution of \$136,000. Inverness Metro District will also be a partner.

B. DRCOG Board-approved Metro Vision TIP Focus Areas

WEIGHT **25%**

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).

Large populations of vulnerable individuals reside within one mile of the project. Currently living within one mile of the project area are:

- 3,131 adults over the age of 65
- 6,017 minority persons
- 702 households living in poverty
- 467 linguistically-challenged persons
- 685 persons with a disability
- 284 households without access to a vehicle

Vulnerable populations are more likely to rely on transit services for their daily mobility needs. Reduced congestion along Dry Creek Road will improve travel time reliability for the RTD Dry Creek and Inverness North FlexRide services, in addition to general vehicular access to the Dry Creek LRT Station, benefitting the vulnerable populations relying on transit access within the project area.

The congestion reduction along Dry Creek Road and improved travel time reliability for the area RTD FlexRide services will also improve access to the 50 CDPHE-regulated health service facilities within one mile of the project area.

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

There is a population of more than 21,600 people and more than 55,000 employees within one mile of the project area. The project will increase the reliability of the existing area transportation network with improved intersection efficiencies and reduced delay for drivers along Dry Creek Road and transit users accessing the Dry Creek LRT Station. Dry Creek Road currently carries over 30,000 vehicles per day west of I-25. Most of the traffic accessing I-25 at the Dry Creek Road interchange is regional traffic traveling in, out, and through the project area. The volumes are forecasted to increase almost 70% to over 50,000 vehicles per day immediately west of the interchange by 2040.

The project is expected to reduce the queue length for the westbound left turn at the Southbound I-25 Ramps. The reduced queues will improve operations for through traffic along Dry Creek Road, improving travel time reliability for the RTD Dry Creek and Inverness North FlexRide services, in addition to general vehicular access to the Dry Creek LRT Station.

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

There were 80 crashes at the I-25 Ramps and Dry Creek Road intersections in the last five years, including 13 injury crashes. Comparing the crash types at the intersections to the statewide averages, the intersections have crash patterns that are above the predicted norm for similar intersections, including broadside, approach turn, and sideswipe same direction crashes.

Reducing the left-turn queuing through the ramp intersections during the ramp meter operations (peak hours) will reduce approach turn, broadside, and sideswipe same direction crashes. The project is expected to reduce crashes at the I-25 ramp intersections by about two crashes/year.

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

WEIGHT

15%

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 project is within the I-25 Corridor urban center. The project will also provide improved access to the urban centers of Lincoln Station TOD, Ridge Gate West Village, and Ridge Gate City Center south of the project area, plus access to the Denver Technology Center and Bellevue Station urban centers north of the project area.

With reduced congestion, the project will improve regional travel connections to the urban centers to focus and facilitate planned growth in identified areas along I-25.

[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

Reduced congestion along Dry Creek Road will improve travel time reliability for the RTD Dry Creek and Inverness North FlexRide services, in addition to general vehicular access to the Dry Creek LRT Station, benefitting the over 1,200 weekday transit boardings within the project area. The improved transit accessibility will also enhance the overall multimodal connections beyond the Dry Creek LRT Station, encouraging more people to utilize transit for commuting and other daily trips. The improved LRT access will enhance the connections between the emerging and existing urban centers along the I-25 LRT corridor.

[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 your subregion for people, goods, or services?

☒ Yes ☐ No

Describe, including supporting quantitative analysis

Safe and effective access to I-25 supports economic growth for the surrounding business community and quality of life for area residents. Reduced congestion along Dry Creek Road will improve travel time reliability for the RTD Dry Creek and Inverness North FlexRide services, in addition to general vehicular access to the Dry Creek LRT Station, benefitting the vulnerable populations relying on transit access within the project area.

The congestion reduction along Dry Creek Road and improved travel time reliability for the area RTD FlexRide services will also improve access to the 50 CDPHE-regulated health service facilities within one mile of the project area.

[MV objective 6a](#)**Improve air quality and reduce greenhouse gas emissions.**

4. Will this project help reduce ground-level ozone, greenhouse gas emissions, carbon monoxide, particulate matter, or other air pollutants?

☒ Yes ☐ No

Describe, *including supporting quantitative analysis*

The project will reduce congestion and queuing at the I-25/Dry Creek Road interchange ramp intersections, which will incrementally help improve all aspects of air quality.

Reduced congestion along Dry Creek Road will improve travel time reliability for the RTD Dry Creek and Inverness North FlexRide services, in addition to general vehicular access to the Dry Creek LRT Station. The improved transit accessibility will also enhance the overall multimodal connections beyond the Dry Creek LRT Station, encouraging more people to utilize transit for commuting and other daily trips. Encouraging mode changes will reduce the vehicular volumes, which will also improve air quality.

[MV objective 7b](#)**Connect people to natural resource or recreational areas.**

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?

☐ Yes ☒ No

Describe, *including supporting quantitative analysis*

[MV objective 10](#)**Increase access to amenities that support healthy, active choices.**

6. Will this project expand opportunities for residents to lead healthy and active lifestyles?

☒ Yes ☐ No

Describe, *including supporting quantitative analysis*

Reduced congestion along Dry Creek Road will improve travel time reliability for the RTD Dry Creek and Inverness North FlexRide services, in addition to general vehicular access to the Dry Creek LRT Station, benefitting the over 1,200 weekday transit boardings within the project area. The improved transit accessibility will also enhance the overall multimodal connections beyond the Dry Creek LRT Station, encouraging more people to utilize transit for commuting and other daily trips.

The congestion reduction along Dry Creek Road and improved travel time reliability for the area RTD FlexRide services will also improve access to the 50 CDPHE-regulated health service facilities within one mile of the project area.

[MV objective 13](#)**Improve access to opportunity.**

7. Will this project help reduce critical health, education, income, and opportunity disparities by promoting reliable transportation connections to key destinations and other amenities?

☒ Yes ☐ No

Describe, *including supporting quantitative analysis*

By providing improved transit connections, the project will help address mobility barriers within the project area by enhancing the affordable and accessible transportation options for the almost 300 households within a mile of the project that do not own a car and/or are unable to drive.

The project will also improve accessibility for people living in the surrounding area to medical facilities and employment centers by improving the connection between the residential areas surrounding the interchange and regional activity centers, employment centers, and medical facilities along the I-25 corridor.

MV objective 14		Improve the region’s competitive position.	
8. Will this project help support and contribute to the growth of the subregion’s economic health and vitality?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Describe, <i>including supporting quantitative analysis</i>			
Enhanced transit connections can result in higher retail sales and increased property values. The project will encourage additional patronage to nearby businesses by reducing the frequent congestion within the project area. The operational improvements will improve the livability, attractiveness, and perceived safety of the neighborhoods accessing the I-25/Dry Creek Road interchange.			
D. Project Leveraging		WEIGHT 20%	
9. What percent of outside funding sources (non-DRCOG-allocated Subregional Share funding) does this project have?	31%	41%+ outside funding sources High 31-40%Medium 30% and belowLow	

Part 3

Project Data Worksheet – Calculations and Estimates

(Complete all subsections applicable to the project)

A. Transit Use

1. Current ridership weekday boardings	1,264
2. Population and Employment	

Year	Population within 1 mile	Employment within 1 mile	Total Pop and Employ within 1 mile
2020	21,602	55,031	76,633
2040	24,267	68,586	92,853

Transit Use Calculations	Year of Opening	2040 Weekday Estimate
3. Enter estimated additional daily transit boardings after project is completed. (Using 50% growth above year of opening for 2040 value, unless justified) <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. (Example: {#3 X 25%} or other percent, if justified)	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.) (Example: {#3 X 25%} or other percent, if justified)	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) (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)	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	115 bicyclists along Dry Creek Rd
2. Population and Employment	

Year	Population within 1 mile	Employment within 1 mile	Total Pop and Employ within 1 mile
2020	21,602	55,031	76,633
2040	24,267	68,586	92,853

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.	0	0
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)	0	0
5. = Initial number of new bicycle trips from project (#3 – #4)	0	0

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)	0	0
7. = Number of SOV trips reduced per day (#5 - #6)	0	0
8. Enter the value of {#7 x 2 miles} . (= the VMT reduced per day) (Values other than 2 miles must be justified by sponsor)	0	0
9. = Number of pounds GHG emissions reduced (#8 x 0.95 lbs.)	0	0
10. If values would be distinctly greater for weekends, describe the magnitude of difference:		
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)	475 pedestrians along Dry Creek Rd
2. Population and Employment	

Year	Population within 1 mile	Employment within 1 mile	Total Pop and Employ within 1 mile
2020	21,602	55,031	76,633
2040	24,267	68,586	92,853

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	0	0
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	0
5. = Number of new trips from project (#3 – #4)	0	0
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)	0	0
7. = Number of SOV trips reduced per day (#5 - #6)	0	0
12. Enter the value of {#7 x .4 miles} . (= the VMT reduced per day) (Values other than .4 miles must be justified by sponsor)	0	0
8. = Number of pounds GHG emissions reduced (#8 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:		

D. Vulnerable Populations

	Vulnerable Populations	Population within 1 mile
Use Current Census Data	1. Persons over age 65	3,131
	2. Minority persons	6,017
	3. Low-Income households	702
	4. Linguistically-challenged persons	467
	5. Individuals with disabilities	685
	6. Households without a motor vehicle	284
	7. Children ages 6-17	4,553
	8. Health service facilities served by project	50

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. *DRCOG staff may be able to use the Regional Travel Model to develop estimates for certain types of large-scale projects.*

1. Current ADT (average daily traffic volume) on applicable segments	SB I-25 On Ramp = 10,400 vpd Dry Creek Rd west of I-25 = 30,600 vpd
2. 2040 ADT estimate	SB I-25 On Ramp = 17,000 vpd Dry Creek Rd west of I-25 = 52,700 vpd
3. Current weekday vehicle hours of delay (VHD) (before project)	0

Travel Delay Calculations	Year of Opening
4. Enter calculated future weekday VHD (after project)	0
5. Enter value of {#3 - #4} = Reduced VHD	0.3
6. Enter value of {#5 X 1.4} = Reduced person hours of delay <i>(Value higher than 1.4 due to high transit ridership must be justified by sponsor)</i>	0.3
7. After project peak hour congested average travel time reduction per vehicle (includes persons, transit passengers, freight, and service equipment carried by vehicles). <i>If applicable, denote unique travel time reduction for certain types of vehicles</i>	N/A
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

1. Provide the current number of crashes involving motor vehicles, bicyclists, and pedestrians <i>(most recent 5-year period of data)</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	0	
Serious Injury crashes	-	
Other Injury crashes	13	
Property Damage Only crashes	67	
2. Estimated reduction in crashes <u>applicable to the project scope</u> <i>(per the five-year period used above)</i>		
Fatal crashes reduced	0	
Serious Injury crashes reduced	-	
Other Injury crashes reduced	2	
Property Damage Only crashes reduced	6	

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

1. Current roadway pavement condition	Choose an item
2. Describe current pavement issues and how the project will address them.	
3. Average Daily User Volume	0

Bicycle/Pedestrian/Other Facility

4. Current bicycle/pedestrian/other facility condition	N/A
5. Describe current condition issues and how the project will address them.	
6. Average Daily User Volume	0

H. Bridge Improvements

1. Current bridge structural condition from CDOT N/A	
2. Describe current condition issues and how the project will address them. N/A	
3. Other functional obsolescence issues to be addressed by project N/A	
4. Average Daily User Volume over bridge	N/A

I. Other Beneficial Variables *(identified and calculated by the sponsor)*

1.	
2.	
3.	

J. Disbenefits or Negative Impacts *(identified and calculated by the sponsor)*

1. Increase in VMT? <i>If yes, describe scale of expected increase</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2. Negative impact on vulnerable populations	
3. Other:	

Part 4

Special Considerations

Complete all answers with a YES/NO/UNSURE, and an explanation as warranted. Part 4 is not scored but will assist in project recommendation.

1. Is the project a construction- or implementable- ready project?

Yes, this project is implementable-ready. This project is a next step in implementation of improvements recommended in the I-25/Dry Creek Road Interchange and Corridor Study, completed in 2016. The study analyzed alternatives and recommended these project improvements for the Southbound I-25 On Ramp.

2. Are there challenges with the project (right-of-way, environmental, utilities, etc.)?

- a. If yes, explain the challenge and how agency plan to address.

A challenge may be working through the complexities of the three-lane ramp meter operations, as this will be the first location with this type of operation in Colorado. There are other locations in the U.S. that utilize three-lane approaches to ramp meters and Arapahoe County will work closely with CDOT to analyze and design the ramp meter operations needed with the changes to the Southbound I-25 On Ramp.

3. Are there other environmental or controversial issues associated with the project?

No. The recommendations from the previous study were evaluated and conceptually designed to minimize environmental impacts and controversial issues while meeting the project goals.

4. Does the project or program benefit more than just the sponsoring agency and considered subregionally significant/transformational?

Yes, this project will reduce delay and improve mobility for travelers through the I-25/Dry Creek Road interchange, to and from Arapahoe County, City of Centennial, City of Greenwood Village, City of Lone Tree, Douglas County, City and County of Denver, and beyond.

Dry Creek Road is an important transportation corridor serving the growing business, commercial, and residential areas east and west of the I-25 corridor. Transportation improvements along the corridor are needed to address operations, safety, and local accessibility. Efficient access to I-25 is critical to the economic activity centers and residential areas surrounding the freeway in Arapahoe County and the City of Centennial. The I-25/Dry Creek Road interchange is an important connection to the regional transit links served by the Dry Creek LRT Station.

The I-25/Dry Creek Road interchange serves as an alternate route for congestion relief at the adjacent I-25 interchanges at Arapahoe Road to the north and County Line Road to the south. Maintaining redundant capacity at interchanges in the Denver Technology Center is essential for maintaining vehicular and multimodal mobility along I-25 in the southern Denver Metropolitan area.

The high concentration of traffic along Dry Creek Road through the project area is heavily influenced by the proximity of I-25. The corridor experiences recurring peak traffic patterns of commuters traveling to and from adjacent business parks, and traveling to and from the residential neighborhoods west of I-25. Safe and effective access to I-25 supports economic growth for the surrounding business community and quality of life for area residents. Therefore, it is considered subregionally significant and transformational.

5. Does the agency have capacity and expertise to manage a federal project?

- a. Explain experience, approach, etc.

Yes, Arapahoe County Transportation staff have broad experience managing projects with federal funding. The County has a long history of successfully managing projects through the federal funding requirements, operational complexities, and stakeholder involvement needed.

6. Is the project a next logical phase of a project funded in previous TIP cycles?

The I-25/Dry Creek Road Interchange and Corridor Study, completed in 2016, analyzed alternatives for improving traffic operations, safety, and multimodal accessibility at and surrounding the I-25/Dry Creek interchange. The study recommended the improvements to be included in the project. This project is the next step in implementation of improvements at the interchange.

7. Of the partnerships described in Section A, Question 7, are the partnerships providing funding?

- a. Describe the partnerships and funding of such.

Arapahoe County collaborated with CDOT, City of Centennial, and the Denver South TMA on the I-25/Dry Creek Road Interchange and Corridor Study, completed in 2016, and continues to work with agency stakeholders to prepare for the implementation of improvements recommended by the study.

CDOT has agreed to fund \$300,000 of the project and the Denver South TMA will match Arapahoe County's and Centennial's combined contribution of \$136,000.

8. Are there any other "special considerations" the committee should consider in evaluating the application?

Development of the three-lane ramp meter operations for the Southbound On Ramp at Dry Creek Road can serve as a prototype for other interchange on ramps in Colorado that experience queuing capacity issues due to peak period traffic volumes with ramp metering operations.