

Part 1 Base Information

1. Project Title	Parker/Quincy/Smoky Hill Intersection Improvements			
2. Project <i>Start/End</i> points or Geographic Area <i>Provide a map with submittal, as appropriate</i>	Intersection of Parker Road and Quincy Avenue, Quincy Avenue between Parker Road and Smoky Hill Road, and Intersection of Quincy Avenue and Smoky Hill Road See Attachment 1 for Project Area and Attachment 2 for Regional Context Map			
3. Project Sponsor (<i>entity that will construct/ complete and be financially responsible for the project</i>)	City of Aurora			
4. Project Contact Person, Title, Phone Number, and Email	Cindy Colip, Acting Deputy Director of Public Works, 303-739-7300, ccolip@auroragov.org			
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> See Attachment 3 – Support Letters			
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>Parker Road/Quincy Avenue/Smoky Hill Road Intersection Improvement Study:</i> https://www.auroragov.org/business_services/planning/plans_and_studies/transportation_planning/parker_quincy_road_study <i>Aurora Comprehensive Plan (“Aurora Places”) pages 66 – 83:</i> https://www.auroragov.org/cms/one.aspx?portalId=1881221&pageId=3680014 <i>Aurora Bicycle and Pedestrian Master Plan:</i> https://www.auroragov.org/business_services/planning/plans_and_studies/transportation_planning/bicycle_and_pedestrian_planning <i>Arapahoe County 2035 Transportation Plan page B-4:</i> http://www.co.arapahoe.co.us/948/2035-Transportation-Plan <i>Parker Road Corridor Study:</i> https://www.arapahoegov.com/1292/Parker-Road-Corridor		
	<input checked="" type="checkbox"/> Other(s):	<i>DRCOG 2040 Regional Transportation Plan (Vision - Unfunded)</i>		
	<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 .				
<table border="0"> <tr> <td> <input type="checkbox"/> Rapid Transit Capacity (2040 FC RTP) <input type="checkbox"/> Transit Other: <input checked="" type="checkbox"/> Bicycle Facility <input checked="" 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 </td> <td> 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: </td> </tr> </table>			<input type="checkbox"/> Rapid Transit Capacity (2040 FC RTP) <input type="checkbox"/> Transit Other: <input checked="" type="checkbox"/> Bicycle Facility <input checked="" 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:
<input type="checkbox"/> Rapid Transit Capacity (2040 FC RTP) <input type="checkbox"/> Transit Other: <input checked="" type="checkbox"/> Bicycle Facility <input checked="" 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?

Parker Road, Quincy Avenue, and Smoky Hill Road serve as major arterial routes for commuters, connecting the southeast metropolitan area with southern Aurora, Centennial, and Arapahoe County. These roadways are vital to the regional transportation system as a whole.

The Parker/Quincy/Smoky Hill Intersection Improvements project will address the following Metro Vision TIP Focus Areas (detailed in Part 2C of this application):

- (1) Improving mobility infrastructure and services for vulnerable populations – by **reducing congestion** through the project area intersections, **reducing transit delay**, and **improving multimodal mobility** with better transit access and pedestrian/bicyclist connections;
- (2) Increasing the reliability of the existing multimodal transportation network – with **improved intersection efficiencies** and **reduced delay for drivers and transit and ridesharing customers** through the area, plus **more efficient connections for pedestrians/bicyclists** to Cherry Creek State Park and the metropolitan bike path system; and
- (3) Improving transportation safety and security – by **reducing congestion-related vehicular crashes** and **addressing safety challenges for pedestrians and bicyclists** traveling through the project intersections.

The project will address the immediate transportation issues in the area, related to increasing traffic congestion, multimodal safety challenges, and lack of multimodal connections, while remaining consistent with identified long-term planning recommendations for the Parker Road corridor. **The project will forward the goal of creating a safer and more reliable transportation network, while serving all modes of transportation with accessible active transportation connections to a regional recreational amenity in Cherry Creek State Park and the Cherry Creek Regional Trail.**

Traffic Operations

The Parker/Quincy intersection handles about 100,000 vehicles a day. Traffic flow through the Parker/Quincy and Quincy/Smoky Hill intersections is characterized by distinct peak hour directionality with heavy traffic flow in the northbound and westbound direction in the morning peak hours and in the southbound and eastbound direction in the evening peak hours. This traffic pattern is a reflection of the high use of the corridors by commuters living in the southeast metropolitan area destined for the Parker/Leetsdale corridor, Cherry Creek/Colorado Boulevard area, downtown Denver, the Denver Technological Center, and the employment centers along the I-225 corridor.

Existing traffic movements at the project intersections create operating conditions characterized by lengthy queues and vehicular delays. **Individual movements at all of the area's signalized intersections operate at LOS E or F** during the AM and/or PM peak hours, including the key commuter movements at the Parker Road and Quincy Avenue and the Quincy Avenue and Smoky Hill Road intersections. There are relatively **long vehicle queues** in the project area, particularly during the AM peak hour in the northbound and westbound directions. On a typical day, queue lengths extend from the traffic signal approaches and block adjacent intersections, **creating traffic gridlock and impacting local access**. Future volumes on the area arterials are projected to increase 12-35% by 2040.

Multimodal Mobility

There are a number of recreational trails within Cherry Creek State Park, west of Parker Road. The Cherry Creek Regional Trail is the main north/south connector trail west of the study area. This trail provides bicyclists with an efficient connection to the complete metropolitan bike path system. The Parker Road and Quincy Avenue intersection provides direct non-motorized access to Cherry Creek State Park from extensive residential areas to the east. This area is highly used during the weekend by bicyclists and pedestrians with over 650 pedestrian/bicyclist crossings (equating to about 400 people) at the Parker/Quincy intersection on a typical Saturday. The project area is served by RTD Bus Routes 135, 139, and 483, providing connections to area neighborhoods from the Nine Mile Station at Parker Road and I-225.

Multimodal problems in the project area include **substandard sidewalk widths impacting pedestrian and bicyclist access** (including access to area bus stops), **out-of-direction travel required for intersection crossings**, and **inconvenient access to the regional trails** in the area.

Safety

The most frequent crash types that occur on both Parker Road and Quincy Avenue are rear-end crashes. Broadside crashes, which typically occur at driveways or intersections, are the second most prevalent crash type. There are also a notable number of sideswipe crashes in the same direction at the intersection of Parker Road and Quincy Avenue. All of these **crash types are indicative of congestion, queuing, and restricted movements** along the corridors.

High traffic volumes, frequent congestion, and moderate pedestrian and bicyclist demand also result in safety challenges for pedestrians and bicyclists traveling through the project intersections.

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

The Parker Road/Quincy Avenue/Smoky Hill Road Intersection Improvements Study, completed by the City of Aurora in September 2016 with previous DRCOG TIP funding, identifies the roadway, multimodal, and operational improvement recommendations. The intersection reconfiguration and operational modifications are recommended to **accommodate existing and future travel demand** focusing on the heaviest turning movements **while improving the pedestrian and bicyclist comfort and safety** at the intersection.

This project will move the recommendations forward through environmental clearance, preliminary engineering, final design, ROW acquisition, and construction.

See Attachment 4 for illustration of the project improvements.

Specific elements include:

- At the Parker/Quincy intersection, reconfiguration of the westbound Quincy Avenue approach to provide triple right turn lanes and a shared through-left lane. This allows the three westbound lanes on Quincy Avenue to feed directly into the three right turn lanes, substantially increasing capacity for the heavy westbound-to-northbound movement while minimizing lane changing maneuvers.
- At the Quincy/Smoky Hill intersection, reconfiguration of the northbound Smoky Hill Road approach to provide three exclusive left turn lanes and a shared through-right lane. This will allow drivers to utilize all three northbound left turn lanes from Smoky Hill Road to feed directly into the three westbound right turn lanes leading to northbound Parker Road. The southbound approach is reconfigured with a shared through-right lane and a left-turn lane, providing acceptable traffic operations for southbound traffic with more sidewalk area in the northwest corner of the intersection.
- Shift of the crosswalk across Parker Road to improve the travel path alignment for pedestrians along the north side of Quincy Avenue with the Cherry Creek State Park entrance and regional trail access in the northwest corner of the intersection. Bicycle detection and counting equipment is recommended to facilitate bicyclists crossing Parker Road at Quincy Avenue and to measure the use of the crossing to access Cherry Creek State Park and regional trail.
- At the Quincy Avenue and Smoky Hill Road intersection, a blank-out sign for the eastbound approach to warn right-turning drivers of pedestrians in the crosswalk across the south leg of the intersection. This blank-out sign would be activated with the pedestrian push button activation for the south crosswalk.
- A new 12-foot sidewalk along the west side of Parker Road from Quincy Avenue to the existing end of the Parker West Trail, improving the multimodal connection between regional trails in the area.
- A widened 12-foot sidewalk along the east side of Parker Road from Quincy Avenue to Rice Place, improving the multimodal connection to the retail and commercial properties south of the intersection.
- A widened 10-foot sidewalk with pedestrian-oriented lighting along the north side of Quincy Avenue from Parker Road to Dillon Way, east of Smoky Hill Road, improving comfort and safety for pedestrians and bicyclists along Quincy Avenue.

10. What is the status of the proposed project?

The Parker Road/Quincy Avenue/Smoky Hill Road Intersection Improvements Study, completed in 2016 with previous DRCOG TIP funding, analyzed alternatives and recommended improvements to be included in the project. **This project is the next step in implementation of the area transportation improvements.** No funding has been identified for the longer-term grade-separated interchange recommended in the *Parker Road Corridor Study*, and it is critical to address the increasing congestion and safety issues at the area intersections with highly beneficial short-term improvements.

The City of Aurora recently allocated transportation funding for high-priority projects and the City is ready to contribute local funding for this important multimodal improvement project.

The City of Aurora is also separately in the process of completing mobility improvements to fill sidewalk gaps along Parker Road, from south of the Quincy Avenue intersection to Belleview Avenue. That sidewalk project is currently in design, and construction is slated for 2019/2020, in advance of the construction of this project.

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.

A smaller funding amount would reduce the scope of the construction, likely reducing the multimodal elements that could be completed. For example, reducing the limits of sidewalk improvements and/or sidewalk width may reduce the ROW and associated funding needs.

A. Project Financial Information and Funding Request

1. Total Project Cost		\$9,170,000
2. Total amount of DRCOG Subregional Share Funding Request	\$5,043,500	55% 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
City of Aurora (non-federal match)	\$4,126,500	45%
	\$	
	\$	
	\$	
	\$	
	\$	
Total amount of funding provided by other funding partners (private, local, state, Regional, or federal)	\$4,126,500	

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	\$	\$	\$3,043,500	\$2,000,000	\$5,043,500
State Funds	\$	\$	\$	\$	\$0
Local Funds	\$860,000	\$640,000	\$1,626,500	\$1,000,000	\$4,126,500
Total Funding	\$860,000	\$640,000	\$4,670,000	\$3,000,000	\$9,170,000
4. Phase to be Initiated Choose from Design, ENV, ROW, CON, Study, Service, Equip. Purchase, Other	ENV/Design	ENV/Design	ROW/CON	CON	

- 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?

Parker Road, Quincy Avenue, and Smoky Hill Road serve as major arterial routes for commuters, connecting the southeast metropolitan area with southern Aurora, Centennial, and Arapahoe County. These roadways are vital to the regional transportation system as a whole. In the Denver metropolitan area, Parker Road (SH 83) is the only continuous north-south transportation corridor between I-25 to the west and E-470 to the east, crossing through key economic activity centers and residential areas for many local jurisdictions, including Aurora, Centennial, Foxfield, Parker, and unincorporated Arapahoe and Douglas Counties. Cherry Creek State Park, a major recreational area along the west side of Parker Road, limits major east-west roadway crossings. The state highway is an important regional connection to I-225 and the Nine Mile LRT Station. Additionally, Parker Road connects the DRCOG region to the south as a continuous state highway between Denver and Colorado Springs.

Quincy Avenue is a continuous east-west major arterial between Parker Road and E-470. East of E-470, the corridor continues east into rapidly-developing areas of Aurora and unincorporated Arapahoe County. Smoky Hill Road intersects Quincy Avenue less than a half mile east of Parker Road and is a continuous major arterial leading diagonally to E-470. **Both the Quincy Avenue and Smoky Hill Road corridors serve regional traffic traveling to/from the large residential developments in southeast Aurora, Centennial, and unincorporated Arapahoe and Douglas Counties, which has a population of 130,000 people, projected to grow over 25% to 165,000 people by 2040.**

Traffic volumes along Parker Road within the study area range from about 57,000 vehicles per day (vpd) south of Quincy Avenue to approximately 89,000 vpd north of Quincy Avenue, making it one of the highest volume arterial highways in the Denver metro area. East of Parker Road, Quincy Avenue carries over 41,000 vpd. Parker Road and Quincy Avenue in the project area are shown in the DRCOG 2040 Fiscally Constrained Regional Transportation Plan as Congested Corridors (Mobility Grade of D or F) in 2016. By 2040, traffic along Parker Road is projected to increase by 20% to over 108,000 vpd north of Quincy Avenue. Quincy Avenue traffic volumes are projected to increase to over 45,000 vpd.

In the AM peak hour, the westbound vehicular queues along Quincy Avenue extend from Parker Road, through the shopping center signalized intersection, to Smoky Hill Road, a distance of over 1,600 feet. The northbound left turn queues on Smoky Hill Road leading to Quincy Avenue are about 850 feet. **With the project, the westbound Quincy Avenue queues are dramatically reduced** to less than 300 feet, no longer continuously blocking the shopping center signalized intersection and the unsignalized intersection at Atchison Way. The northbound left turn queue on Smoky Hill Road is reduced to less than 100 feet. These reduced queue lengths will **improve access for residents and businesses** along Parker Road, Quincy Avenue, and Smoky Hill Road.

The project's operational improvements will **relieve congestion and reduce delay for the high volumes of traffic** traveling through the project area. Utilizing cost per hour assumptions from the DRCOG 2017 *Annual Report on Roadway Traffic Congestion in the Denver Region*, the project will **save over \$1 Million in travel delay costs per year experienced through the project area.**

The Parker Road and Quincy Avenue intersection provides direct multimodal access to Cherry Creek State Park and the regional trails within the park. More than 650 pedestrian and bicyclist crossings have been counted on a Saturday at the Parker Road and Quincy Avenue intersection. From the improved connection to the Cherry Creek Regional Trail, **pedestrians and bicyclists can connect with the complete metropolitan multiuse path system, providing limitless recreational and multimodal travel opportunities.**

The sidewalk widening and new connections included in the project will improve operations and safety for pedestrians and bicyclists traveling along the area arterials and through the congested intersections. **Accessible active transportation connections to businesses and neighborhoods within and surrounding the project area will be significantly improved, encouraging walking and biking as a mobility choice.**

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 opportunities for the **estimated 140,000 travelers that utilize the Parker Road and Quincy Avenue intersection each day, from not only the City of Aurora, but also the City of Centennial, unincorporated Arapahoe County, and beyond.**

Reducing congestion and delay at this bottleneck along Parker Road will also benefit regional trips to/from the City and County of Denver to the north and to/from the Town of Parker and unincorporated Douglas County to the south. The project will help attract economic investment by developers in economic centers and residential communities in those municipalities by increasing confidence in regional travel time reliability.

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

The project improves the connection for commuters living in the southeast metropolitan area destined for the Parker/Leetsdale corridor, Cherry Creek/Colorado Boulevard area, downtown Denver, the Denver Technological Center, and the employment/retail/medical centers along the I-225 corridor and southern metro area, **improving access between the City and County of Denver, Arapahoe County, and Douglas County subregions.** Improving access to the Cherry Creek Regional Trail will benefit multimodal travel opportunities for all subregions along the trail.

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

At the Parker/Quincy intersection, reconfiguration of the westbound Quincy Avenue approach will allow the three westbound lanes on Quincy Avenue to feed directly into the three right turn lanes leading to northbound Parker Road, **substantially increasing capacity for the heavy westbound-to-northbound movement while minimizing lane changing maneuvers and improving safety.** Intersection operational analyses show a **reduction of 314 person hours of travel delay per day through the project area, particularly in the morning peak hour.**

At the Quincy/Smoky Hill intersection, reconfiguration of the northbound Smoky Hill Road approach will allow drivers to utilize all three northbound left turn lanes from Smoky Hill Road to feed directly into the three westbound right turn lanes leading to northbound Parker Road, which **increases capacity and reduces weaving maneuvers, thereby also improving safety.** The increases capacity and lane utilization improvements are expected to reduce the rear-end and sideswipe crashes along Quincy Avenue between Parker Road and Smoky Hill Road, which are the highest crash type within the area. **The project is expected to reduce crashes in the project area by about 13 crashes/year.**

Crosswalk and sidewalk modifications at the Parker Road and Quincy Avenue intersection will improve the travel path alignment for pedestrians along the north side of Quincy Avenue with the Cherry Creek State Park trail access in the northwest corner of the intersection, **enhancing safe access to the State Park and regional trail system.** The eastbound and westbound Quincy Avenue approaches will operate split-phased and the WALK signal for the Parker Road crossing will run with the westbound approach, **eliminating any left- or right-turn traffic conflict with pedestrians/bicyclists in the crosswalk.** The project is expected to **eliminate at least one serious injury crash per year involving pedestrians or bicyclists** that has occurred at the intersection in the last five years.

At the Quincy Avenue and Smoky Hill Road intersection, a blank-out sign for the eastbound approach to warn right-turning drivers of pedestrians in the crosswalk across the south leg of the intersection will **improve pedestrian comfort and safety by reducing conflicts with turning vehicles.**

The project includes a new 12-foot sidewalk along the west side of Parker Road connecting to the Parker West Trail and a widened 12-foot sidewalk along the east side of Parker Road from Quincy Avenue to Rice Place, **improving the multimodal connection to the retail and commercial properties south of the intersection.** A widened 10-foot sidewalk with pedestrian-oriented lighting along the north side of Quincy Avenue from Parker Road to Dillon Way, east of Smoky Hill Road, will **improve comfort and safety for pedestrians and bicyclists along Quincy Avenue, as well as improve access to bus stops along the corridor.**

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 project will **encourage additional patronage to nearby businesses by reducing the frequent congestion** within the project area. Businesses will also benefit from reduced congestion and travel times for truck deliveries. General regional freight along Parker Road, approximately 2,500 trucks per day, will experience reduced travel time, benefitting the larger region.

The operational improvements at area intersections and the resulting reduction in queues, particularly along westbound Quincy Avenue, will **improve the liveability, attractiveness, and perceived safety and reduced level of stress of the neighborhoods accessing the project arterials**. Improving accessibility and mobility along the arterials will improve the quality of life for the approximately 140,000 commuters and travelers utilizing the Parker Road, Quincy Avenue and Smoky Hill Road intersections every day.

Investment in bicycle and pedestrian infrastructure has been linked to various community benefits. Enhancing the pedestrian and bicyclist infrastructure and operations will **encourage more non-single-occupancy-vehicle travel and recreational activities in the area by improving connections to the Cherry Creek Regional Trail**.

According to the National Association of City Transportation Officials (NACTO), enhanced multimodal facilities can result in higher retail sales and increased property values. Adventure Cycling is a bicycle store on the southeast corner of the Parker Road and Quincy Avenue intersection that caters to the surrounding bicycling community, organizing and guiding bicycling trips into Cherry Creek State Park. **The project improvements will improve the economic vitality of the community.**

Based on estimates from Part 3 of this application, the project will reduce VMT by about 200 miles per day by 2040, which is approximately 73,000 miles per year. The project will **save people auto fuel and maintenance costs, reduce air pollution, and create positive health impacts by encouraging people to use alternative transportation.**

The project is expected to **save over \$1 Million in travel delay costs per year experienced through the project area**. Reduced congestion through the area intersections will also improve travel time reliability for RTD Routes 135, 139, and 483, **enhancing multimodal connections from the Nine Mile Station at Parker Road and I-225 to area neighborhoods and beyond.**

The significant reduction in vehicular queuing with the project will reduce rear end crashes during peak hours. The recommended improvements are expected to **improve safety for all travel modes through the study intersections**, focusing on the reduction of multimodal conflicts. The shift of the pedestrian crosswalk at Parker Road to the north leg of the intersection with the reconfiguration of the westbound right turn lanes **eliminates the turning traffic conflicts with pedestrians/bicyclists in the crosswalk**. The project is expected to eliminate at least one serious injury crash per year involving pedestrians or bicyclists that has occurred at the intersection in the last five years.

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

The project will **improve pedestrian and bicyclist sidewalk/path connections to RTD bus stops** in the project area. Reduced congestion through the area intersections will also improve travel time reliability for RTD Routes 135, 139, and 483, which according to RTD load data carry approximately 600 people through the project area each day. The project improvements will **enhance multimodal connections from the Nine Mile Station at Parker Road and I-225 to area neighborhoods and beyond**, encouraging more people to utilize transit for commuting and other daily trips.

The project will **improve the direct multimodal access to Cherry Creek State Park and the Cherry Creek Regional Trail**. From the project area, pedestrians and bicyclists will be able to connect with the complete metropolitan regional multiuse path system, providing limitless multimodal travel opportunities.

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

This project builds on existing CDOT and local agency studies completed within the project area. The City of Aurora is committed to working with regional agencies to create a project that will be mutually beneficial to the entire region.

The city collaborated with CDOT, Arapahoe County, DRCOG, RTD, and City of Centennial on the Parker Road/Quincy Avenue/Smoky Hill Road Intersection Improvements Study, completed in 2016 with DRCOG TIP funding, to identify the project elements and continues to work with agency stakeholders to prepare for the environmental and design phases of the project.

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)**.

The project will **increase capacity and improve multimodal infrastructure for all, including vulnerable populations such as older adults, low-income families, minorities, and people with disabilities**. Vulnerable populations are more likely to rely on transit services and healthy, able-bodied persons will rely on active transportation modes like walking and biking to access employment, shopping (Arapahoe Crossing, Cornerstar, Nine Mile Urban Center), and services.

The project will improve transit travel time reliability with the travel time through the project area reduced by up to three minutes/vehicle in the peak hours. The project's multimodal transportation improvements providing safer and **more convenient access to Cherry Creek State Park, the Cherry Creek Regional Trail, and the RTD bus stops and Nine Mile Transit Station will benefit vulnerable populations who rely more on non-single-occupancy travel modes, such as transit, biking, walking and other active transportation travel modes**.

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

- 5,300 adults over the age of 65
- 9,800 minority persons
- 960 households living in poverty
- 820 linguistically-challenged persons
- 1,400 persons with a disability
- 640 households without access to a vehicle
- 4,500 children between the age of 6 and 17

This project will also provide accessibility to the 21 CDPHE-regulated health service facilities located within one mile of the project. Additional nursing homes and assisted living facilities, such as Shalom Park, are located in close proximity to the project. Community gardens are also located in close proximity to the project area with public plots available at Aurora Mental Health Center Community Garden and the Heather Gardens Community Garden. The project will provide **improved vehicular access and direct multimodal access to these facilities providing community health benefits beyond the immediate transportation elements**.

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

There is a population of more than 31,200 people and more than 57,000 employees within one mile of the project area. The Parker Road, Quincy Avenue, and Smoky Hill Road corridors also serve regional traffic traveling to/from the large residential developments in southeast Aurora, Centennial, and unincorporated Arapahoe and Douglas Counties, which has a current population of 130,000 people with more than 30,000 employees. **The intersections and arterial corridors serve these people driving, walking, cycling, or riding transit to access a residence or place of employment.** The project will improve and enhance the existing infrastructure to create a safer and more reliable transportation network, while serving all modes of transportation with accessible active transportation connections.

Parker Road north of Quincy Avenue currently carries 89,000 vehicles/day. Quincy Avenue east of Parker Road carries almost 41,000 vehicles/day and Smoky Hill Road south of Quincy Avenue carries about 23,000 vehicles/day. **The traffic on these corridors is mostly regional traffic passing through from outside the area surrounding the project.** These volumes are forecasted to increase 12–35% by 2040.

Intersection operational analyses show a **reduction of 314 person hours of travel delay per day with the project intersection modifications, particularly in the morning peak hour.** The project is also expected to substantially reduce the queue lengths for the heavy peak hour movements, with a 90% decrease in queue length, from almost 900 feet to under 100 feet for northbound Smoky Hill Road at Quincy Avenue in the morning peak hour.

Reducing congestion through the project area will improve the travel time reliability of RTD Routes 135, 139, and 483 by providing better on-time performance with the travel time through the project area reduced by up to three minutes/vehicle in the peak hours. The bus routes through the area currently carry about 600 people through the project area every day. The project will **improve pedestrian and bicyclist sidewalk/path connections to Cherry Creek State Park, the Cherry Creek Regional Trail, and the RTD bus stops and Nine Mile Transit Station to encourage people across all spectrums of age, ability, and socioeconomic status to access affordable and reliable transportation options.**

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

There were 493 crashes along Parker Road, Quincy Avenue, and Smoky Hill Road in the project area in the last five years, including one fatal crash and 32 serious injury crashes. **The Parker/Quincy intersection is at Level of Service of Safety (LOSS) IV, which means it has a higher crash frequency than expected considering similar intersections in Colorado.** At LOSS IV, there is a high potential for crash reduction with transportation improvements.

Crash types within the project area are indicative of congestion, queuing, and restricted movements along the corridors. **The significant reduction in vehicular queuing with the project will reduce rear end crashes during peak hours. Removing the need for lane changing maneuvers along Quincy Avenue between Parker Road and Smoky Hill Road for the high volume movements through the area will reduce sideswipe crashes,** which is the second-highest crash type within the area. The project is expected to reduce crashes by about 13 crashes/year.

High traffic volumes, frequent congestion, and moderate pedestrian and bicyclist demand also result in safety challenges for pedestrians and bicyclists traveling through the project intersections. The recommended improvements are expected to improve safety for all travel modes through the study intersections, focused on the reduction of multimodal conflicts. The shift of the pedestrian crosswalk at Parker Road to the north leg of the intersection with the reconfiguration of the westbound right turn lanes eliminates turning traffic conflicts with pedestrians/bicyclists in the crosswalk. The expected crash reduction includes **the elimination of at least one serious injury crash per year involving pedestrians or bicyclists** with the removal of that crossing conflict at the Parker/Quincy intersection.

The project also includes pedestrian scale lighting with the sidewalk along the north side of Quincy Avenue between Parker Road and Smoky Hill Road, which will **increase the perceived comfort and safety of walking and bicycling in the project area at night.**

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 in **close proximity to the emerging urban centers of I-225/Parker Road and the Iliff Avenue Center**. The project will also provide **improved access to the emerging Smoky Hill urban center and the existing Parker urban center** south of the project area. Intersection operational analyses show a reduction of 314 person hours of travel delay per day with the project, particularly in the morning commuting peak hours.

With the reduced travel delay, the **project will improve regional travel connections to the designated urban centers, including multimodal access to the Nine Mile Bus and Rail Station, to focus and facilitate planned growth** in identified areas along the Parker Road corridor.

[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

With the improved connection to the Cherry Creek Regional Trail at the Parker Road and Quincy Avenue intersection, **pedestrians and bicyclists will have an enhanced connection with the complete metropolitan regional multiuse path system, providing limitless recreational and multimodal travel opportunities**. This area is highly used during the weekend by bicyclists and pedestrians with about 400 pedestrians and bicyclists passing through the Parker/Quincy intersection on a typical Saturday.

The project will also improve pedestrian and bicyclist sidewalk connections to RTD bus stops in the project area. Reduced congestion through the area intersections will also improve travel time reliability for RTD Routes 135, 139, and 483 with the travel time through the project area reduced by up to three minutes/vehicle in the peak hours, enhancing multimodal connections from the Nine Mile Station at Parker Road and I-225 to project area neighborhoods and beyond. The **improved transit efficiencies will enhance the connections between the emerging and existing urban centers of I-225/Parker Road, Iliff Avenue Center, Smoky Hill, and Parker**.

[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

The Parker Road and Quincy Avenue intersection provides direct access to Cherry Creek State Park from extensive residential areas to the east. Crosswalk and sidewalk modifications at the intersection will **improve the travel path alignment and eliminate vehicular turning traffic conflicts with pedestrians/bicyclists in the crosswalk, improving access for the more than 600 pedestrians and bicyclists currently expected to utilize the intersection** to access the regional trail amenities on the weekends (equating to approximately 1,000 pedestrian/bicyclist crossings at the traffic signal in 2040).

The project will also improve pedestrian and bicyclist sidewalk connections to RTD bus stops in the project area. Reduced congestion through the area intersections will also improve travel time reliability for RTD Routes 135, 139, and 483 with the travel time through the project area reduced by up to three minutes/vehicle in the peak hours, enhancing multimodal connections from the Nine Mile Station at Parker Road and I-225 to project area neighborhoods and beyond. The **improved transit efficiencies and stop access is expected to increase weekday ridership**, currently at about 75 boardings at stops within the project area, to over 100 boardings per day.

[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 area intersections, which will incrementally help improve all aspects of air quality.**

Improving the multimodal facilities and providing new connections within the project area will also **make the use of the sidewalks/trails/paths and transit routes more attractive as alternative modes of transportation.**

Encouraging mode changes will reduce the vehicular volumes, which will also improve air quality.

Based on estimates from Part 3 of this application, the project will reduce pounds of daily GHG emissions by 200 pounds per day on an average weekday in 2040. Because the connections to the Cherry Creek Regional Trail will be heavily used on weekends by recreational users, the local environmental benefits may be larger on the weekends.

[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*

The sidewalk connections that the project will improve or create will **enhance active transportation connections to the regional recreational asset and natural resources areas of Cherry Creek State Park.** The project will improve multimodal access to the Regional Cherry Creek Trail system and from there pedestrians and bicyclists can connect with the complete metropolitan regional multiuse path system, providing limitless recreational and multimodal travel opportunities.

[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*

The improved and new ADA-compliant multimodal facilities in the project area will encourage healthy behavior for residents and employees in the developed areas east of Parker Road by providing improved walking and biking access to the natural resources areas of Cherry Creek State Park, and the Cherry Creek Regional Trail connections to the complete metropolitan regional multiuse path system. **The trail connections create an alternative transportation opportunity to recreate, travel to work, or connect to other regional economic centers.**

Investing in and promoting bicycling and walking within a community can produce significant benefits related to health. In 2009, the World Health Organization developed the Health Economic Assessment Tool (HEAT) to assist agencies with estimating the local economic benefits of reduced mortality resulting from walking and bicycling based on area-specific empirical data. Applying this tool to the state of Colorado in 2014 resulted in an annual estimated benefit of \$3.2 billion (Economic and Health Benefits of Bicycling and Walking, BBC Research & Consulting, October 2016). **Increased levels of bicycling and walking lead to lower mortality rates because more physical activity can help to reduce the risk of many chronic diseases and obesity.**

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>		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<p>Describe, including supporting quantitative analysis</p> <p>By providing improved opportunities for people to walk, bike, or take transit, the project will help address mobility barriers within the project area by providing affordable and accessible transportation options for the over 600 households within a mile of the project that do not own a car and/or are unable to drive.</p> <p>Additionally, the improved multimodal connections will promote opportunities for the over 4,500 children living within a mile of the project to access the natural areas and regional amenity of Cherry Creek State Park.</p> <p>The project will also improve accessibility for people living in the southeast metropolitan area to medical facilities, government services, and educational or academic institutions by improving the connection between the large residential areas south of the project area and regional activity centers in downtown Denver and the employment centers and medical facilities along the I-225 corridor and I-25 corridor.</p>			
MV objective 14		Improve the region's competitive position.	
<p>8. Will this project help support and contribute to the growth of the subregion's economic health and vitality?</p>		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<p>Describe, including supporting quantitative analysis</p> <p>Enhanced multimodal facilities 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. Businesses will also benefit from reduced congestion and travel times for truck deliveries. General regional freight along Parker Road, approximately 2,500 trucks per day, will experience reduced travel time, benefitting the larger region.</p> <p>The project will also maximize the regional investment in infrastructure. The City of Aurora recently began design for a new sidewalk connection on the east side of Parker Road that will connect to the sidewalk improvements planned with this project. The current roadway pavement along Quincy Avenue is in poor condition with needed maintenance, and this project presents an opportunity to improve the pavement conditions with the proposed improvements.</p> <p>The 2040 DRCOG Regional Transportation Plan includes a regionally-funded project to widen Parker Road to eight lanes north of Quincy Avenue to Hampden Avenue, but it is not funded until the 2025-2034 cycle. This project will increase the capacity of the Parker/Quincy intersection, which will tie into and facilitate the future construction of the Parker Road project.</p>			
D. Project Leveraging			WEIGHT 20%
<p>9. What percent of outside funding sources (non-DRCOG-allocated Subregional Share funding) does this project have?</p>	<p>45%</p>	<p>41%+ outside funding sources High 31-40%Medium 30% and belowLow</p>	

Part 3

Project Data Worksheet – Calculations and Estimates

(Complete all subsections applicable to the project)

A. Transit Use

1. Current ridership weekday boardings	76
2. Population and Employment	

Year	Population within 1 mile	Employment within 1 mile	Total Pop and Employ within 1 mile
2020	31,228	5,720	36,948
2040	32,058	5,935	37,993

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	38
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	10
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	10
6. = Number of SOV one-way trips reduced per day (#3 – #4 – #5)	0	18
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	162
8. = Number of pounds GHG emissions reduced (#7 x 0.95 lbs.)	0	154
9. If values would be distinctly greater for weekends, describe the magnitude of difference: It is not anticipated weekend transit ridership would exceed weekday ridership.		
10. If different values other than the suggested are used, please explain here: N/A		

B. Bicycle Use

1. Current weekday bicyclists	126
2. Population and Employment	

Year	Population within 1 mile	Employment within 1 mile	Total Pop and Employ within 1 mile
2020	31,228	5,720	36,948
2040	32,058	5,935	37,993

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.	13	69
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)	6	35
5. = Initial number of new bicycle trips from project (#3 – #4)	7	34
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	10
7. = Number of SOV trips reduced per day (#5 - #6)	5	24
8. Enter the value of {#7 x 2 miles} . (= the VMT reduced per day) (Values other than 2 miles must be justified by sponsor)	10	48
9. = Number of pounds GHG emissions reduced (#8 x 0.95 lbs.)	10	45
10. If values would be distinctly greater for weekends, describe the magnitude of difference: Bike counts on weekends are estimated to be at least three times higher than weekdays, based on peak hour weekend counts compared to weekday counts at the Parker Road/Quincy Avenue intersection. About 375 bicyclist crossings were counted at the intersection on a typical Saturday.		
11. If different values other than the suggested are used, please explain here: N/A		

C. Pedestrian Use		
1. Current weekday pedestrians (include users of all non-pedaled devices)		105
2. Population and Employment		

Year	Population within 1 mile	Employment within 1 mile	Total Pop and Employ within 1 mile
2020	31,228	5,720	36,948
2040	32,058	5,935	37,993

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	11	58
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)	5	29
5. = Number of new trips from project (#3 – #4)	6	29
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	9
7. = Number of SOV trips reduced per day (#5 - #6)	4	20
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	8
8. = Number of pounds GHG emissions reduced (#8 x 0.95 lbs.)	2	8

9. If values would be distinctly greater for weekends, describe the magnitude of difference:

Pedestrian counts on weekends are estimated to be three times higher than weekdays, based on peak hour weekend counts compared to weekday counts at the Parker Road/Quincy Avenue intersection. About 275 pedestrian crossings were counted at the intersection on a typical Saturday.

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

N/A

D. Vulnerable Populations

	Vulnerable Populations	Population within 1 mile
Use Current Census Data	1. Persons over age 65	5,287
	2. Minority persons	9,805
	3. Low-Income households	959
	4. Linguistically-challenged persons	819
	5. Individuals with disabilities	1,376
	6. Households without a motor vehicle	635
	7. Children ages 6-17	4,537
	8. Health service facilities served by project	21

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	Parker Rd north of Quincy Ave = 89,000 vpd Parker Rd south of Quincy Ave = 57,000 vpd Quincy Ave east of Parker Rd = 41,000 vpd Smoky Hill Rd south of Quincy Ave = 23,000 vpd
2. 2040 ADT estimate	Parker Rd north of Quincy Ave = 108,300 vpd Parker Rd south of Quincy Ave = 76,900 vpd Quincy Ave east of Parker Rd = 45,800 vpd Smoky Hill Rd south of Quincy Ave = 26,600 vpd
3. Current weekday vehicle hours of delay (VHD) (before project)	Total project area = 5,043 VHD

Travel Delay Calculations	Year of Opening
4. Enter calculated future weekday VHD (after project)	Total project area = 4,819 VHD
5. Enter value of {#3 - #4} = Reduced VHD	224 VHD
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>	314 PHD
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	AM Peak Hour = 3 min/veh (132 veh-hr) PM Peak Hour = 1 min/veh (37 veh-hr)

8. If values would be distinctly different for weekend days or special events, describe the magnitude of difference.

N/A

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

N/A

F. Traffic Crash Reduction

1. Provide the current number of crashes involving motor vehicles, bicyclists, and pedestrians (*most recent 5-year period of data*)

Fatal crashes

1

Serious Injury crashes

32

Other Injury crashes

132

Property Damage Only crashes

328

2. Estimated reduction in crashes applicable to the project scope (*per the five-year period used above*)

Fatal crashes reduced

0

Serious Injury crashes reduced

5

Other Injury crashes reduced

14

Property Damage Only crashes reduced

46

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*).

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

Poor

2. Describe current pavement issues and how the project will address them.

The existing asphalt pavement is in poor condition with visible wear. This project presents an opportunity to improve the pavement conditions with the proposed improvements.

3. Average Daily User Volume

Quincy Ave = 41,000 vpd

Bicycle/Pedestrian/Other Facility	
4. Current bicycle/pedestrian/other facility condition	Fair
5. Describe current condition issues and how the project will address them. <p>The existing sidewalk along the north side of Quincy Avenue between Parker Road and Quincy Avenue are eight feet wide, not accommodating pedestrian and bicyclist traffic. The project will widen the sidewalk to ten feet and provide pedestrian-oriented lighting, improving comfort and safety for pedestrians and bicyclists along Quincy Avenue.</p> <p>Along Parker Road south of Quincy Avenue, the sidewalk on the east side of Parker Road is five feet wide. There is a gap in sidewalk on the west side of Parker Road with no sidewalk from Quincy Avenue to the end of the Parker West Trail about 1,800 feet south of the intersection. The project will construct a new 12-foot sidewalk along the west side of Parker Road from Quincy Avenue to connect to the existing trail. The project will also provide a widened 12-foot sidewalk along the east side of Parker Road from Quincy Avenue to Rice Place. These sidewalk improvements will improve the multimodal connections to the residential, retail, and commercial areas south of the intersection.</p>	
6. Average Daily User Volume	231 pedestrians and bicyclists per day
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 <i>(identified and calculated by the sponsor)</i>	
1.	
2.	
3.	
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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No
N/A	
2. Negative impact on vulnerable populations None	
3. Other: N/A	

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 will be implementable-ready because the city has begun the process for environmental clearances, preliminary design, and final design plans, with contractor project award scheduled for early Spring 2019.

This project is the next step in implementation of the area transportation improvements. The Parker Road/Quincy Avenue/Smoky Hill Road Intersection Improvements Study, completed in 2016, analyzed alternatives and recommended improvements to be included in the project, so the project elements are defined. The city is providing the funding for the environmental clearance, preliminary design, and final design phases and the funding request is for ROW acquisition and the construction of the defined improvements.

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

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

Yes, there are project challenges, but they are typical for roadway and multimodal facilities construction in constrained urban areas and they have already been identified during the 2016 Parker Road/Quincy Avenue/Smoky Hill Road Intersection Improvements Study. The early identification of the challenges allows the city to minimize unforeseen construction issues. For example, the following challenges will be considered and addressed in the scoping phase for the project:

■ Right-of-way impacts

- Parking lot reconfiguration and improved sidewalks will require some ROW acquisition.
- Community wall reconstruction will be required in southwest corner of Quincy Avenue and Smoky Hill Road intersection.

■ Utilities

- Subsurface Utility Engineering investigation in accordance with CDOT and ASCE 38 Guidelines will be conducted with the project preliminary engineering.
- Potential for drainage infrastructure and utility impacts along widened sidewalks and at intersections.

■ Drainage

- Potential drainage impacts with intersection reconstruction and parking lot reconfiguration.

■ Environmental

- Curb ramp and trail connection improvements in northwest corner of Parker Road and Quincy Avenue intersection will need to consider Section 4(f)/6(f) impacts.

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

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

The public and stakeholder outreach process completed with the Parker Road/Quincy Avenue/Smoky Hill Road Intersection Improvements Study also identified concerns, which are

typical concerns for transportation construction projects in urban areas. These concerns were considered and mitigated with the identification of the project elements.

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

Yes, the project will reduce delay and improve mobility opportunities for travelers in not only the City of Aurora, but also the City of Centennial and unincorporated Arapahoe County. Reducing congestion and delay at this bottleneck along Parker Road will also benefit regional trips to/from the City and County of Denver to the north and to/from the Town of Parker and unincorporated Douglas County to the south. The project will help attract economic investment by developers in economic centers and residential communities in those municipalities by increasing confidence in regional travel time reliability.

The project will also improve accessibility for people living in the southeast metropolitan area to the Nine Mile Bus and Rail Station, medical facilities, government services, and academic institutions by improving the vehicular, multimodal, and transit connections between the large residential areas south of the project area and regional activity centers in downtown Denver and the employment centers and medical facilities along the I-225 corridor and I-25 corridor.

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 project arterials. Enhancing the pedestrian and bicyclist infrastructure and operations will encourage more recreational activities in the area by improving connections to the Cherry Creek Regional Trail, which will improve the economic vitality of the local community and larger region. 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, City of Aurora Public Works staff have broad experience managing projects with federal funding. The city has identified a project manager with the capacity and focus to lead the project, considering the federal funding requirements, design challenges, and stakeholder involvement needed.

The Transportation Project Delivery (TPD) group within Public Works is responsible for TIP project management from design through construction as well as planning and operational studies. Several project managers have completed TIP projects in the recent past, gaining valuable experience that will be applied to the city's future TIP projects. The Parker Road/Quincy Avenue Operational Study was managed by Cindy Colip and resulted in recommended interim improvements to the network. The 23rd Avenue Bike/Ped Path at Fitzsimons Station included design and construction of a multi-use trail from Fitzsimons Light Rail Station to Ursula Street then south into the Fitzsimons campus. This project was managed through the design by Brad Richardson, and construction activities were managed by Rhaj Khanzadeh, an ex-CDOT construction management specialist. More recently, the Westerly and Toll Gate Creek Connections to Florida Station project, establishing more than 3 miles of protected, one- and two-way bicycle tracks east and west of Florida Station, has just wrapped up the design phase and is entering the construction phase. This project is being managed by Steve Gardner, with Jana Krell taking on the construction management duties. For most of the city's TIP projects, the TPD group hires private construction management and inspection firms to monitor day-to-day construction activities and handle materials testing.

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

Yes, the Parker Road/Quincy Avenue/Smoky Hill Road Intersection Improvements Study, completed in 2016 with DRCOG TIP funding, analyzed alternatives and recommended improvements to be included in the project. This project is the next step in implementation of the area transportation improvements.

No funding has been identified for the longer-term grade-separated interchange included in Arapahoe County's *Parker Road Corridor Study*, and it is critical to address the increasing congestion and safety issues at the area intersections with highly beneficial short-term improvements.

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

a. Describe the partnerships and funding of such.

This project builds on existing CDOT and local agency studies completed within the project area. The City of Aurora is committed to working with regional agencies to create a project that will be mutually beneficial to the entire region. The city collaborated with CDOT, Arapahoe County, DRCOG, RTD, and City of Centennial on the initial study to identify the project elements and continues to work with agency stakeholders to prepare for the environmental clearance and design phases of the project.

The City of Aurora recently allocated transportation funding for high-priority projects and the city is ready to contribute local funding with substantial over-matching funds for this important multimodal improvement project.

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

The city is building on the 2016 Parker Road/Quincy Avenue/Smoky Hill Road Intersection Improvements Study by proceeding with the environmental clearance and design procurement for the next phases of the project. The city is proactively constructing mobility improvements south of the intersection and has identified a 45% funding match for this application. We are committed to delivering this project for our constituents and the surrounding region.

Attached, please find our estimated cost for the construction, as Attachment 5.