

Part 1

Base Information

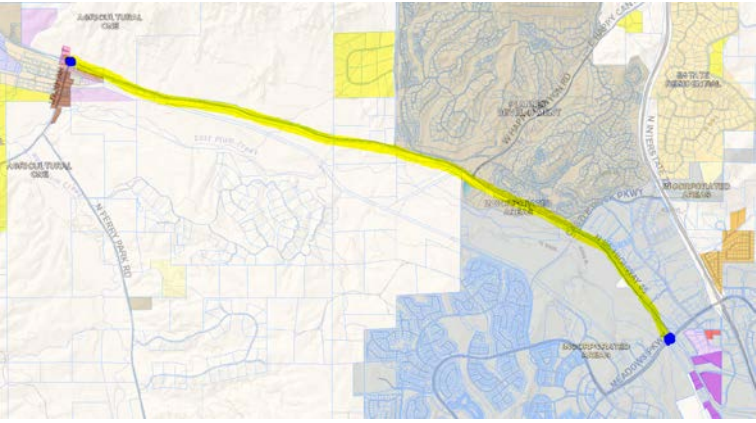
1. Project Title

US 85 Widening & Reconstruction

Note: project includes updating EA, final design, right-of-way acquisition, utility relocations and construction; however, we are only requesting federal funding for final design, utility relocations, and right-of-way acquisition (not for construction funding for this application).

2. Project Start/End points or Geographic Area
Provide a map with submittal, as appropriate

SH 67 to Meadows Parkway (Highlighted in yellow between blue dots)



This federal fund grant request is for design and right-of-way only.

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

Douglas County

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

Art Griffith, Capital Improvements Projects Manager, 303-660-7490, AGriffit@douglas.co.us

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 \(2040 FCRTTP\) \(Page 89 and 143\)](#)

| | |
|---|--|
| <input checked="" type="checkbox"/> Local plan: | Douglas County 2030 Transportation Plan (Nov. 9, 2009), Widening pg. 47, Bike pg. 70-71, Implementation pg. 83-86 Safety Analysis for US 85 Widening, Douglas County Department of Public Works (DiExSys, January 11, 2019) |
| <input checked="" type="checkbox"/> Other(s): | FEIS (2002), CDOT 30% Plans, CDOT ROWPR (2018) |

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 FC RTP)
- Transit Other:
- Bicycle Facility
- Pedestrian Facility
- Safety Improvements
- Roadway Capacity or Managed Lanes (2040 FC RTP)
- 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 subregional problem/issue will the transportation project address?

US 85 is an important Major Regional Arterial (MRA), part of the National Highway System, and a National Freight Corridor, which also serves as a detour route when major incidents occur that require the closure of I-25. US 85 is a critical north-south route connecting the south Denver metro communities with major employment centers. US 85 is also regionally significant because it provides important connections further north into the greater Denver area, also to the I-70 mountain corridor via C-470, and with I-25 corridor with connections further south of Castle Rock into Colorado Springs and Pueblo.

It is paramount that we widen US 85 from a two-lane rural section (without shoulders) to a four-lane expressway roadway section as called for in the 2002 FEIS, which is essential in order to provide a safe and reliable transportation network. This project is included in the 2040 Metro Vision Regional Transportation Plan’s Fiscally Constrained Roadway and Rapid Transit/Roadway Capacity Improvements. The roadway connects two fast growing area in the south metro Denver. Increasing roadway capacity as well as reducing accidents on this corridor are the primary objectives to solve this transportation problem.

SAFETY CONCERNS:

It is Douglas County’s objective to maximize crash reduction within the limitations of available budgets by making road safety improvements at locations where it does the most good or prevents the most crashes.

US 85 is the second most north-south traveled corridor in Douglas County serving residents, employees and visitors across the Southern Front Range (Source: *Douglas County Traffic Count Viewer* <https://apps.douglas.co.us/gis/TrafficCount/>). Travelers using the US 85 corridor today face dangerous conditions with the insufficient travel lanes, intersections without left and right turn lanes, and inadequate shoulders. Recent analysis shows that vehicles are passing slower vehicles on the inadequate shoulders and creating those dangerous conditions. Forecasts of future demand show increased driver frustration, resulting in increased traffic accidents and reduced usage. (Source: *2002 South I-25 Corridor and US 85 Corridor Record of Decision Reevaluation and Section 4(f) Evaluation US 85 Highlands Ranch Parkway to C-470 – Traffic Existing Conditions*)

Using DRCOG’s 2040 Metro Vision Regional Transportation Plan, the region’s population is projected to increase by 37 percent and the number of active transportation trips is projected to increase by 46 percent.

The existing facility is a 2-lane rural highway with 12-foot lanes and paved shoulders ranging from **zero** to 6-feet in width. The existing speed limit is 55 mph. The proposed facility will be a 4-lane, divided rural highway with a raised or depressed center median, 4-foot inside shoulders and 10-foot outside shoulders, which matches the existing template both north and south of the 2-lane section. The project will also include a separated 10-foot multi-use trail. These improvements are essential to providing a safe and reliable corridor.

The mainline, non-intersection accident history for the period of 1/1/2012 through 12/31/2016 was examined between MP 185.60 and 189.55 to locate accident clusters and identify accident causes. One-hundred and thirteen (101) accidents were reported in the 5-year period, with 61 Property Damage Only (PDO), 38 Injury (64 People were injured) and 2 Fatal accidents (2 people were killed).

Below is an aerial showing the project limits and proximity to I-25.

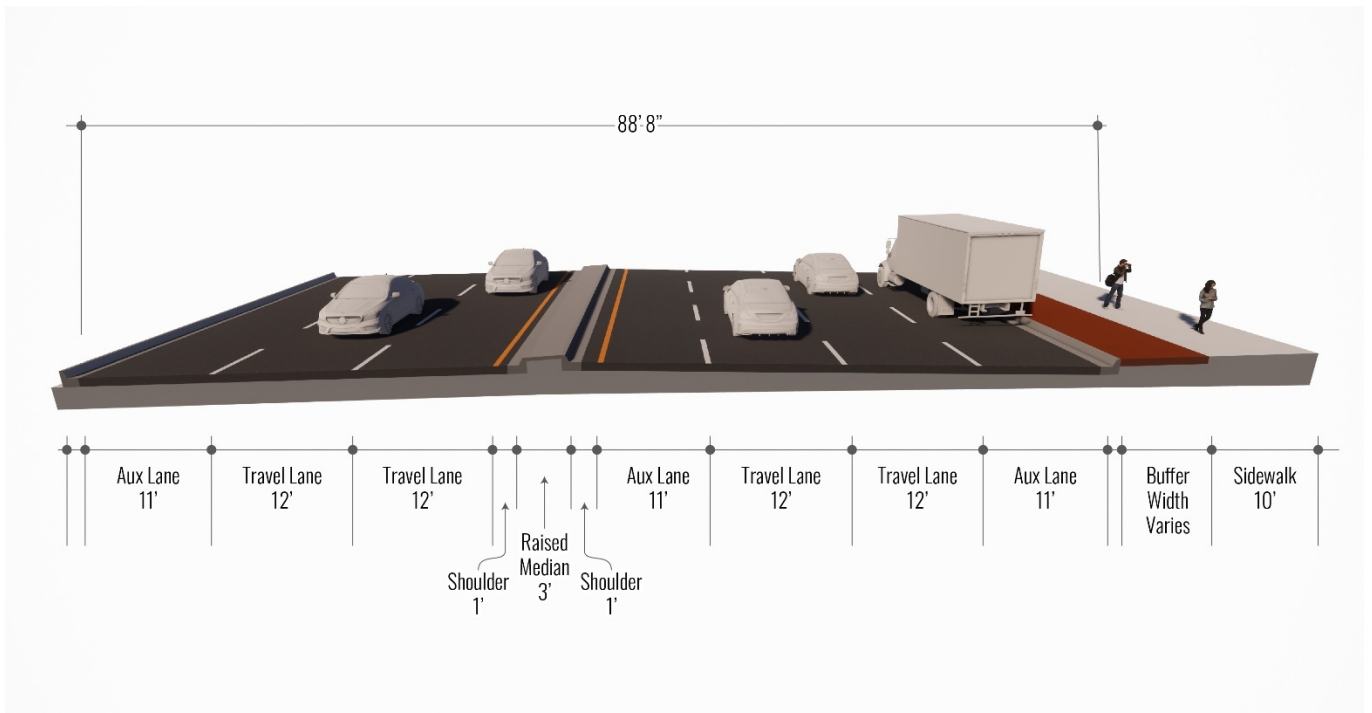


Figure 1: US-85 MP 185.60-189.55 Typical View

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

The US 85 Corridor from SH67 to Meadows Parkway exhibits problems for traffic turning on and off of US 85 and requires implementing an access control plans to minimize severe accidents. This segment of US 85 exhibits crash patterns consistent with highly congested corridors, and lacks multimodal facilities. Future projected growth will worsen these conditions based on 2040 traffic projections. There is a need for other modal options for corridor travelers. There is no north-south bicycle or pedestrian path that provides a means for cyclists or pedestrians to access the numerous trails leading into the Highlands Ranch area, the C-470 Regional Multi-Use Trail (Centennial Trail), and further north to connect with the RTD light rail station at Mineral. There is bus service provided along the US 85 Corridor, beginning as Highlands Ranch Parkway, which could be extended further south in the future to provide service to Castle Rock; and the proposed improvements will better accommodate access to non-motorized travel modes.

Proposed Typical Cross Section



10. What is the status of the proposed project?

The project will be updating/performing a minor reevaluation of FEIS (approved in 2002) primarily to update traffic and noise assessment. Additionally, currently CDOT is advancing final design and right-of-way acquisition (ROWPR plans have been completed and CDOT Transportation Commission approved moving forward with right-of-way negotiations in summer 2018).

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.

The applicant would be willing to consider accepting \$1.0 M in lieu of \$1.5 M.

A. Project Financial Information and Funding Request

| | | |
|---|---|--|
| 1. Total Project Cost | | \$4,000,000 |
| 2. Total amount of DRCOG Subregional Share Funding Request | \$1,500,000 | 38% 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 |
| Applicant Contribution | 1,000,000 | 25% |
| CDOT Funding Request | 1,500,000 | 38% |
| | \$ | |
| | \$ | |
| | \$ | |
| | \$ | |
| Total amount of funding provided by other funding partners <i>(private, local, state, Regional, or federal)</i> | \$2,500,000 | |

| | | | | | |
|---|--|----------------|----------------|----------------|--------------------|
| Funding Breakdown (year by year)* | <i>*The proposed funding plan is not guaranteed if the project is selected for funding. While DRCOG will do everything it can to accommodate the applicants' request, final funding will be assigned at DRCOG's discretion within fiscal constraint. Funding amounts must be provided in year of expenditure dollars using an inflation factor of 3% per year from 2019.</i> | | | | |
| | FY 2020 | FY 2021 | FY 2022 | FY 2023 | Total |
| Federal Funds | \$1,500,000 | \$0 | \$0 | \$0 | \$1,500,000 |
| State Funds | \$1,500,000 | \$0 | \$0 | \$0 | \$1,500,000 |
| Local Funds | \$1,000,000 | \$0 | \$0 | \$0 | \$1,000,000 |
| Total Funding | \$4,000,000 | \$0 | \$0 | \$0 | \$4,000,000 |
| 4. Phase to be Initiated <i>Choose from Design, ENV, ROW, CON, Study, Service, Equip. Purchase, Other</i> | DESIGN/ROW | | | | |

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?

The Douglas County Subregional Transportation Forum rated this project as its top priority, for the reasons already described above.

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

Although the project is located entirely within Douglas County it provides benefit to Highlands Ranch community, Sterling Ranch community, Roxborough community, Sedalia, Louviers, Castle Pines, and Castle Rock.

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

Because of the regional importance of US 85, Jefferson County, Arapahoe County, Douglas County, El Paso County, and the City and County of Denver benefit from this project. US 85 provides access to Denver's Mountain Park (Daniels Park), Chatfield State Park, nearby US Forrest Service property, and access to the I-70 mountain corridor for residents in El Paso County and tourists from southern states.

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

In addition to the information provided above in Part 1, Section #8, see the following comments:

The proposed project improvements will:

1. Provide left turn lanes and acceleration/deceleration lanes where warranted
2. Provide 10-foot paved shoulders
3. Provide a multi-use trail (detached when possible and cost effective)
4. Raised median to control access on and off US 85
5. Improve intersections (signaled when warranted)
6. Provide noise mitigation where required in accordance with federal guidelines
7. Relocate utilities
8. Purchase additional right-of-way where required
9. Improve drainage and add water quality features

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 increase capacity and trip reliability of the regional transportation network and increase safety, improve bicycle and pedestrian accessibility, reduce congestion, and reduce delays with improved access to properties and businesses. These improvements combined with the reducing of delays will allow for an increase in business activity for consumers and business owners.

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

With the addition of the proposed multi-use path, non-motorized travel options will be increased. Ultimately the multi-use path will extend from Castle Rock to the C-470 Regional Multi-use Trail, and provide connections with High Line Canal Trail, several trails into and out of Highlands Ranch, connections into Chatfield State Park and proposed bike and pedestrian facilities being developed by Sterling Ranch in the Chatfield basin, as well as connections to the Colorado Trail at Waterton Canyon.

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

Project funding will be a partnership from Federal Highway Administration, Colorado Department of Transportation and Douglas County.

B. DRCOG Board-approved Metro Vision TIP Focus Areas

WEIGHT **30%**

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

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

The improvements described above will improve mobility and access for the vulnerable population groups living along the US 85 corridor; and provide a safer and more reliable trip to and from nearby health services.

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

Providing a continuous four-lane major arterial roadway section improves the reliability of our transportation network for the reasons described above.

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

Providing a continuous four-lane major arterial highway section will improve its ability to deliver goods and services on this national freight corridor and improve reliability needed for NHS that are used for homeland security and incident management for I-25.

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

By providing a safer and more reliable connection to the existing urban areas, as well as, adjacent to north Castle Rock, an improved SH 85 serves to enhance its role as an area hub and attraction.

| | |
|---|--|
| MV objective 3 | Increase housing and employment in urban centers. |
| <p>2. Will this project help establish a network of clear and direct multimodal connections within and between urban centers, or other key destinations?</p> <p>Describe, <i>including supporting quantitative analysis</i></p> <p>A safer and more reliable SH 85 enhances the connections between the urban centers of Castle Rock and the south Denver metro area and to the open spaces that take access off of US 85. It also provides a very direct connection between communities and employment centers west of I-25.</p> | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| MV objective 4 | Improve or expand the region’s multimodal transportation system, services, and connections. |
| <p>3. Will this project help increase mobility choices within and beyond your subregion for people, goods, or services?</p> <p>Describe, <i>including supporting quantitative analysis</i></p> <p>Increasing safety and dependability of the SH 85 corridor will improve the interconnections of the multimodal transportation system within and beyond the region for motorized and non-motorized trips. US 85 along with SH 83 and I-25 are the only north south entrances into the southern portion of the Denver Metro area and connections to El Paso County and Colorado Springs. Maintaining these options in a safe and efficient manner will expand and improve the regions multimodal transportation system.</p> | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| MV objective 6a | Improve air quality and reduce greenhouse gas emissions. |
| <p>4. Will this project help reduce ground-level ozone, greenhouse gas emissions, carbon monoxide, particulate matter, or other air pollutants?</p> <p>Describe, <i>including supporting quantitative analysis</i></p> <p>A more reliable US 85 will reduce the congestion cause by frequent accidents and the resulting full or partial closures, many of which are due to the lack of a continuous four-lane arterial section. Currently, this segment of the corridor offers little room to bypass traffic around accidents due to lack of shoulders. Detour routes are long and cause additional VMT and VHT. Improved operations of US 85 will reduce congestion on I-25 during peak demand by providing transportation network choices.</p> | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| MV objective 7b | Connect people to natural resource or recreational areas. |
| <p>5. Will this project help complete missing links in the regional trail and greenways network or improve other multimodal connections that increase accessibility to our region’s open space assets?</p> <p>Describe, <i>including supporting quantitative analysis</i></p> <p>Absolutely – As previously stated, US 85 provides numerous accesses to trails, greenways, and open space, including state parks, and US Forrest Service lands. Additionally, more local parks, such as Dupont Park located in Louviers, Sharp-tail Ridge Trail, Ringtail Trail, Swallow Tail Trail, Carpenter Peak Trail, Indian Creek Trail, are all accessed off of US 85 for the front range communities.</p> | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 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*

Enhancing the accessibility to many of the nearby recreational amenities will encourage and promote activities that support healthy and active lifestyles. Additionally, a continuous multi-use trail between Castle Rock and C-470 accommodates a dedicated non-motorized corridor for commuting and recreation uses.

[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*

Located adjacent to this segment of US 85, there are currently approximately 10% (4,764) persons over the age of 65, 424 households with no vehicles available, 2,800 persons with a disability, and 652 households below poverty. Additionally, there are over twenty health services nearby. Providing a more reliable multi-modal transportation network will provide accessibility for all travel choices.

[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*

Improving the safety and resiliency of US 85 will positively impact the health and vitality of the subregion by providing:

- Stronger and safer connection between the communities, employment centers, schools, and health services.
- Better and safer access to the natural resource areas and amenities that are a significant asset for attracting business and jobs

D. Project Leveraging

WEIGHT **15%**

| | | |
|--|-----|---|
| 9. What percent of outside funding sources (non-DRCOG-allocated Subregional Share funding) does this project have? | 63% | 60%+ outside funding sources High 30-59%Medium 29% and belowLow |
|--|-----|---|

Part 3

Project Data Worksheet – Calculations and Estimates

(Complete all subsections applicable to the project)

A. Transit Use

| | |
|---|---|
| 1. Current ridership weekday boardings | 0 |
| 2. Population and Employment (information in this part of the application was provided by Douglas County Planning Department, which is similar to information recently provided by DRCOG) | |

| Year | Population within 1 mile | Employment within 1 mile | Total Pop and Employ within 1 mile |
|------|--------------------------|--------------------------|------------------------------------|
| 2020 | 10,475 | 8,547 | 19,022 |
| 2040 | 12,702 | 14,622 | 27,324 |

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

B. Bicycle Use

| | |
|-------------------------------|---|
| 1. Current weekday bicyclists | 5 |
| 2. Population and Employment | |

| Year | Population within 1 mile | Employment within 1 mile | Total Pop and Employ within 1 mile |
|------|--------------------------|--------------------------|------------------------------------|
| 2020 | 10,475 | 8,547 | 19,022 |
| 2040 | 12,702 | 14,622 | 27,324 |

| 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. | 34 | 104 |
| 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) | 34 | 104 |
| 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) | 30 | 100 |
| 7. = Number of SOV trips reduced per day (#5 - #6) | 30 | 100 |
| 8. Enter the value of {#7 x 2 miles} . (= the VMT reduced per day) (Values other than 2 miles must be justified by sponsor) | 60 | 200 |
| 9. = Number of pounds GHG emissions reduced (#8 x 0.95 lbs.) | 57 | 190 |
| 10. If values would be distinctly greater for weekends, describe the magnitude of difference: We believe that weekend volumes would be greater because they would include recreational users and more cyclists making short trips to and from weekend events. | | |
| 11. If different values other than the suggested are used, please explain here: We did not use increased volumes for additional weekend trips in calculation shown above. | | |

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 | 10,475 | 8,547 | 19,022 |
| 2040 | 12,702 | 14,622 | 27,324 |

| 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 | 20 | 100 |
| 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) | 20 | 100 |
| 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) | 20 | 100 |
| 7. = Number of SOV trips reduced per day (#5 - #6) | 20 | 100 |

| | | |
|---|---|----|
| 12. Enter the value of {#7 x .4 miles} . (= the VMT reduced per day) <i>(Values other than .4 miles must be justified by sponsor)</i> | 8 | 40 |
| 8. = Number of pounds GHG emissions reduced (#8 x 0.95 lbs.) | 7 | 38 |
| 9. If values would be distinctly greater for weekends, describe the magnitude of difference: We believe that weekend volumes would be greater because they would include recreational users and more pedestrians making short trips to and from weekend events. | | |
| 10. If different values other than the suggested are used, please explain here: We did not use increased volumes for additional weekend trips in calculation shown above. | | |

D. Vulnerable Populations

| Use Current Census Data | Vulnerable Populations | Population within 1 mile |
|---|-------------------------------|---|
| | 1. Persons over age 65 | |
| 2. Minority persons | | 1,662 |
| 3. Low-Income households | | 187 |
| 4. Linguistically-challenged persons | | 0 |
| 5. Individuals with disabilities | | 365 households with 1 or more persons with a disability |
| 6. Households without a motor vehicle | | 31 |
| 7. Children ages 6-17 | | 1,496 |
| 8. Health service facilities served by project | | 69 |

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 | 0 |
| 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 <i>(Value higher than 1.4 due to high transit ridership must be justified by sponsor)</i> | 0 |
| 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> | 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:
 Taken from DiExSys Safety Analysis for US-85 Planned Widening (dated January 2019-full report available upon request), preliminary analysis using Highway Capacity Manual methods predicts increase in peak period running speed from 34 mph to 59 mph, resulting in reduced peak period travel time reductions of almost 3 minutes per vehicle over the 3.9-mile project length. The net monetized travel time savings will exceed \$60 Million over 20 years.

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 | 2 |
| Serious Injury crashes | 64 |
| Other Injury crashes | 38 |
| Property Damage Only crashes | 61 |

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

Taken from DiExSys Safety Analysis for US-85 Planned Widening (dated January 2019-full report available upon request), Level of Service of Safety Analysis finds US-85 (excluding intersections) performs in LOSS-III category, reflecting moderate to high potential for crash reduction, in terms of crash frequency and in LOSS-IV category, reflecting high potential for crash reduction in terms of severity.

Patterns of injury crashes, multivehicle crashes, rear end collisions, same direction sideswipe collisions and opposite direction sideswipe collisions were observed. All of the above non-intersection patterns are related to congestion, and all will be effectively addressed by providing a continuous four lane arterial highway section as identified in the proposed solution. Based on observed crash history at another location on US-85, before and after similar 4-laning and improvements, the net safety benefit of the proposed widening project is expected to exceed \$29 Million, (with additional safety benefits at the intersections).

At Promenade Parkway the existing intersection performs in the LOSS-III category, reflecting moderate to high potential for crash reduction in terms of total crashes and in terms of severity. Rear end and same direction sideswipes are over represented at the intersection. It is recommended and assumed that acceleration/deceleration lanes will be provided for all allowed movements to and from US-85 at all major intersections, to address the observed crash types.

At Happy Canyon Road the existing intersection is estimated to perform in the LOSS-IV category, reflecting high potential for crash reduction, in terms of both total crashes and severity.

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*).

| | | |
|---|---|--|
| See report for predicted crash reductions. | | |
| 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. As part of the proposed project, the entire existing pavement will be removed and replaced. | |
| 3. Average Daily User Volume | 19,000 |

Bicycle/Pedestrian/Other Facility

| | |
|---|----------------|
| 4. Current bicycle/pedestrian/other facility condition | Choose an item |
| 5. Describe current condition issues and how the project will address them. | |
| 6. Average Daily User Volume | 0 |

H. Bridge Improvements

| | |
|---|---|
| 1. Current bridge structural condition from CDOT N/A | |
| 2. Describe current condition issues and how the project will address them. | |
| 3. Other functional obsolescence issues to be addressed by project | |
| 4. Average Daily User Volume over bridge | 0 |

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

| | |
|----|--|
| 1. | |
| 2. | |

3.

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

1. Increase in VMT? *If yes, describe scale of expected increase*

Yes No

2. Negative impact on vulnerable populations

3. Other: