Part 1 Base Information

1. Project Title	**Broadway Corridor Plan**
2. Project *Start/End* points or Geographic Area *Provide a map with submittal, as appropriate*	Broadway from Belleview Ave to C-470
3. Project Sponsor *(entity that will construct/ complete and be financially responsible for the project)*	City of Littleton
4. Project Contact Person, Title, Phone Number, and Email	Keith Reester, Director of Public Works, 303-795-3866, kreester@littletongov.org

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

☒ Yes ☐ No

If yes, provide applicable concurrence documentation with submittal

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

☐ DRCOG 2040 Fiscally Constrained Regional Transportation Plan (2040 FCRTP)

☒ Local plan:	City of Littleton Comprehensive and Transportation Master Plan (Late 2019 Release)
☒ Other(s):	RTD BRT Feasibility Study Tier 1 & 2

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

7. Identify the project's **key elements**.

- ☐ Rapid Transit Capacity (2040 FCRTP)
- ☒ Transit Other: Possible BRT
- ☒ Bicycle Facility
- ☒ Pedestrian Facility
- ☒ Safety Improvements
- ☐ Roadway Capacity or Managed Lanes (2040 FCRTP)
- ☒ Roadway Operational

Grade Separation

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

- ☐ Roadway Pavement Reconstruction/Rehab
- ☐ Bridge Replace/Reconstruct/Rehab
- ☒ Study
- ☐ Design
- ☐ Transportation Technology Components
- ☐ Other:

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

Growth Challenges (2040 MVRTO, pp. 9)

Population & Economic Growth

The Broadway corridor is already feeling the effects of growth in the DRCOG region. Some areas of this corridor see ADT's of over 50,000 vehicles, and redevelopment south of the corridor is beginning to creep north. This study will aim to create a cohesive vision for the corridor that provides the necessary transportation infrastructure to accommodate future growth, a growing regional bike and pedestrian network, and possible bus rapid transit (BRT).

Land Development Challenges (pp. 9)

Location of Growth

Growth in the form of redevelopment is already starting to heavily impact this segment of Broadway. As redevelopment continues it has the potential to limit future transportation options by restricting the land available for ROW acquisition, and by establishing land uses that are not transit supportive. This study will determine what transportation facilities need to be included on, or near, the corridor, and establish land use policies that guide growth to areas that support future transportation on the corridor.

Social Challenges (pp. 10)

Increased Travel

DRCOG recognizes that the travel demand on the Broadway corridor is already leading to significant levels of congestion which is expected to worsen by 2040. Broadway is also a regionally significant corridor that provides access from Downtown Denver to Highlands Ranch and several jurisdictions along the way. As the DRCOG region grows there is a unique opportunity to make Broadway a multimodal corridor that spans a number of jurisdictions and serves as an example of how to facilitate increased travel demand through dedicated regional facilities for transit, cyclists, pedestrians, and motorists.

Transportation Challenges (pp. 13)

Traffic Congestion

Traffic congestion on this segment of Broadway is unique in that there is an AM peak hour, PM peak hour, and a midafternoon jump in volumes when Littleton and Heritage High Schools let out. This study will look at all the factors that contribute to congestion along the corridor and develop a vision and plan that addresses congestion through multimodal transportation.

Traffic Crashes

Several of the intersections in this segment of Broadway have a high number of total accidents over the last 5 years. Littleton Blvd and Broadway, for example, has a high relative number of bike-vehicle and rear-end accidents. This study will take an in depth look at the crash data throughout the corridor to determine which areas are most accident-prone and develop strategies to reduce crashes on the corridor and improve safety.

Environmental Challenges (pp. 17)

Air quality

It is well documented that stop and go traffic causes vehicles to burn more fuel which adds to air pollution in areas near congested roadways. This project will look to alleviate congestion throughout the corridor which can help improve air quality.

Additional Challenges

Opportunity Cost

Currently there are 11 projects on this corridor that are either in the pre-application or construction phase and have the potential to impact future transportation options along Broadway. As redevelopment continues, land use is becoming more intense and will limit the number of future transportation options. This study will look to establish a cohesive multimodal vision for this corridor that moves motorist, cyclists, pedestrians, and transit riders. Without some form of study or document that guides it, development may preclude the best possible transportation options for the corridor.

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

Prepare a Corridor Plan and multimodal transportation plan that incorporates land use, access control, and design concepts supporting potential future land use and possible future BRT on Broadway. The study will assess the current and future land use constraints and changes necessary to accommodate right-of-way, access control, zoning, and technology to support the growth of a multimodal mixed-use corridor that supports enhanced transportation options in the future. The project will allow the City of Littleton and its partners to assure that opportunities are not lost for future options while enhancing opportunities to improve the corridor in preparation

for future transportation uses.

Project Extent

Currently the anticipated project extent will be from Belleview Ave to the C-470 interchange and will go at least one parcel deep on either side of the roadway.

Active Transportation Facilities

This study will examine how best to accommodate cyclists and pedestrians either on Broadway or on a nearby parallel facility depending on the constraints discovered during the study.

Possible Bus Rapid Transit (BRT)

Because the Broadway corridor has been moved into the Tier 3 Analysis of RTD's BRT Feasibility study, this project will plan for future BRT and examine several BRT models (center-running vs curb-running, dedicated vs shared lanes) to determine the best model given the context and constraints of the corridor. If the corridor is not ultimately selected for BRT, this study will examine what changes can be made to the corridor to enhance existing transit and set the stage future high capacity transit.

Move More People

This study will examine all feasible transportation options for the corridor and determine what mix of options will move the most amount of people through the corridor regardless of travel mode.

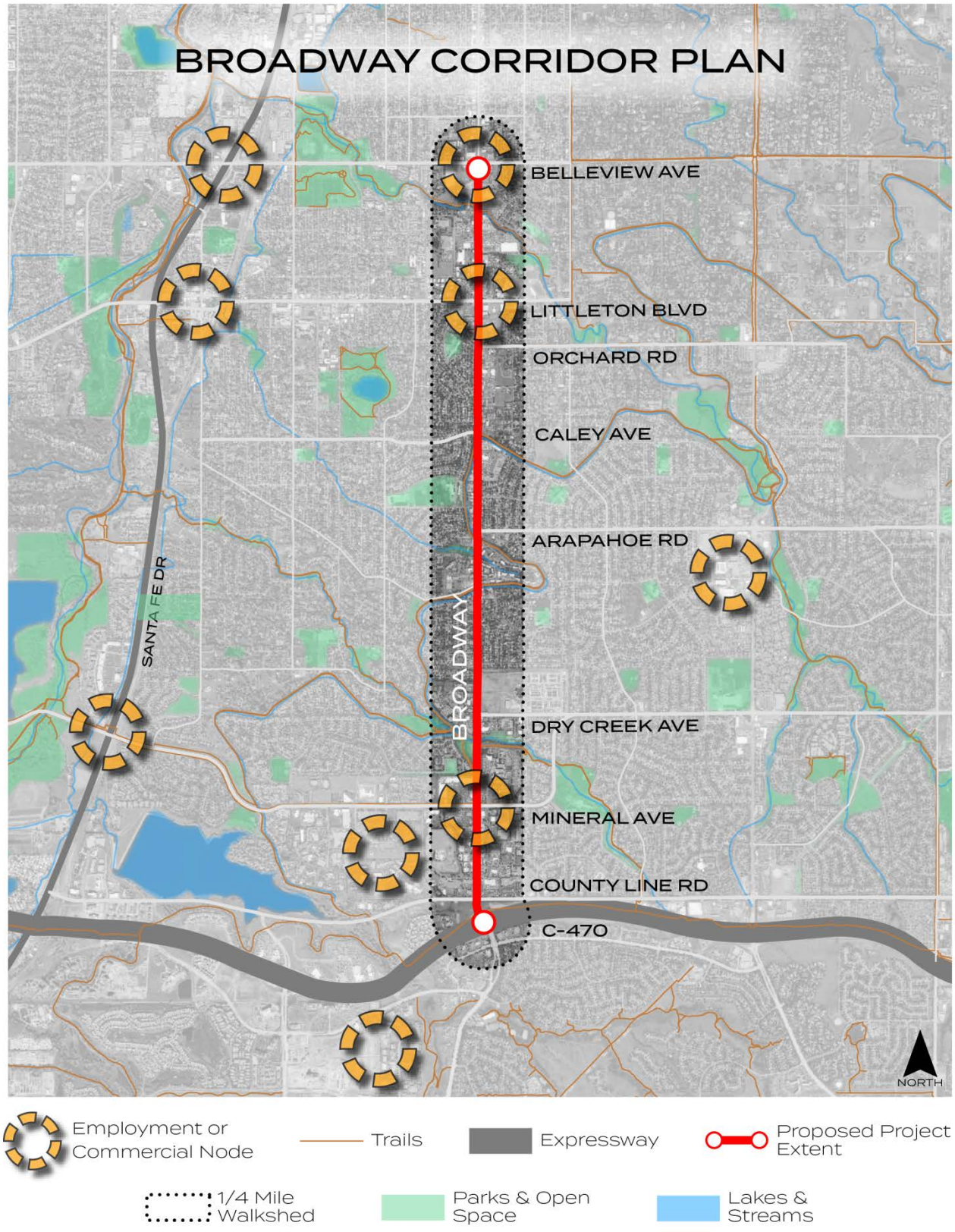
Increased Safety

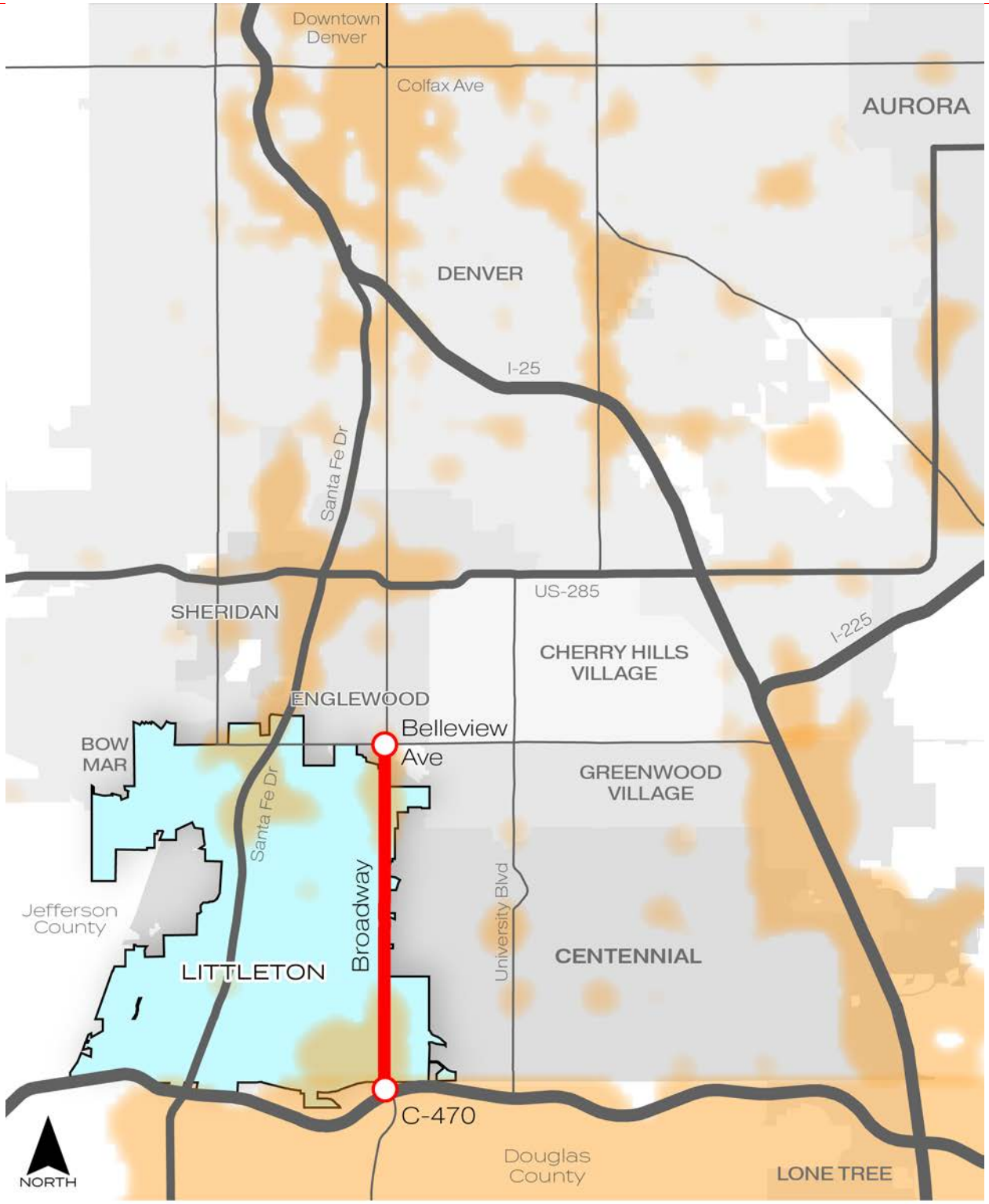
In addressing issues like access management, signal timing, and design options this study will look at crash data for the corridor and prioritize solutions that address accident prone areas of the corridor.

Land Use

Along with examining transportation issues on the corridor, this study will examine land use along the corridor and make recommendations that facilitate growth and uses that support multimodal transportation and high capacity transit like BRT.

Conceptual Project Study Extent & Regional Context





BROADWAY CORRIDOR PLAN
CONTEXT MAP

City of Littleton | High Employment | Roadway | Project Extent

10. What is the status of the proposed project?

Awaiting funding and final coordination with adjacent municipalities.

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.

If a lesser amount is awarded for this project, the level of detail in the study could be scaled back and revaluated during the design and environmental phase of the process. The City of Littleton thinks that a scaled back study at a cost of $800,000 would accomplish most of the desired goals.

A. Project Financial Information and Funding Request

1. Total Project Cost		**$1,000,000**
2. Total amount of DRCOG Subregional Share Funding Request	**$800,000**	**80%** 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 Littleton	$200,000	20%
	$	
	$	
	$	
	$	
	$	
Total amount of funding provided by other funding partners *(private, local, state, Regional, or federal)*	**$200,000**	

Funding Breakdown (year by year)*

**The proposed funding plan is not guaranteed if the project is selected for funding. While DRCOG will do everything it can to accommodate the applicants' request, final funding will be assigned at DRCOG's discretion within fiscal constraint. Funding amounts must be provided in year of expenditure dollars using an inflation factor of 3% per year from 2019.*

	FY 2020	FY 2021	FY 2022	FY 2023	Total
Federal Funds	$520,000	$280,000	$	$	**$800,000**
State Funds	$	$	$	$	**$0**
Local Funds	$130,000	$70,000	$	$	**$200,000**
Total Funding	$650,000	$350,000	$0	$0	**$1,000,000**
4. Phase to be Initiated *Choose from Design, ENV, ROW, CON, Study, Service, Equip. Purchase, Other*	Study	Study	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?

Opportunity Cost

As described above, this project provides a great opportunity to establish a regional multimodal corridor that serves people from several cities and counties, and connects them to a number of regional amenities and employment opportunities. This study will look to establish a cohesive multimodal vision for this corridor that moves motorists, cyclists, pedestrians, and transit riders. Without some form of study or document that guides the corridor toward this vision, development may preclude the best possible design options for the corridor.

Regional & Subregional Connector

Broadway is a prominent north/south connecter in the DRCOG region that spans from Highlands Ranch north to Downtown Denver where is becomes Brighton Blvd. During the peak hour Broadway is used by commuters who need to access Denver, Englewood, Littleton, Centennial or Highlands Ranch. In Littleton specifically, it is 1 of 2 north/south arterials that span the entire city which makes it a vital roadway for Littleton residents. This project would focus on the section from Belleview to C-470, but would take into account relevant plans from neighboring jurisdictions.

Establish a Cohesive Vision

This portion of Broadway varies greatly in its cross-section width, number of lanes, access control, and adjacent land use. As travel on the corridor increases, a cohesive and well-planned vision will be needed to efficiently move people through the corridor and guide development to support future transportation. This plan will also help prevent this section of Broadway from becoming a bottleneck in the future which could impact nearby municipalities and adjacent subregions.

BRT Feasibility Study

In addition to the transportation challenges described above, RTD has identified Broadway as a potential BRT corridor that has been moved into Tier 3 of their BRT Feasibility Study. With redevelopment already occurring on the corridor, and traffic volumes increasing, this study will examine how BRT might best fit into this changing corridor before future growth precludes the best possible application of BRT.

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

Along with benefitting the City of Littleton, this project will benefit the following municipalities:

Highlands Ranch (Place)

Broadway provides direct access from Highlands Ranch to Downtown Denver, and this study will take into account the traffic coming from Highlands Ranch and the modal needs of people from Highland Ranch that use this segment of Broadway. In Highlands Ranch, the Broadway cross section includes dedicated multimodal facilities, and this study will examine how best to continue this infrastructure north into the project extent.

Centennial

Broadway provides north/south access along Centennial's western edge and direct access to Downtown Denver. This study will consider the traffic coming from Centennial and the modal needs of Centennial residents that use this segment of Broadway. In addition, several areas of the corridor are regulated by Littleton on one side and Centennial on the other, this study will aim to create a unifying vision for the corridor that both municipalities contribute to and uphold. Included in this application is a letter of support from the City of Centennial.

Englewood

Broadway provides north/south access through Englewood and access to Highlands Ranch and Douglas County for those coming from Englewood. This study will consider the traffic coming from Englewood and the modal needs of people from Englewood that use this segment of Broadway. In addition, it will look to connect proposed multimodal facilities to those that exist in Englewood.

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

Along with benefitting the Arapahoe County subregion, it will also benefit the following subregions:

Douglas County
This study will address capacity issues and modal needs of the people who live near the corridor and rely on it for regular travel including residents and businesses south of the project extent in Douglas County. This study will also take into account plans from Douglas County that will impact this segment of Broadway. Additionally, growth from the Sterling Ranch development will heavily impact volumes on Santa Fe Dr, and this study will examine what can be done to establish Broadway as competitive alternative to Santa Fe during peak hours.

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

Growth Challenges (2040 MVRTO, pp. 9)
Population & Economic Growth
This project will examine both the transportation on the corridor in light of the anticipated nearby growth and possible future BRT. In doing so, this study will aim to create a vision for the corridor that responsibly accommodates future population growth, increased travel demand, and encourages economic growth along the corridor.

Land Development Challenges (pp. 9)
Location of Growth
This project will look at expected growth near the corridor and create a strategy to guide more intense development to this segment of the Broadway given that it's a region corridor and the desire to support future high capacity transit on Broadway. By planning for and guiding development here, this study will help promote growth in the appropriate locations.

Social Challenges (pp. 10)
Increased Travel
This project will look at how best to move people on Broadway through the use of multimodal planning that promotes walking, cycling, and transit to help ease vehicle congestion and accommodate increased travel.

Transportation Challenges (pp. 13)
Traffic Congestion
This study will look at all the factors that contribute to congestion along the corridor to determine the best course of action to help relieve it.

Traffic Crashes
This study will take an in depth look at the crash data to determine which areas are accident-prone and need special examination to improve safety. In addition, this study will use best practices to recommend safety measures for future cyclists and pedestrian facilities on the corridor.

Environmental Challenges (pp. 17)
Air quality

It is well documented that congestion causes vehicles to burn more fuel which adds to air pollution in areas near congested roadways. This project will look to alleviate congestion throughout the corridor which can help improve air quality.

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?

Congestion/Travel Times:

This plan will examine ways to reduce travel times and congestion by recommending changes in the roadway's cross section, access management, and signal timing. All these factors will help vehicles flow through the corridor more smoothly providing greater access to businesses and properties adjacent to and near the corridor. In addition, the plan will examine how best to accommodate future high capacity transit and/or BRT, as well as improving bike and pedestrian facilities along the corridor. Ultimately, the goal will be to reduce travel time and congestion on the corridor by moving more people through it in a more efficient manner. This will allow commuters and business that rely on the corridor to spend less time in traffic and be more productive.

North/South Connectivity:

All the north/south corridors in this part of the DRCOG region (Santa Fe, Broadway, and University) are experiencing significant congestion and have been identified as such by DRCOG. That congestion is expected to worsen in 2040 as the region's population and economy grow. This plan will look to improve operations, alleviate congestion, and move more people by creating a corridor that facilitates multimodal travel. This will help businesses and people who rely on Broadway for commuting and regular business operations.

Future BRT

Broadway has been identified as a potential BRT corridor and moved forward into RTD's Tier 3 BRT Feasibility Study. By considering how BRT can be incorporated into the corridor along with other transportation changes at this early stage, the aim is to have as minimal an impact as possible on businesses and residents on the corridor. By working with business owners and residents to strategize a phased implementation approach, the study can outline a path that achieves the goals of improved transportation while strategically helping businesses and residents thrive during future construction and benefit from the final outcome.

Multimodal Facilities

Facilities along the corridor for pedestrians and cyclists are lacking which can create uncomfortable and unsafe situations for non-vehicle travelers and often deters them from using it. Though there are sidewalks along this segment of Broadway, they vary greatly in width and type (attached vs. detached) throughout the corridor. Currently, no bicycle infrastructure exists along, or parallel to, this segment of Broadway despite other bike facilities (bike routes, bike lanes, and trails) intersecting the corridor 9 times within the proposed extent. This study will examine how best to incorporate bike and pedestrian infrastructure to allow more users to safely navigate the corridor and have greater access to the amenities along the corridor and to the existing bike facilities that intersect it.

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

Transit Enhancement

If the corridor is chosen for BRT, this study will examine how best to accommodate it into the corridor and how best to provide nearby residents access to BRT stations.

If the corridor is not ultimately identified for future BRT, this study will examine how the corridor can best support existing transit and set the stage for future high capacity transit upgrades.

Bike Facilities

As mentioned above, bike facilities intersect this corridor 9 times within the proposed extent, but no adequate bike facilities exist along this section of Broadway. This project will examine how best to incorporate bike facilities

either along the corridor or on a nearby parallel facility.

Ped Facilities
As mentioned above, sidewalks along the corridor vary widely. This study will examine how best to create a consistent standard for sidewalks on the corridor, identify areas that need ADA compliance upgrades, and areas that would be best suited for mid-block crossings.

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

The City of Littleton is coordinating with Centennial and Englewood, but no formal agreements have been reached.

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).**

Vulnerable Populations
Within 1 mile of the proposed project extent are a number of people that belong to a vulnerable population. Of the vulnerable populations, those without access to a vehicle or who are unable to operate a vehicle, stand to benefit the most from this project because it aims to increase access to all modes of transportation. In addition to vulnerable populations, there are also 24 nearby blocks that are CDBG eligible and 7 TAZ's considered to be Environment Justice (EJ) Analysis Zone's. This study will examine how best to accommodate BRT throughout the corridor and ensure that it is accessible for all of the populations and areas listed above. Even if this corridor is not ultimately selected for BRT, this study will examine where vulnerable and transit dependent populations live along the corridor and work with RTD to better provide transit access to these areas.

Healthcare Facilities & Active Living

Within 1 mile of the corridor there are 36 healthcare facilities that could be impacted by this project. This study will examine how best to provide access to them—especially for those that are within ¼ mile from the corridor. In addition, this study will look at providing dedicated bike infrastructure, ADA compliant sidewalks, and better trail connections. This will provide more mobility choices for those who use Broadway access to these healthcare facilities.

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

Multimodal Network Connections

Broadway is a major north/south connector for the City of Littleton and the Arapahoe County subregion. While there is sidewalk throughout the corridor, the width and type vary from block to block and in several places doesn't meet current ADA standards. Additionally, there is no bike infrastructure along the corridor or on nearby parallel facilities for cyclists to access. This is despite there being a nearby parallel route north of the proposed extent in Englewood, and a bike lane on Broadway south of the extent in Highlands Ranch. This study will look at the best solution for providing bike infrastructure along—or nearby and parallel to—the corridor and how best to tie into adjacent bike and pedestrian infrastructure.

In addition to being a primary north/south arterial, the Broadway corridor is intersected 9 times by bike facilities within the proposed project extent. This study would examine each crossing then determine the best way to connect proposed bike and pedestrian infrastructure with intersecting facilities.

By studying how to best upgrade and fill in gaps in the local multimodal network, this study will help increase the

reliability of the overall regional multimodal network.

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

Crash Data

In examining existing conditions on the corridor, this study will rely heavily on crash data from the previous 5 years to determine areas and intersections that are accident-prone. This data will be a key factor in creating a holistic vision for the corridor that makes transportation more accessible, efficient, and safe. For example, the intersection of Broadway and Littleton Blvd has a relatively high number of bike-car and rear-end accidents, so this study will examine how different signal timing strategies, access management approaches, and/or intersection treatments might prevent them. Similar strategies would be employed throughout the entire proposed study extent.

Dedicated Multimodal Facility

Another area this study will look at is upgrading and providing dedicated facilities for alternative transportation modes (walking, biking, and transit). As described above some sidewalks along the corridor are non ADA compliant and this study would make recommendations for meeting ADA standards, and, where possible, examine the possibility of detached sidewalks to provide a safer place for pedestrians. Likewise, this study will look at how to provide dedicated and/or protected bike infrastructure where possible, and, if this corridor is chosen for BRT, how to best accommodate BRT infrastructure. Having dedicated facilities for different modes will improve user expectancy and help prevent conflicts between faster and slower modes of transportation—ultimately making the corridor safer.

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*

Coming Redevelopment

Though this section of Broadway does not have any DRCOG designated Urban Centers, the corridor is bookended by urban centers at Broadway and Hampden (Englewood City Center) to the north, and Broadway and Highlands Ranch Pkwy (Highlands Ranch Town Center) to the south. Additionally, higher intensity development is beginning to popup throughout the corridor especially on the southern end near the C-470 interchange. Traffic volumes range between about 30,000 and 50,000 ADT which is consistent with other corridors in the DRCOG region that support higher intensity land uses than those currently on the corridor. These volumes are expected to increase and DRCOG has already identified this stretch of Broadway as one that will be heavily congested in the future.

Currently there are 11 projects on the corridor that have the potential to impact future transportation options. This study will make suggestions to facilitate growth that supports the recommended transportation on the corridor while ensuring it doesn't preclude the best possible design options.

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*

The Missing Link

In many ways this segment of Broadway is the missing link for a number of multimodal facilities. As described above, the segment is bookended by urban centers, there are bike facilities both to the north and south, there are bike facilities that cross the corridor 9 times, and, if selected, this can be a key corridor for BRT in the region. This study will look at all these components in recommending a roadway that connects the facilities on either end of the corridor and connects people to employment. By doing so it will help in establishing a key multimodal connection for the region and will provide greater access to the nearby urban centers and employment concentrations.

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*

Greater Access to Transit
If Broadway is chosen for BRT, then this study will look at the best way to accommodate the necessary BRT facilities along this segment of the corridor. It will also look at where to locate stops and stations to provide greater access to transit for those who may be dependent on it. By improving the quality of transit and the location of transit stops this study will help provide greater access to transit. This will improve mobility choice for those living near the corridor in the subregion, and those traveling to it from outside the subregion.

Better Bike & Pedestrian Facilities
This study will look at providing improved sidewalks to better accommodate all users and create a greater sense of safety for pedestrians. In addition, it will look to provided dedicated bike facilities along or nearby the corridor so that cyclists can take advantage of the north/south connectivity the corridor provides. Both these efforts will increase mobility choice for those who live near the corridor and would like to bike or walk to nearby destinations. It may also increase mobility choice for those who live outside the subregion but may depend on the corridor to commute.

Better Bike & Pedestrian Connections
This segment of the Broadway Corridor is intersected 9 times by other bike facilities and this study will examine how best to connect the proposed bike infrastructure on the corridor with those that intersect it. Some of these bike facilities are shared trails like the Highline Canal Trail which also carries pedestrians. This study will look at making better connections to these intersecting facilities.

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*

Congestion Relief

It is well documented that greater traffic congestion burns greater amounts of fuel, and that when cars burn fuel they emit ground level ozone, carbon monoxide, particulate matter, greenhouse gases, and other air pollutants. This study will look to ease congestion by examining signal timing and access management which help improve traffic flow. It will also look at providing safe facilities for bikes and pedestrians, and at making transit a more competitive mode of travel, all of which could attract people away from single occupancy vehicles and could lessen congestion and thus 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*

The Missing Link

In many ways this segment of Broadway is the missing link for several multimodal facilities. As described above, the segment is bookended by urban centers, there are bike facilities both to the north and south, there are bike routes, local trails, and regional trails that cross it, and, if selected, this can be a key corridor for BRT in the region. This study will look at all these components in recommending a roadway that connects the facilities on either end of the corridor. By doing so it will help in establishing a key multimodal connection for the region and will provide greater access to the nearby urban centers and employment concentrations. In addition, this corridor is within a ¼ mile of 10 parks or open spaces. This project will study how best to connect the corridor with nearby parks and open space.

Highline Canal Trail

The Highline Canal Trail is a regional amenity that meanders its way diagonally through the metro area. In this segment of Broadway, it intersections the roadway three times, but only one of these crossings provides safe access for users to traverse the roadway. This study will examine how best to accommodate these crossing in a manner that upholds the trail users' safety and connects the trail with multimodal facilities on the corridor.

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*

Opportunity Leads to Action

Several studies suggest that better walking and biking infrastructure leads to more walking and biking. A study out of Atlanta found that residents of 'high walkability' neighborhoods were twice as likely to meet physical activity guidelines as compare to resident of 'low walkability' neighborhoods. Additionally, a study out of Portland State University found that protected bike lanes lead to a 21-171% increase in ridership on that facility, and that 10% of those riders previously used a different mode of travel. The Broadway Corridor Plan will study how to make this segment of Broadway more walkable and bikeable and by doing so will provide opportunities to lead more active and healthier lifestyles for those nearby.

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*

Greater Access to Regional Amenities
As outlined above, this study will look at how to best accommodate improved sidewalks, dedicated bike facilities, and BRT infrastructure into this segment of the Broadway corridor. By doing so, this study will be one step in providing greater access to regional amenities and key destinations like employment concentrations, urban centers, and healthcare facilities for people of all income levels and ability types.

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? ☒ Yes ☐ No

Describe, *including supporting quantitative analysis*

Preparing for BRT & Redevelopment
This study will look at how to accommodate BRT on this segment of the Broadway corridor and how best to encourage higher intensity land uses that are supportive of high-frequency transit and BRT. This segment of the Broadway corridor is already experiencing pockets of redevelopments and this study will examine how to best prepare for and encourage responsible redevelopment throughout the corridor. By planning for and encouraging redevelopment to higher intensity uses, this project will help promote economic growth in the subregion.

D. Project Leveraging

WEIGHT 20%

9. What percent of outside funding sources (non-DRCOG-allocated Subregional Share funding) does this project have?	20%	41%+ outside funding sources ..... High 31-40% ..... Medium 30% and below ..... Low

Part 3 Project Data Worksheet – Calculations and Estimates

(Complete all subsections applicable to the project)

A. Transit Use

1.	Current ridership weekday boardings	491
2.	Population and Employment	

Year	Population within 1 mile	Employment within 1 mile	Total Pop and Employ within 1 mile
2020	46,294	35,023	**81,317**
2040	53,086	41,871	**94,957**

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)* *Provide supporting documentation as part of application submittal*	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:

Because this project is a study it will not have any anticipated impact on transit ridership. As part of this study the City of Littleton will determine the best possible strategy to increase transit ridership.

B. Bicycle Use

1.	Current weekday bicyclists	0
2.	Population and Employment	

Year	Population within 1 mile	Employment within 1 mile	Total Pop and Employ within 1 mile
2020	46,294	35,023	**81,317**
2040	53,086	41,871	**94,957**

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:

Bike and pedestrian counts will be collected and analyzed as part of this study. Because this project is a study it will not have any anticipated impact on bike use. As part of this study the City of Littleton will determine the best possible strategy to increase bike use.

C. Pedestrian Use

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

Year	Population within 1 mile	Employment within 1 mile	Total Pop and Employ within 1 mile
2020	46,294	35,023	**81,317**
2040	53,086	41,871	**94,957**

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:

Bike and pedestrian counts will be collected and analyzed as part of this study. Because this project is a study it will not have any anticipated impact on pedestrian use of this corridor. As part of this study the City of Littleton will determine the best possible strategy to increase pedestrian use.

D. Vulnerable Populations

	Vulnerable Populations	Population within 1 mile
Use Current Census Data	**1.** Persons over age 65	6,127
	2. Minority persons	8,940
	3. Low-Income households	1,768
	4. Linguistically-challenged persons	992
	5. Individuals with disabilities	2,301
	6. Households without a motor vehicle	955
	7. Children ages 6-17	6,280
	8. Health service facilities served by project	36

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	50,000
2. 2040 ADT estimate	0
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
6. Enter value of **{#5 X 1.4}** = **Reduced person hours of delay** *(Value higher than 1.4 due to high transit ridership must be justified by sponsor)*	0
7. **After project peak hour congested average travel time reduction** per vehicle (includes persons, transit passengers, freight, and service equipment carried by vehicles). *If applicable, denote unique travel time reduction for certain types of vehicles*	0

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:

Because this project is a study it will not have any anticipated impact on traffic congestion or travel delay. As part of this study the City of Littleton will determine the best possible strategy to decrease congestion and travel delay.

F. Traffic Crash Reduction

1. Provide the current number of crashes involving motor vehicles, bicyclists, and pedestrians *(most recent **5-year** period of data)*		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).* *Note: Because this is a study, trying to estimate any reduction in crashes would be premature.*
Fatal crashes	1	
Serious Injury crashes	95	
Other Injury crashes	0	
Property Damage Only crashes	1,039	
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	0	
Other Injury crashes reduced	0	
Property Damage Only crashes reduced	0	

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	Fair

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

Pavement is 20+ years old asphalt with wear and tear consistent with its age. Because this is a study any predictions on possible impacts to pavement would be premature.

3. Average Daily User Volume	50,000

Bicycle/Pedestrian/Other Facility

4. Current bicycle/pedestrian/other facility condition	Fair

5. Describe current condition issues and how the project will address them.

Bicycle facilities are nonexistent, but sidewalks are consistent throughout the corridor. However, they vary greatly in type (attached vs. detached) and in width. Because this is a study predictions on possible upgrades to bike and pedestrian facilities would be premature.

6. Average Daily User Volume	Unsure

H. Bridge Improvements

1. Current bridge structural condition from CDOT

   3 Bridges over the Highline Canal, rated:

   81.4, 73.9, and 88.3

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	35,000

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

1.	Unsure
2.	Unsure
3.	Unsure

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

1. Increase in VMT? *If yes, describe scale of expected increase*	☐ Yes ☐ No

Unsure

2. Negative impact on vulnerable populations

Unsure

3. Other:

Unsure

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, final coordination with neighboring jurisdictions, the release of an RFP, and selection of a consultant team will need to be completed prior to starting.

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.
   No, however, one of the targeted outcomes of this study would be to identify possible challenges.

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

   Unsure, one of the targeted outcomes of this study would be to identify potentially controversial issues.

4. Does the project or program benefit more than just the sponsoring agency and considered subregionally significant/transformative?
   Yes, this project will benefit Arapahoe County, Douglas County, Denver County, Highlands Ranch, Littleton, Centennial and Englewood by planning for future BRT which will grant greater access to the aforementioned jurisdictions.

5. Does the agency have capacity and expertise to manage a federal project?
   a. Explain experience, approach, etc.
   Yes, the City of Littleton has managed federally funded transportation projects successfully in the past.
   The most recent example is the Broadway and County Line Road Intersection, and, in addition, four other projects are currently underway.
   There will be both a Project Manager to ensure the project is completed correctly and on time, and a Grant Manager to ensure project expenditures, timelines, and documentations meet the standards required by the TIP Program.

6. Is the project a next logical phase of a project funded in previous TIP cycles?
   No

7. Of the partnerships described in Section A, Question 7, are the partnerships providing funding?
   a. Describe the partnerships and funding of such.
   No

8. Are there any other “special considerations” the committee should consider in evaluating the application?
   Yes, this study will set the stage for what could be the subregion’s first BRT project. By performing this study in this early stage, BRT will have the best possible chance of success on Broadway and new development will not preclude putting forth the best possible transportation solutions.