## US 6 – CO 9 CORRIDOR OPERATIONS STUDY EXECUTIVE SUMMARY

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### **Executive Summary**

CDOT identified a need to take a data-driven approach to corridor operations and safety to identify efficiency improvements for US 6 and CO 9 in Summit County within the context of existing and proposed land uses and infrastructure. The study limits extend from the I-70 Exit 205 interchange to the north on CO 9 to Hamilton Creek Rd and to the east on US 6 to Lake Dillon Drive. Effects of the Wildernest Rd/Stephen's Way loop were considered in the analysis.

#### Process

Prior to evaluating corridor operations and alternatives, the project team identified core values and critical issues in partnership with PLT members, including Town of Silverthorne, Town of Dillon, and Summit County. Core Values included the following:

- Corridor Operations
- Safety
- Mobility and Accessibility for All Users
- Communities Collaboration between Local Agencies and CDOT
- Sustainability

An evaluation matrix was developed with criteria to measure whether alternatives met these Core Values. Results of the matrix were used identify recommendations for the corridor.

To establish a comprehensive understanding of existing conditions and anticipated future growth and development, the project team used the following approach:

- 1. Developed technical methodologies for traffic projections, traffic analysis, and application of access management principles.
- 2. Identified a desired "design condition". Friday afternoon and Sunday morning in July were identified as the annual 30<sup>th</sup> highest hour "design" condition. This is unique because traffic operations are typically evaluated for recurring weekday demand.
- 3. Gathered data from multiple sources including traffic counts, origin-destination data, statewide traffic model outputs, and previous local studies.
- 4. Conducted field observation for real-world understanding of traffic patterns and conditions.
- 5. Reconciled the statewide traffic model growth with the local agencies' understanding of potential development. Traffic is expected to increase by 45% in 2045 on US 6 and CO 9.
- 6. Calibrated traffic models via direct observation to match existing conditions.

The project team identified and evaluated a range of potential solutions. Using the evaluation matrix, recommendations for potential improvements were identified.



#### Alternatives

The project team identified a range of potential solutions to consider for overall corridor operations including:

- Traffic control management solutions
- Interchange improvements.
- Access management solutions.
- Multi-modal improvements.
- Alternative routes.

Given the build-out throughout the corridor, capacity improvements were specifically excluded from the study since the physical impacts on the local communities would be too great (i.e. loss of developed properties, expansion of existing barriers for pedestrians and bicyclists). A high level evaluation to understand the potential effects that 6 lanes of traffic would provide was conducted. The result revealed that 6 lanes would not fully accommodate the projected traffic volumes and confirmed the expected scale of impacts.

#### Recommendations

Alternatives were evaluated based on twenty criteria with a simple positive, neutral, or negative rating system. Three alternatives provided overall favorable results and are recommended for implementation:

- **Traffic Signal Timing Improvements** Initial traffic signal timing improvements were implemented in 2022 with 9-22% improvement in travel time.
  - Recommend routine review of traffic signal timing plans to match realized growth
  - Recommend investigation of demand responsive signal system to maximize application of timing plans
- Implementation of Proposed Access Management Plan
  - Recommend installing medians to restrict movements between traffic signals
  - Recommend extending and/or adding auxiliary lanes for signalized intersections and proposed ¾ movements
  - Recommend widening key local streets to accept dual left-turn lanes from US 6 and CO9 including Ruby Ranch Road, Wildernest Road, Stephen's Way, Little Beaver Trail, and Dillon Ridge Road
- Invest in Mode Shift
  - Recommend implementing pedestrian and bicycle improvements to provide connectivity including closing sidewalk gaps, making connections to trail system, grade-separated crossings of US 6, and support off-highway multimodal routes
  - Recommend implementing the Summit Stage Short Range Transit Plan and investigating opportunities for inter-regional transit and a Long Range Transit Plan.
  - Recommend aligning local land-use requirements and parking regulations to support mode shift.
  - Recommend investigating opportunities to support micromobility options such as e-bikes and scooters which could include development of a micromobility hub in the area



#### Interchange Findings

Based on the evaluation matrix, the interchange alternatives with various subarea options provided mixed results. Regardless of the interchange configuration, the US 6-CO 9 corridor is expected to be over capacity in 2045 and several intersections within the study area will not operate at an acceptable LOS.

The results of the diamond interchange vs DDI microsimulations show an increase in network capacity and off-ramp travel time performance when implementing the DDI, however travel time performance along the US 6 CO 9 corridor worsened. While the DDI can move more vehicles through the interchange, the adjacent intersections experience more congestion. The closely spaced intersections and existing roadway do not have the capacity to move the traffic demand through the corridor.

In reviewing local and statewide resiliency for I-70, US 6 and CO 9 currently provide critical redundancy to I-70 via the strength of connection they provide to US 40. Given recent natural incidents and the risk of continuing incidents along the I-70 corridor, the risk of closures on I-70 is heightened and is expected to remain high within the study period. Construction of a DDI at the junction will limit redundancy and capacity to accommodate I-70 closures for multiple seasons both locally and statewide. The diamond interchange also offers the ability to run I-70 traffic along the ramps across US 6/CO 9 if the I-70 bridge becomes unavailable.

In conclusion, as shown by the evaluation matrix results, the operational benefits that the DDI offers are not compelling enough for CDOT to support the implementation of a DDI at this time due to the risk of limiting I-70 redundancy. Access management improvements and other local road improvements, including the realignment of Little Beaver/Stephen's Way and widening Wildernest and Stephen's Way to four lanes, contribute positively to improved operations and redundancy on US 6 and CO 9.

#### **Project Funding Opportunities**

There are currently many funding opportunities available for transportation infrastructure at the federal, state and local level, especially for local agencies that are trying to advance safety, multimodal transportation, transportation equity, sustainability, economic development, freight, and resiliency. A series of infrastructure improvements have been recommended by the study to create an overall vision for US 6 and CO 9 to address safety and operations. The improvements identified by this operations study show benefit in most, if not all, of these areas. In addition, the majority of these opportunities are enhanced when multiple agencies join together to solve transportation issues at the local and regional level. With this study and the local planning completed and in progress, the communities in Summit County are poised to work together to advance operations and safety throughout the US 6 CO 9 corridor.



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### Introduction

In 2023, the Colorado Department of Transportation (CDOT) identified a need to take a datadriven approach to corridor operations and safety to identify efficiency improvements for US 6 and CO 9 in Summit County within the context of existing and proposed land uses and infrastructure. The following four key components were considered in the study:

- Interchange improvement opportunities at I-70 Exit 205
- Access management opportunities
- Spot improvements along the corridor
- Accommodation of multimodal users including transit, bicycle, and pedestrian improvements

The study area located in Summit County begins north of I-70 in the Town of Silverthorne and runs south to the Town of Dillon as illustrated in Figure 1. The limits of the project are along CO 9 between the I-70 interchange (MP 101.56) and Hamilton Creek Road (MP 103.980) and along US 6 between the I-70 Interchange (MP 208.66) and the Evergreen Drive / Lake Dillon Drive (MP 209.84) intersection, totaling approximately 3.63 miles of highway. Effects of the Wildernest Rd/Stephen's Way loop were considered in the analysis.



#### **Figure 1: Study Area**

The US 6 CO 9 corridor experiences a wide range of traffic demand conditions. Seasonal recreational opportunities make the area most popular during winter and summer months with peak travel time typically occurring on the weekends. US 6 and CO 9 also provide connectivity to other popular destinations in Colorado and serve as alternative routes when I-70 is closed.



### Process

Prior to evaluating corridor operations and alternatives, core values and critical issues were identified in partnership with Project Leadership Team (PLT) members, including Town of Silverthorne, Town of Dillon, Summit County, and CDOT. Core Values include the following:

- Corridor Operations
- Safety
- Mobility and Accessibility for All Users
- Communities Collaboration between Local Agencies and CDOT
- Sustainability

An evaluation matrix was developed with criteria to measure whether alternatives met the PLT's Core Values. Results of the matrix evaluation were used to formulate corridor recommendations.

To establish a comprehensive understanding of existing conditions and anticipated future growth and development, the project team used the following approach:

- Developed technical methodologies for traffic projections, traffic analysis, and application of access management principles.
- Identified a desired "design condition". Friday afternoon and Sunday morning in July were identified as the annual 30<sup>th</sup> highest hour "design" conditions. This is unique because traffic operations are typically evaluated for recurring weekday demand.
- Gathered data from multiple sources including traffic counts, origin-destination data, statewide traffic model outputs, and previous local studies.
- Conducted field observations for real-world understanding of traffic patterns and conditions.
- Reconciled the statewide traffic model growth with the local agencies' understanding of potential development. Traffic is expected to increase by 45% by 2045 on US 6 and CO 9.
- Calibrated traffic models to closely match existing conditions.



### Alternatives

The project team identified a range of potential solutions to preserve overall corridor operations and safety over time, including:

- **Traffic control management** such as traffic signal timing, installation and/or removal of traffic signals, and installation of intersection treatments such as roundabouts.
- Access management. Evaluated operations and safety for public road intersections and made recommendations for allowable movements, auxiliary lane improvements and intersection traffic control.
- Interchange improvements. Initial high-level evaluations of various interchange types were conducted. These analyses validated that a diamond and diverging diamond interchange (DDI) configurations were appropriate options for consideration consistent with the 2012 Planning and Environmental Linkages (PEL study). Using micro-simulation, a detailed evaluation of corridor operations between 4<sup>th</sup> Street and Dillon Ridge Road was conducted for a diamond interchange and DDI interchange five different access and geometric alternatives for US 6 east of the interchange identified as subarea options.
- **Multi-modal improvements.** Identified alternatives to improve safety and connectivity for multi-modal users including pedestrians, bicycles, and transit.
- Alternative routes. Considered the feasibility and operational impact of removing traffic from the Exit 205 interchange area through implementation of alternative connections across I-70.

Given the apparent right-of-way constraints, the PLT agreed to specifically exclude capacity improvements from the study since the physical impacts on the local communities would be too great (i.e. loss of developed properties, expansion of existing barriers for pedestrians and bicyclists). A high-level evaluation to understand the potential effects that six lanes of traffic would provide was conducted. The result revealed that six lanes would not fully accommodate the projected traffic volumes and confirmed the expected scale of impacts.

### **Traffic Control Management Solutions**

With the many planned developments and altering traffic patterns along the US 6 CO 9 corridor, it is important that the signal timing plans are consistently monitored and updated. The Federal Highway Administration (FHWA) recommends retiming traffic signals every two to three years. This recommendation should be applied to the US 6 CO 9 corridor to ensure that the signals are adapting to the current traffic flow. These updates will help to minimize delays and keep the corridor running smoothly as conditions evolve. In some cases, immediate retiming should be applied where traffic patterns change significantly, such as a new development or a change in the roadway's access. CDOT retimed the traffic signals in the US 6 CO 9 corridor between Annie Road and Lake Dillon Drive in 2022 for three separate seasons: summer, winter and "mud" season. Average travel time improved between 9 percent and 22 percent increasing reliability along the corridor.

In addition to consistently re-timing signal plans based on traffic pattern shifts, monitoring the effectiveness of the technology for and implementing a demand-responsive signal system should be investigated to maximize the current signal plans on the corridor. A demand-responsive signal system is a type of traffic signal control that adjusts signal timings based on real-time traffic



conditions rather than fixed schedules. The system uses sensors to monitor traffic flow and vehicle counts. It then dynamically changes the signal phases based on current demand. The US 6 CO 9 signal system currently implements multiple signal timing plans such as seasonal, AM/PM peaks, and day of week timings. The demand-responsive signal system would allow the corridor to dynamically select from the many timing plans and choose the best fit for the current conditions. This approach would help to optimize traffic flow, reduce congestion, and improve travel times by responding to actual traffic needs rather than relying on preset timings that may not reflect current conditions.

Alternate intersection types were considered at many locations. Roundabouts were considered at the Stephens Way / Wildernest Road intersection and the Dillon Ridge Rd / US 6 intersection (for more details on this, refer to the US 6 – CO 9 Corridor Operations Study - Access Management Summary. Roundabouts were also considered at other locations along US 6, however, the profile grade of US 6 is too high to easily implement them and would create many impacts to adjacent properties

#### Access Management Plan

Corridor specific issues such as intersection spacing, traffic movements, circulation, safety concerns, land use, topography, alternative access opportunities, and other local planning documents were considered while developing the recommendations for major intersections along the corridor. For more information on the existing conditions, operational performance, and local planned developments of the corridor, see *US 6 - CO 9 Corridor Operations Study - Access Management Summary*.

By observing each intersection on a case-by-case basis, opportunities were discovered to minimize conflict points and improve operations along the corridor. Circulation, spacing, and out of direction travel were factors in developing the plan and the individual intersection improvements. Adjustments to existing unsignalized intersections included proposing a median on US 6 and CO 9 to create either <sup>3</sup>/<sub>4</sub> movement intersections or right-in right-out accesses to improve safety and create space for additional auxiliary lane storage.

Once alternatives were developed at each of the corridor's major intersections, the operational performance was evaluated under existing and project future traffic conditions. The Access Management Plan shows improvements for the corridor in the twenty-year (2045) projection, as seen in Table 1.



Corridor Scenario	# of Acceptable Intersections	# of Intersections Nearing Failure	# of Failing Intersections
No-Build	5	4	11
Access Management Plan	10	6	4

#### Table 1: 2045 Intersection Performance

For full analysis results, please see the US 6 - CO 9 Corridor Operations Study - Access Management Summary.

It was determined by the project team and PLT that multiple options needed to be considered in the area between Wildernest Road/Rainbow Drive east to Dillon Ridge Road which includes Stephens Way and the I-70 Interchange ramps. These options were identified as subarea options in the study. Due to the high number of signals within a short distance of roadway and the high volumes of traffic, specifically those vehicles making left turns, several options were developed with five options further analyzed with both a DDI and improved diamond interchange.

Options 4, which relocated Stephen's Way and Little Beaver Trail to create a single four-legged intersection with a t-intersection at the commercial access on the south, and Option 5, which applied a signalized <sup>3</sup>/<sub>4</sub> movement at Stephen's Way, both improved the level of service and capacity at Stephens Way and Little Beaver Trail. Option 4 demonstrated the most improved operations with both a DDI and diamond interchange, reduces conflict points for all users, and is consistent with the Town of Silverthorne's Transportation Master Plan. Option 4 realigns Stephens Way to the east and Little Beaver to the west to create a single signalized intersection . The intersection includes dual eastbound and westbound left turns. The existing Little Beaver Trail north access is closed making the existing signalized intersection a signalized t-intersection for the commercial access on the south. Refer to Appendix C of the US 6 - CO 9 Corridor Operations Study - Access Management Summary for layouts of each option considered.

A complete list of the recommendations included in the Access Management Plan follows. Exhibits of the proposed Access Management Plan and conceptual layouts of the intersection improvements can be found in Appendix B.



#### **Table 2: Access Plan Recommendations**

Intersection	Existing Conditions	Proposed Conditions	Proposed Improvement
Hamilton Creek	Signalized Full Movement	Signalized Full Movement	No Changes
Bald Eagle Rd/ Golden Eagle Rd	Unsignalized Full Movement	Unsignalized Full Movement	Add EB Left Turn Accel Lane
Willowbrook Rd	Unsignalized Full Movement	3/4 Movement	Restrict EB Left Turn Extend NB Left Turn Lane Add SB Right Turn Decel Lane Add EB Right Turn Accel Lane
Smith Ranch Rd	Unsignalized Full Movement	3/4 Movement	Restrict EB, SB and WB Left Turns Extend NB Left Turn Lane
Ruby Ranch Rd	Unsignalized`	Signalized Full Movement	Signalize When Warranted Add Dual NB Left Turn Lanes Widen Ruby Ranch Road to accept dual left turns Add SB Right Turn Decel Lane
W 13th St.	Unsignalized Full Movement	Right-In/Right-Out	Restrict Left Turns
W 12th St.	Unsignalized Full Movement	Right-In/Right-Out	Restrict Left Turns
W 11th St.	Right-In/Right- Out	3/4 Movement	Restrict EB Left Turn Extend NB Left Turn Lane
W 10th St.	Unsignalized Full Movement	Right-In/Right-Out	Restrict Left Turns
W 9th St.	Right-In/Right- Out	Right-In/Right-Out	Restrict Left Turns
Annie Rd	Signalized Full Movement	Signalized Full Movement	Extend NB Left Turn Lane
W 7 <sup>th</sup> St.	Unsignalized Full Movement	Right-In/Right-Out	Restrict Left Turns



W 6 <sup>th</sup> St.	Signalized Full Movement	Signalized Full Movement	Extend SB Left Turn Lane Add SB Right Turn Lane
W 5th St.	Unsignalized Full Movement	Right-In/Right-Out	Restrict Left Turns
W 4th St.	Signalized Full Movement	Signalized Full Movement	*No Changes
W 3rd St.	Unsignalized Full Movement	3/4 Movement	Restrict EB Left Turn Extend NB Left Turn Lane Remove median landscaping to improve sight distance north of 3 <sup>rd</sup> Street
Private Access	<sup>3</sup> ⁄ <sub>4</sub> Movements	Right-In/Right-Out	Restrict Left Turns
Wildernest Rd.	Signalized Full Movement	Signalized Full Movement	NB Dual Left Turn Lanes Widen Wildernest Road to accept dual left turns Add SB Right Turn Lane Add Free NB Right Lane Extend SB Left Turn Lane
Private Properties Between Wildernest Rd and I-70	Right-In/Right- Out	Close Access	Close access with redevelopment and provide access via local roadways
I-70 WB Ramps	Signalized Full Movement	Signalized Full Movement	Extend WB Left Turn Lane
I-70 EB Ramps	Signalized Full Movement	Signalized Full Movement	No Changes
Stephens Way/Little Beaver Trail	Signalized 3- Legged Full Movement	Signalized 4- Legged Full Movement	Shift Stephen's Way east approximately 100' Realign Little Beaver Trail to align with Stephens Way Add Dual EB & WB Left Turn Lanes Widen Stephen's Way and Little Beaver Trail to accept dual left turns Add WB Right Turn Lane



Existing Little Beaver Trail	Signalized Full Movement	Signalized 3-Legged Full Movement	Close North Access
W Anemone	¾ Movement	Right-In/Right-Out	Restrict WB Left Turn
E Anemone Trail/Dillon Ridge Rd.	Signalized Full Movement	Signalized Full Movement	Add Dual SB Left Turn Lanes Widen Dillon Ridge Road to accept dual left turns Separate NB & SB Left Turns from thru movements and eliminate split phasing
Dillon Dam Rd.	Signalized Full Movement	Signalized Full Movement	Extend WB Left Turn Lane Extend EB Right Turn Lane
Lake Dillon Dr.	Signalized Full Movement	*Signalized Full Movement	Extend EB Left Turn

#### Interchange & Subarea Analysis

The analyses performed for the project concluded that both the existing diamond interchange and a diverging diamond interchange (DDI) are the most feasible options for the US 6 CO 9 and I-70 interchange. Microsimulation was used to further analyze which interchange type in combination with adjacent intersection improvements would be the most effective for traffic operations and safety along the corridor. The microsimulation modeled the interchange and the US 6 CO 9 corridor extending from just north of 4th Street to just east of the Dillon Ridge Road/E Anemone Trail intersection. The Wildernest Road and Stephens Way loop was also included.

The microsimulation model was first calibrated to existing conditions to ensure the model is representative of real traffic conditions. Data collection was taken on Friday March 24, 2023, from 4-5 PM and a field visit was conducted at this time to verify traffic conditions. Vehicle and driver parameters in the microsimulation model were adjusted to match these conditions as closely as possible. These parameters were applied to all models for the project.

Microsimulation models were prepared of the No-Build diamond interchange along with adjacent intersections. Existing (2022), Interim (2035), and Future (2045) volumes developed for the project were used along with origin-destination data to capture the specific weaving movements and origin-destinations along the corridor. Microsimulations were run for existing, interim, and future traffic to develop an understanding of how the network is operating today and how traffic growth will impact the existing corridor.

The DDI was also modelled and tied into the corridor's existing geometry. This model was meant to analyze the effects of modifying the interchange to a DDI while keeping the remainder of the corridor as is. The existing, interim, and future traffic demand with origin-destinations applied were evaluated with the DDI configuration.

The results of the diamond interchange vs DDI microsimulations show an increase in network capacity and off-ramp travel time performance when implementing the DDI, however travel time performance along the US 6 CO 9 corridor worsened. While the DDI can move more vehicles through the interchange, the adjacent intersections experience more congestion. The closely spaced intersections and existing roadway do not have the capacity to move the traffic demand through the corridor.

Four subarea options were analyzed in the microsimulations to aid the flow of traffic along US 6 and CO 9. The subarea options considered multiple configurations and access restrictions to the intersections east of the interchange to improve capacity. The subarea options were applied to the diamond interchange and DDI models to analyze which combination of interchange and subarea improvements were most beneficial to traffic operations. Option 4, the realignment of Stephens Way and Little Beaver Trail, had the best results for both the diamond interchange and DDI.

When looking only at the I-70 interchange at US 6 CO 9, the implementation of a diverging diamond interchange shows the most operational benefit, however it leads to more congestion along the US 6 CO 9 network. Additional access modifications implemented in the sub-area options provide additional benefit when paired with the DDI. Overall, the sub-area option 4 shows the best results with both the diamond interchange and the DDI. Refer to the US 6 - CO 9 Corridor Operations Study – Microsimulation Analysis Memo for further details.

### Multimodal Improvements

With the anticipated traffic growth and limitations for increasing capacity along US 6 CO 9, multimodal improvements are an option to reduce traffic and congestion during peak periods.

Currently, there are gaps in the sidewalk and shared-use path networks along the corridor. Pedestrian crossings are limited and challenging due to the wide roadways and heavy traffic, with only one grade-separated crossing existing near Rainbow Drive/Wildernest Road.

Current public transit includes Summit Stage, which provides public transit along US 6 CO 9 with routes connecting Silverthorne, Dillon, and Keystone. Silverthorne Station, located at Adams Avenue and 4th Street, serves as a transit hub for the area, with routes to Silverthorne, Dillon, Wildernest, Frisco, and Keystone.

To encourage a mode shift, several improvements were identified to help reduce traffic congestion, improve accessibility, and improve quality of life for locals and visitors as listed below:

- Extending sidewalks on CO 9 to fill existing gaps, particularly from Ruby Ranch Road to 3rd Street, will better connect new developments and local businesses.
- Adding a shared-use path along the north side of US 6 from the EB I-70 on-ramp to Lake Dillon Drive improves access to Downtown Dillon and local businesses.
- Addition/extension of bike lanes on local roadways to connect neighborhoods and existing trails.
- Grade-separated crossings, such as an underpass at Straight Creek and a pedestrian bridge at Lake Dillon Drive, to enhance pedestrian connectivity.
- Implementation of the Summit Stage Short Range Transit Plan and development of Long Range Transit Plan including investigation of inter-regional transit opportunities



• Non-infrastructure improvements such as adjusting parking regulations, encouraging micromobility options such as e-bikes, and considering a micromobility hub

Refer to the US 6 - CO 9 Corridor Operations Study – Multimodal Improvements Memo for further details.

#### Alternative Routes

Due to projected traffic growth and anticipated future developments, the US 6 and CO 9 corridor is expected to exceed capacity by 2045. To alleviate traffic congestion along the highway, alternative routes were evaluated. These routes would provide bypass options around the interchange, reducing traffic volume. One proposed route would establish a direct connection from I-70 to the east end of the corridor past Dillon Ridge Road / E. Anemone Trail. The second option would connect the residential area Wildernest to Dillon Dam Road. These improvements are projected to reduce traffic through the interchange. Figure 2 outlines the percentage of vehicles that would be removed from the interchange. Despite these potential reductions, US 6 and CO 9 would remain over capacity, and the costs, right-of-way needs, and environmental impacts associated with developing these alternatives significantly outweigh the expected benefits. These options were considered not feasible and do not justify the cost/impact to the corridor and surrounding properties.



**Figure 2: Alternative Routes** 

#### Local Road Improvements

As part of the study, the Wildernest Road/Stephen's Way loop was evaluated. It was confirmed that the loop provides a critical alternative route to the US 6 and CO 9 corridor under I-70 by



reducing demand on the highway and providing resiliency during incidents that impact the highway under I-70. The Town of Silverthorne's plan to provide four lanes of traffic on both Wildernest Road and Stephen's Way improves operations on the highway. Controlling access on both of these roadways, as proposed in the Town's Master Plan, will benefit the system from both a safety and operational perspective.

Based on the recommendations for double lefts from the access management analysis, widening the local roadway to accept double lefts will be required at the following locations: Wildernest Road, Stephen's Way, Little Beaver Trail, Dillon Ridge Road, and Ruby Ranch Road. In addition, the results of the analysis supports the implementation of the following local Master Plan Improvements in Silverthorne, Dillon and Summit County:

- Multimodal connections on US 6
- Option 4 Realignment of Little Beaver Trail with Stephen's Way
- 4 lanes on Wildernest Road and Stephen's Way
- Roundabout at Wildernest Road/Stephen's Way intersection
- Access control on Wildernest Road and Stephen's Way
- Adams Avenue Extension

### **Evaluation**

The project team identified and evaluated a range of potential solutions. Using the evaluation matrix, recommendations for potential improvements were identified.

The analyses done for the project including traffic control management solutions, access improvements, interchange and subarea options, multimodal improvements, and alternative routes across I-70 were assessed using the evaluation matrix developed at the beginning of the project. Alternatives were evaluated based on twenty criteria with a simple positive, neutral, or negative rating system. Alternatives with results greater than +7 were identified as positive. Alternatives with results less than a -7 were identified as negative and those in between were neutral. The results of the evaluation matrix are shown in Table 3 below. Refer to the attached evaluation matrix for detailed results.

Alternative	Rating
Traffic Signal Timing	15
Mode Shift	12
Access Improvements	9
Diamond Interchange	7
DDI Interchange	4
DDI Option 4 - Realigned Little Beaver and Signalized Full Movement at Plaza Dr	4



Diamond Option 4 - Realigned Little Beaver and	
Signalized Full Movement at Plaza Dr	4
Alternative Routes across I-70	2
Diamond Option 5 - <sup>3</sup> / <sub>4</sub> Stephen's and Signalized Full	
Movement at Little Beaver	2
DDI Option 5 - <sup>3</sup> / <sub>4</sub> Stephen's and Signalized Full	
Movement at Little Beaver	-1
DDI Option 2 – Realigned Little Beaver and ¾ Plaza Dr	-2
DDI Option 1 – ¾ Stephen's and ¾ Little Beaver	-6

#### Recommendations

Three alternatives provided overall favorable results and are recommended for implementation:

- **Traffic Signal Timing Improvements** Initial traffic signal timing improvements were implemented in 2022 with 9-22% improvement in travel time.
  - Recommend routine review of traffic signal timing plans to match realized growth
  - Recommend investigation of demand responsive signal system to maximize application of timing plans
- Implementation of Proposed Access Management Plan
  - o Recommend installing medians to restrict movements between traffic signals
  - Recommend extending and/or adding auxiliary lanes for signalized intersections and proposed ¾ movements
  - Recommend widening key local streets to accept dual left-turn lanes from US 6 and CO9 including Ruby Ranch Road, Wildernest Road, Stephen's Way, Little Beaver Trail, and Dillon Ridge Road
- Invest in Mode Shift
  - Recommend implementing pedestrian and bicycle improvements to provide connectivity including closing sidewalk gaps, making connections to trail system, grade-separated crossings of US 6, and support off-highway multimodal routes
  - Recommend implementing the Summit Stage Short Range Transit Plan and investigating opportunities for inter-regional transit and a Long Range Transit Plan.
  - Recommend aligning local land-use requirements and parking regulations to support mode shift.
  - Recommend investigating opportunities to support micromobility options such as e-bikes and scooters which could include development of a micromobility hub in the area

While local road improvements were not evaluated with the matrix, the study confirmed that the following planned local road improvements benefit safety and operations on US 6 and CO 9 and provide added resilience to the system:

- Multimodal connections on US 6
- Option 4 Realignment of Little Beaver Trail with Stephen's Way



- 4 lanes on Wildernest Road and Stephen's Way
- Roundabout at Wildernest Road/Stephen's Way intersection
- Access control on Wildernest Road and Stephen's Way
- Adams Avenue Extension

#### **Interchange Analysis Conclusions**

Based on the evaluation matrix, the interchange alternatives with various subarea options provided mixed results. Regardless of the interchange configuration, the US 6-CO 9 corridor is expected to be over capacity in 2045 and several intersections within the study area will not operate at an acceptable LOS.

While the microsimulation shows the most localized operational benefit for the DDI with Option 4 (Realigned Little Beaver/Stephen's Way), the closely spaced intersections near the interchange, including Wildernest Road/Rainbow Drive, Stephen's Way, Little Beaver Trail, and Dillon Ridge Road, create bottlenecks that prevent traffic from reaching the interchange to receive the full operational benefit offered by reconfiguration. Corridor capacity is generally maintained with a diamond interchange with Option 4.

The DDI option provides safety benefits by reducing left-turning conflict points, however the corridor does not currently experience a level of crashes that results in a compelling safety Benefit/Cost ratio. The diamond interchange option offers high driver expectancy with traditional intersection configurations.

In reviewing local and statewide resiliency for I-70, US 6 and CO 9 currently provide critical redundancy to I-70 via the strength of connection they provide to US 40. Given recent natural incidents and the risk of continuing incidents along the I-70 corridor, the risk of closures on I-70 is heightened and is expected to remain high within the study period. Construction of a DDI at the junction will limit redundancy and capacity to accommodate I-70 closures for multiple seasons both locally and statewide. The diamond interchange also offers the ability to run I-70 traffic along the ramps across US 6/CO 9 if the I-70 bridge becomes unavailable.

In conclusion, as shown by the evaluation matrix results, the operational benefits that the DDI offers are not compelling enough for CDOT to support the implementation of a DDI at this time due to the risk of limiting I-70 redundancy. Access management improvements and other local road improvements, including the realignment of Little Beaver/Stephen's Way and widening Wildernest and Stephen's Way to four lanes, contribute positively to improved operations and redundancy on US 6 and CO 9.



## **Project Funding Opportunities**

A series of infrastructure improvements have been recommended by the study to create an overall vision for US 6 and CO 9 to address safety and operations. Implementation of these improvements will likely not occur all at once and can be phased and prioritized in a variety of different ways based on types of funding sources. Depending on the type of improvement, there may be opportunities for private, local, state, and federal funding sources.

### **Private Funding Sources**

For recommended access management improvements, any site that develops either directly on the highway or along a local roadway that intersects with the highway that will increase the traffic at the highway by 20% or more (per the State Highway Access Code) must be required to go through the CDOT Access Permit process to determine highway improvements the development is responsible for constructing. If the development is on a local roadway that feeds the highway intersections, the local agency will be the permittee in coordination with the development. In addition, it is recommended that local agencies require developments to provide multimodal improvements in front of their site with their project, as appropriate.

#### **Public Funding Sources**

For projects that will be publicly funded, the project type, cost, benefit, and potential partnerships will guide local agencies and CDOT in determining potential funding sources for various projects. For the purpose of understanding potential costs and phased projects of the vision presented in this study, a series of projects with logical limits and improvements have been defined and conceptual level costs have been developed. Costs are conceptual in nature and are meant for planning purposes only. Conceptual Opinions of Probable Cost (OPC) using 2024 dollars were prepared for each segment using unit cost data from the CDOT historical data for recent project bids from similar projects and similar locations. Due to the conceptual nature of the project, several items were quantified as percentage items of the construction bid items. In addition, a range of contingencies were included to plan for miscellaneous items either not specifically quantified or unknown at this time. Costs do not include right-of-way, environmental mitigation, or landscaping. Detailed OPC's can be found in the Appendix.

Table 4 provides a list of construction segments and a range of conceptual level costs with possible project funding sources for consideration. It is worth noting that the funding sources may not fund the construction of the entire segment and that additional investigation into grant requirements is needed to confirm the applicability of the grant to particular projects. There are currently many state and federal grant programs available for transportation infrastructure implementation. Several grants that could be considered for projects include, but are not limited to:

- Highway Safety Improvement program (HSIP)
- CDOT FASTER Safety
- SS4A Implementation (in conjunction with Town of Silverthorne and Summit County's SS4A Action Plans currently in development)
- Revitalizing Main Streets (RMS)
- Transportation Alternative Program (TAP)
- Multimodal Transportation and Mitigation Options Fund (MMOF)



- Rebuilding American Infrastructure with Sustainability and Equity (RAISE)
- Multimodal Project Discretionary Grants(MPDG) MEGA, INFRA and Rural Programs

There are also many transit related grants including Office of Innovative Mobility (OIM) Grants, the Volkswagen Settlement Trust – Transit Bus Replacement Program and other grants through the Federal Transit Administration that could also be pursued for various Summit Stage transit projects that are not identified in Table 4. In addition, the Strengthening Mobility and Revolutionizing Transportation (SMART) Grants Program may provide opportunities for funding pilot projects for demand responsive signal systems or other technology that can help manage traffic in the corridor.



Project Segment	Estimated	Project	Cost	Potential Funding Sources
Golden Eagle Rd/Bald Eagle Rd	2,700,000	to	3,100,000	FASTER, SS4A, RAISE*, MPDG*
Willowbrook Rd. to Smith Ranch Rd.	1,700,000	to	2,000,000	FASTER, SS4A, RAISE*, MPDG*
Ruby Ranch Rd to 13 <sup>th</sup> St	3,300,000	to	3,800,000	HSIP, FASTER, SS4A, RAISE*, MPDG*
12 <sup>th</sup> St to 9 <sup>th</sup> St	2,000,000	to	2,400,000	FASTER, SS4A, RAISE*, MPDG*
Annie Rd. to 6 <sup>th</sup> St.	1,300,000	to	1,500,000	HSIP, FASTER, SS4A. RAISE*, MPDG*
5th St.	1,100,000	to	1,200,000	ss4a, raise*, MPDG*
4 <sup>th</sup> & 5 <sup>th</sup> St	2,700,000	to	3,100,000	RMS, TAP, MMOF, RAISE*, MPDG*
3rd to Wildernest Rd.	3,200,000	to	3,700,000	HSIP, FASTER, SS4A, RAISE*, MPDG*
Wildernest Rd. to Stephens Way (Roundabout)	4,200,000	to	4,900,000	ss4a, raise*, MPDG*
Stephens Way 4 Lane to Little Beaver Trail Connection	6,900,000	to	7,900,000	ss4a, raise*, MPDG*
Improved Diamond	100,000	to	300,000	ss4a, raise*, MPDG*
Option 4	13,300,000	to	15,400,000	HSIP, FASTER, SS4A, RAISE*, MPDG*
East Anemone Trail to Dillon Ridge Rd.	1,500,000	to	1,800,000	HSIP, FASTER, SS4A, RAISE*, MPDG*
Dillon Dam Rd.	600,000	to	700,000	FASTER, SS4A, RAISE*, MPDG*

#### **Table 4: Project Costs and Potential Funding Sources**

\*In considering project limits for RAISE and MPDG grants, it is likely beneficial to combine a series of the projects identified above to show the highest benefit and to identify opportunities for partnership and collaboration between agencies.



To assist with understanding the potential for safety specific grants, each of the proposed intersection improvements was evaluated to determine the potential safety benefits they may provide. When applicable to a specific treatment, a crash modification factor (CMF) was used as the primary metric to quantify the expected safety benefit. A CMF is a multiplicative factor used to compute the number of crashes expected to occur after implementing a countermeasure. The factor is derived from studies comparing the number of crashes before implementation of a countermeasure to the number of crashes after implementation. Based upon the CMF factors, project funding sources may be available at certain intersections. A table identifying CMF's is included in the Appendix for reference. For proposed treatments for which a CMF is not available, a brief narrative is provided discussing the expected safety benefits.

In summary, there are currently many funding opportunities available for transportation infrastructure at the federal, state and local level, especially for local agencies that are trying to advance safety, multimodal transportation, transportation equity, sustainability, economic development, freight, and resiliency. The improvements identified by this operations study show benefit in most, if not all, of these areas. In addition, most of these opportunities are enhanced when multiple agencies join together to solve transportation issues at the local and regional level. With this study and the local planning completed and in progress, the communities in Summit County are poised to work together to advance operations and safety throughout the US 6 CO 9 corridor.



## Appendix A







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## Appendix B















APPENDIX B











APPENDIX B





## Appendix C

PARTMENT OF TRANSPORTATION R3 INION OF PROBABLE COST	Project # XXXXX				
ien Eagle Rri (Phase 1)	160 S	DLORADO	Stol	fus	
US 6 CO 9 - Golden Eagle Rd (Phase 1)	Date:		P E Project code XXXXX		
Summit County			Length In Feel	Longth In Miles	
	Powwe	Planement	Asphalt		
Stolfus & Associates, Inc.	Truckens	is in biching	Pavement.	Basse'	
ing opinions of probable construction cost, the Client understands that S al or materials, or over the Contractor's method of pricing, and that the o four qualifications and experience. These costs do not reflect escalati 3 or implied, as to the accuracy of such opinions as compared to bid or a	itolfus & Associates Inc. ha pinions of probable constr on for future costs. Stolfus actual costs.	is no control over ruction costs prov & Associates, Inc	costs or the price ided herein are to 2. makes no warra	of labor, be made on nty,	
ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST	
EMOVAL OF CONCRETE MEDIAN COVER MATERIAL	SY	900	\$25	\$22,500.0	
EMOVAL OF SIDEWALK	SY	700	\$40	\$28,000.0	
EMOVAL OF GURB AND GUTTER	LF	3,800	\$25	\$95,000.0	
MEANKMENT MATERIAL (COMPLETE IN PLACE)	CY	800	\$30	\$24,000	
GGREGATE BASE COURSE (CLASS 6)	CY	800	\$80	\$64,000.0	
OT MIX ASPHALT (GRADE SF)(100)(PG 58-34)	TON	470	\$120	\$56,400.	
ONGRETE SIDEWALK	SY	500	\$120	\$60,000.	
URB AND GUTTER TYPE 2 (SECTION I-B)	LF	3,000	\$40	\$120,000.0	
URB AND GUTTER TYPE 2 (SECTION 11-B)	LF	700	\$50	\$35,000.0	
EDIAN COVER MATERIAL (PATTERNED CONCRETE)	SF	20,100	\$20	\$402,000.0	
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		- P	1		
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	1	1913 - 1			
Total Major Items	Duran	d Bacher	Percent	\$930,00	
36	Pircon	u nange	Selected	5930.00	
			- 594	A17.00	
http://Landscaping/SWMP	1 to 5% of (A)		5%	\$47,00	
on Surveying	7 to 5% of (A)		5%	\$47.0	
on Phasing & Traffic Control	- 10 to 25% of (A)+(B)+(C)		- 10%	\$103,00	
	1 to 10% of (A)		10%	\$93,00	
Striping	1 to 5% of (A)	4%	\$38.0		
	5 to 10% of (A)		5%	\$47,00	
R.	10% of (A)+(B)+(0	C)+(D)+(E)+(F)+(G)	10%	\$131.00	
PINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI	(A)+(B)+(C)+(D)+(E)+(F)+(G)+(H)			\$1,436,00	
ount - Miscellaneous	T to 10% of (I)			\$72,00	
ENCY & INFLATION	(L)+(J)			\$1,508,00	
ay .	30% of (K)		30%	\$453,00	
and the second sec				54 0E4 0	
PINION OF PROBABLE CONSTRUCTION ITEMS COST, CI	(K)+(L)			31,301,00	
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PINION OF PROBABLE CONSTRUCTION ITEMS COST, CI an Engineering, CE & Indirects meeting	(K)+(L) 26% of (M) 10% of (M)		26% 10%	\$510,0 \$197,0	
	ARTMENT OF TRANSPORTATION R3 INION OF PROBABLE COST INION OF PROBABLE CONST INION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI US & CO 9 - Golden Engle Rd (Phase 1) Summit County. Stoffuls & Associates, Inc. Ing opinions of probable construction cost, the Client understands that S it or materials, or over the Contractor's method of pricing, and that the courted of our qualifications and experience. These costs do not reflect escalad it or implied, as to the accuracy of such opinions as compared to bid or a ITEM DESCRIPTION EMOVAL OF CONCRETE MEDIAN COVER MATERIAL EMOVAL OF ASPHALT (MAT MBANKMENT MATERIAL (COMPLETE IN PLACE) SGREGATE BASE COURSE (CLASS 6) OT MIX ASPHALT (GRADE SF/100/PG 65:34) ONCRETE SIDEWALK URB AND GUTTER TYPE 2 (SECTION I-B) EDIAN COVER MATERIAL (PATTERNED CONCRETE) Total Major Items Is Introl / Landscaping / SWMP In Surveying In Phasing & Traffic Control Stipping I I INION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI PARAMENT - Miscellaneous ENCY & INFLATION	ARTMENT OF TRANSPORTATION R3 INFOR OF PROBABLE COST INFORM OF PROBABLE CONSTRUCTION COST, CHE (Presse 1)  US & CO 9 - Golden Engle Rd (Presse 1)  Summit County  Provem Stoffus & Associates, Inc.  Provem Stoffus & Associates, Inc.  Information of probable construction cost, the Client understands that Stoffus & Associates Inc. ha to rmaterials, or over the Contractor's method of pricing, and that the opinions of probable const to rmplied, as to the accuracy of such opinions as compared to bid or actual costs.  If the DESCRIPTION UNIT EMOVAL OF CONCRETE MEDIAN COVER MATERIAL SY MOVAL OF CURR AND GUITER LIF MOVAL OF SIDEWALK SY MOVAL OF CURR AND GUITER LIF MOVAL OF SIDEWALK SY MOVAL OF CURR AND GUITER LIF MOVAL OF SIDEWALK SY MOVAL OF CURR AND GUITER LIF MOVAL OF SIDEWALK SY MOVAL OF CURR AND GUITER LIF MOVAL OF SIDEWALK SY MOVAL OF CURR AND GUITER LIF MOVAL OF SIDEWALK SY MOVAL OF CURR AND GUITER LIF MOVAL OF SIDEWALK SY MOVAL OF CURR AND GUITER LIF MOVAL OF SIDEWALK SY MOVAL OF CURR AND GUITER LIF MOVAL OF SIDEWALK SY MOVAL OF CURR AND GUITER LIF MOVAL OF SIDEWALK SY MOVAL OF CURR AND GUITER LIF MOVAL OF SIDEWALK SY MOVAL OF CURR AND GUITER LIF MOVAL OF SIDEWALK SY MOVAL OF CURR AND GUITER SY MOVAL OF CURR AND SY SY MOVAL OF CURR AND SY SY MOVAL OF CURR AND SY MOVAL OF CURR AN	Addition of ProBase Scott Iso Fagle Rd (Phase 1)  US 6 CO 9 - Golden Engle Rd Rd Rd Rd 16 O golging of probable Construction cores 1  rd or implied, as to the accuracy of such upinions as compared to bid or actual costs.  TEM DESCRIPTION  UNIT  UNIT	ARTMENT OF TRANSPORTATION RE INFO OF FROMANE CONT are Equip Rd (Phase 1)  US 8 CO 9 - Golden Engle Rd (Phase 1)  US 8 CO 9 - Golden Engle Rd (Phase 1)  US 8 CO 9 - Golden Engle Rd (Phase 1)  Burnnit County  US 8 CO 9 - Golden Engle Rd (Phase 1)  Burnnit County  Us 8 CO 9 - Golden Engle Rd (Phase 1)  Burnnit County  Us 8 CO 9 - Golden Engle Rd (Phase 1)  Burnnit County  Us 8 CO 9 - Golden Engle Rd (Phase 1)  Burnnit County  Us 8 CO 9 - Golden Engle Rd (Phase 1)  Burnnit County  Us 8 CO 9 - Golden Engle Rd (Phase 1)  Burnnit County  Us 8 CO 9 - Golden Engle Rd (Phase 1)  Burnnit County  Us 8 CO 9 - Golden Engle Rd (Phase 1)  Burnnit County  Doutser frammed  Tourse provide A secondate, Inc.  Trem DESCRIPTION  UNT COST  Trem DESCRIPTION  UNT COST  Trem DESCRIPTION  UNT COST  Trem DESCRIPTION  UNT COST  Not a secondate RA Secondate, Inc.  Trem DESCRIPTION  UNT COST  Not a secondate RA Secondate, Inc.  Trem DESCRIPTION  UNT COST  Not a secondate RA Secondate, Inc.  Trem DESCRIPTION  UNT COST  Not a secondate RA Secondate, Inc.  Trem DESCRIPTION  UNT COST  Not A SPALT MAT  SY 700 500 500 500 500 500 500 500 500 500	



B & CO 9 - Gelden Eagle Rd (Phase 2)           Image: Lange Rd         US & CO 9 - Golden Eagle Rd (Phase 2)         Date:         PE (Phase 2)         Date:         Date:         PE (Phase 2)         Date:         Date:         Date:         Date	NGINEER'S OPINION OF	T OF TRANSPORTATION R1	Project # 20000				
Insertance         US 8 CO 19- Goldon Eagle Rd (Phase 2)         Date:         PE Preparation (Completed in the Chart and the Chart an	8 6 CO 9 - Golden Eagle	Rd (Phase 2)	16 S S	OLORADO	Stol	fus	
Caude, M         Burnell County         Longh Inf           Free         Stothik & Ansociates, Inc.         Montane archites         Apphalit           Prepentitie         Stothik & Ansociates, Inc.         Intrame archites         Premetties	Project likenie	US 6 CO 9 - Golden Eagle Rd (Phase 2)	Di	ute;	P.E. Project code .	00000	
Thick         Readbing / Storikes & Association, Inc.         Readbing / Storikes & Association, Inc.         Apphal           The providing ophistors of probable construction costs, the Client understands that 36thise & Associates, Inc.         The providing ophistors of probable construction costs provided bereat area to be made the basis of our qualifications and experience. These costs do not reflect escalation for faiture costs. Stalfs & Associates, Inc. makes no warranty, segressed or implied, as to the accuracy of start of princes as compared to bid or actual costs.         Implicit in the impl	Citaintly M	Summit County		-	Leagen in Feet	Longih In Miles	
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Ta providing opinions of probable construction cost, the Client understands that Stoffss & Associates Izc. As no control over costs or the price of Labor, equipment or materials, or over the Contextor's method of prickag, and that the opialom of probable construction costs provided herein are to be made the basis of our guildleciations (Inc. Rest). Stoffs & Associates, Izc. Makers warearchy, expressed or implied, as to the accuracy of such opinions as compared to bid or actual costs.         TEEM NO.       Control of Exploring (Inc. Rest).       Unit of Advantage (Inc. Rest).       Unit of Advantage (Inc. Rest).       Unit of Cost         202-00100       REMOVAL OF CONCRETE MEDAS CONTRAL.       UNIT       UNIT       UNIT COST       COST         202-00100       REMOVAL OF CONCRETE MEDAS CONTRAL.       UNIT       UNIT COST       COST         202-00100       REMOVAL OF CONCRETE NEDAS CONTRAL.       UNIT       UNIT COST       COST         202-00100       REMOVAL OF CONCRETE IN PLACEL       CY       400       450       5120         202-00100       REMOVAL OF CONRES (CLASS 50)       CY       400       450       5120         202-00100       MEDIAN CONRES (CLASS 50)       CY       400       450       5120         202-00100       MEDIAN CONRES (CLASS 50)       CY       400       5120       5120         202-00100       MEDIAN CONRES (CLASS 50)       S120       S120       5120	Prepared by	Stolfus & Associates, Inc.	Thickne	ess in inchas	Payment 6'	Base 6	
THEM NO.         TEM DESCRIPTION         UNIT         QUANTITY         UNIT COST         COST           202-0000 REMOVAL OF CONCRETE MEDIAN COVER MATERIAL         5Y         1,000         \$26         \$25,000         \$26         \$25,000         \$26         \$25,000         \$26         \$25,000         \$26         \$25,000         \$26         \$25,000         \$26         \$25,000         \$26         \$52,000         \$26         \$52,000         \$25         \$50,000         \$55         \$50,000         \$56         \$50,000         \$56         \$50,000         \$56         \$50,000         \$56         \$50,000         \$56         \$51,20         \$56,000         \$56         \$51,20         \$56,000         \$56         \$51,20         \$56,000         \$56         \$52,000         \$52,000         \$32,000	In providing opin equipment or ma the basis of our q expressed or imp	tions of probable construction cost, the Client understands th torials, or over the Contractor's method of pricing, and that ( malifications and experience. These costs do not reflect esca slied, as to the accuracy of such opinions as compared to bid	at Stolfus & Associates Inc. h he opinions of probable const lation for future costs. Stolfus or actual costs.	as no control over ruction costs prov a & Associates, Inc	costs or the price ided herein are to c. makes no warr	of labor, be made on inty,	
202-0100         FEMOVAL OF CONCRETE INEDIAN COVER MATERIAL         SY         1.000         \$26         \$220, 2020           202-0200         REMOVAL OF CURE AND GUTTER         I.F         2.700         \$515         \$512, 527, 527, 527, 527, 527, 527, 527, 52	ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST	
D20-00203 REMOVAL OF CURE AND GUTTER         I.F.         2,700         \$251         \$515.           200-00203 REMOVAL OF ASPHALT MAT         SY         700         \$151         \$100.00         \$800         \$120.00         \$100.00         \$800         \$120.00         \$100.00         \$800         \$120.00         \$100.00         \$800         \$120.00         \$100.00         \$800         \$120.00         \$100.00         \$800.00         \$100.00         \$800.00         \$100.00	202-00190 REMOVA	L OF CONCRETE MEDIAN COVER MATERIAL	SY	1,000	\$25	\$25,000.0	
Current Construction Phase mark         SY         700         \$15         \$10.5           200-0000 [MBRANKINET HATERIAL (COMPLETE IN PLACE]         CY         400         \$80         \$32.0           200-0000 [MBRANKINET HATERIAL (COMPLETE IN PLACE]         CY         400         \$80.0         \$32.0           200-0000 [MBRANKINET HATERIAL (COMPLETE IN PLACE]         CY         400         \$80.0         \$32.0           200-0000 [MBRANKINET HATERIAL (CASS 6)]         LF         3,600         \$40.0         \$14.0           609-2010 [CURB AND GUTTER TYPE 2 (SECTION I-B)         LF         3,600         \$40.0         \$14.0           610-00020 [MEDIAN COVER MATERIAL (PATTERNED CONCRETE)         SF         9,500         \$20         \$100.0           10         LF         3,600         \$40.0         \$14.0         \$14.0           10         LF         3,600         \$20.0         \$20.0         \$10.0           10         COVER MATERIAL (CONTRETE)         LF         3,600         \$20.0         \$50.0           10         Total Major Items         SF         9,500         \$20         \$100.0           10         Total Major Items         SF         9,500         \$20.0         \$20.0           10         Total Major Items <td>202-00203 REMOVA</td> <td>L OF CURB AND GUTTER</td> <td>LF</td> <td>2,700</td> <td>\$25</td> <td>\$67,500.0</td>	202-00203 REMOVA	L OF CURB AND GUTTER	LF	2,700	\$25	\$67,500.0	
Construction Control (Land Notice Course)         Control (Land Notice Course)         State         State <td>202-00220 REMOVA</td> <td>L OF ASPHALT MAT</td> <td>SY</td> <td>700</td> <td>\$15</td> <td>\$10,500.0</td>	202-00220 REMOVA	L OF ASPHALT MAT	SY	700	\$15	\$10,500.0	
AGS-37831         HOT MIX ASPHALT (GRADE SF)(100)(PG 58-34)         TON         220         \$120         \$220           609-21010         CURR AND GUTTER TYPE 2 (SECTION FB)         LF         3,600         \$40         \$144,0           609-21010         CURR AND GUTER TYPE 2 (SECTION FB)         LF         3,600         \$40         \$144,0           610-00020         MEDIAN COVER MATERIAL (PATTERNED CONCRETE)         SF         9,500         \$20         \$100           610-00020         Major Items         SF         9,500         \$20         \$100           Total Major Items           Total Major Items           Major Items           Total Major Items           Total Major Items           Total Major Items           Total Major Items           Major Items           Total Major Items           Major Items           Total Major Items           Major Items           Major Items           Total Major Items           Signing Astrophysics of (A)           Signing Astrophysics of (A)            100 5% of (A)         5% </td <td>304-06007 AGGREG</td> <td>ATE BASE COURSE (CLASS 6)</td> <td>CY</td> <td>400</td> <td>\$80</td> <td>\$32,000.0</td>	304-06007 AGGREG	ATE BASE COURSE (CLASS 6)	CY	400	\$80	\$32,000.0	
Eds.21010 (CURB AND GUTTER TYPE 2 (SECTION FB)         IF         3.600         \$40         \$44.0           610-00020 (MEDIAN COVER MATERIAL (PATTERNED CONCRETE)         SF         9,500         \$20         \$100.0           Total Major Items         SF         9,500         \$20         \$100.0           Total Major Items         Percent Range         Percent Range         \$51           Major Items         Selected         \$55         \$20         \$100.0           Total Major Items         Percent Range         \$51         \$51         \$56         \$52           Major Items         Selected         \$55         \$52         \$51         \$56         \$52           Construction Surveying         1 to 5% of (Å)         \$5%         \$52         \$52         \$51           Construction Phasing & Traffic Control         10 to 5% of (Å)         \$5%         \$52         \$52           Utilities         1 to 10% of (Å)         10%         \$5%         \$52         \$52           Utilities         1 to 5% of (Å)         \$5%         \$52         \$53         \$53         \$53           Utilities         1 to 5% of (Å)         \$5%         \$52         \$55         \$50         \$50         \$50         \$55         \$52	403-37831 HOT MIX	ASPHALT (GRADE SF)(100)(PG 58-34)	TON	220	\$120	\$26,400.0	
SF         9,500         \$20         \$196,0           Total Major Items         551         500         \$20         \$196,0           Total Major Items         551         551         551           Item         Percent Range         Percent Solected         551           Major Items         551         556         552           Total Major Items         551         556         552           Eresion Control / Landscaping / SWMP         1 to 5% of (A)         5%         52           Construction Surveying         1 to 5% of (A)         5%         52           Construction Phasing & Traffic Control         10 to 25% of (A)+(B)+(C)         10%         5%           Utilities         3 to 10% of (A)         10%         5%         52           Lighting         5 to 10% of (A)         5%         52         5%         52           Lighting         5 to 10% of (A)         10%         5%         52           Lighting         5 to 10% of (A)         5%         52           Lighting         5 to 10% of (A)         5%         52           Control OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI         (A)+(B)+(C)+(D)+(E)+(F)+(G)+(H)         5%           Foree Account - Miscellaneous	609-21010 CURB AN	D GUTTER TYPE 2 (SECTION I-B)	LF	3,600	\$40	\$144,000.0	
Total Major Items         Percent Range         Percent Selected         S51           Major Items         551         Costs         551           Eresion Control / Landscaping / SWMP         1 to 5% of (A)         5%         52           Construction Surveying         1 to 5% of (A)         5%         52           Construction Phasing & Traffic Control         10 to 25% of (A)+(B)+(C)         10%         5%           Utlines         1 to 5% of (A)         5%         52           Signing & Striping         1 to 5% of (A)         5%         52           Utlines         1 to 10% of (A)         10%         5%           Signing & Striping         1 to 5% of (A)         5%         52           Dighting         5 to 10% of (A)         10%         5%           Mobilization         10% of (A)         5%         52           TOTAL OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI         (A)+(B)+(C)+(D)+(E)+(F)+(G)+(H)         579           Force Account - Miscellaneous         1 to 10% of (I)         5%         58           CONTINGENCY & INFLATION         (I)+(J)         5%         51.08%           Contingency         30% of (K)         30%         52.5           TOTAL OPINION OF PROBABLE CONSTRUCTION ITEMS COST, C1	610-00020 MEDIAN (	COVER MATERIAL (PATTERNED CONCRETE)	SF	9,500	\$20	\$190,000.0	
Total Major Items         S511           Item         Percent Range         Percent Selected         Costs           Major Items         551         552         551           Eression Control / Landscaping / SWMP         1 to 5% of (A)         5%         52           Construction Surveying         1 to 5% of (A)         5%         52           Construction Phasing & Traffic Control         10 to 5% of (A)         5%         52           Construction Phasing & Traffic Control         10 to 5% of (A)+(B)+(C)         10%         5%           Utilines         1 to 10% of (A)         5%         52           Signing & Striping         1 to 5% of (A)+(B)+(C)         10%         5%           Lighting         5 to 10% of (A)         5%         52           Mobilization         10% of (A)+(B)+(C)+(D)+(E)+(F)+(G)         10%         5%           TOTAL OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI         (A)+(B)+(C)+(D)+(E)+(F)+(G)+(H)         579           Forea Account - Miscellaneous         1 to 10% of (K)         30%         52           Contingency         30% of (K)         30%         525           TOTAL OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI         (K)+(L)         51,08           Contingency         30% of (K)							
Item         Percent Range         Percent Selected         Costs           Major Items         551         551           Eression Control / Landscaping / SWMP         1 to 5% of (A)         5%         \$2           Construction Surveying         1 to 5% of (A)         5%         \$2           Construction Phasing & Traffic Centrol         10 to 25% of (A)+(B)+(C)         10%         \$5           Utilities         3 to 10% of (A)         5%         \$2           Lighting         1 to 5% of (A)+(B)+(C)         10%         \$5           Lighting         1 to 10% of (A)         5%         \$2           Lighting         5 to 10% of (A)         5%         \$2           Lighting         5 to 10% of (A)         5%         \$2           Mobilization         10% of (A)+(B)+(C)+(D)+(E)+(F)+(G)         10%         \$7           TOTAL OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI         IA)+(B)+(C)+(D)+(E)+(F)+(G)+(H)         \$79           Forten Account - Miscellaneous         1 to 10% of (I)         \$16           CONTINGENCY & INFLATION         (I)+(J)         \$83           Contingency         30% of (K)         30%         \$25           TOTAL OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI         (K)+(L)         \$108	Total	Major Items		- 8 -	-	\$510,00	
Major Items         551           Erosion Control / Landscaping / SWMP         1 to 5% of (A)         5%         \$2           Construction Surveying         1 to 5% of (A)         5%         \$2           Construction Phasing & Traffic Control         10 to 5% of (A)         5%         \$2           Construction Phasing & Traffic Control         10 to 25% of (A)+(B)+(C)         10%         \$5           Utilities         3 to 10% of (A)         10%         \$5           Signing & Striping         1 to 5% of (A)         5%         \$2           Lighting         5 to 10% of (A)         5%         \$2           Lighting         5 to 10% of (A)         5%         \$2           Mobilization         10% of (A)+(B)+(C)+(D)+(E)+(F)+(G)         10%         \$7           TOTAL OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI         (A)+(B)+(C)+(D)+(E)+(F)+(G)+(H)         \$79           Forten Account - Miscellaneous         1 to 10% of (I)         \$%         \$4           CONTINGENCY & INFLATION         (I)+(J)         \$83         \$26           TOTAL OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI         (K)+(L)         \$10.88           Contingency         30% of (K)         30%         \$25           TOTAL OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI	Item		Perce	nt Range	Percent Selected	Costs 5	
Eression Control / Landscaping / SWMP         1 to 5% of (Å)         5%         \$2           Construction Surveying         1 to 5% of (Å)         5%         \$2           Construction Phasing & Traffic Centrol         10 to 5% of (Å)         5%         \$2           Construction Phasing & Traffic Centrol         10 to 25% of (Å)+(B)+(C)         10%         \$5           Utilities         1 to 10% of (Å)         10%         \$5           Signing & Striping         1 to 5% of (Å)         5%         \$2           Lighting         5 to 10% of (Å)         5%         \$2           Mabilization         10% of (Å)         5%         \$2           TOTAL OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI         IA)+(B)+(C)+(D)+(E)+(F)+(G)         10%         \$7           Fortes Account - Miscellaneous         1 to 10% of (I)         \$%         \$4           CONTINGENCY & INFLATION         (I)+(J)         \$83         \$20% of (K)         \$20% of (M)         \$25%           TOTAL OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI         (K)+(L)         \$108         \$20% of (M)         \$25%	Major Items					\$510,00	
Construction Surveying         1 to 5% of (A)         5%         \$2           Construction Phasing & Traffic Control         10 to 25% of (A)+(B)+(C)         10%         \$5           Utilises         1 to 10% of (A)         10%         \$5           Signing & Striping         1 to 10% of (A)         10%         \$5           Lighting         1 to 5% of (A)         5%         \$2           Mobilization         10% of (A)         5%         \$2           Mobilization         10% of (A)         5%         \$2           Mobilization         10% of (A)+(B)+(C)+(D)+(E)+(F)+(G)         10%         \$7           TOTAL OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI         IA)+(B)+(C)+(D)+(E)+(F)+(G)+(H)         \$79           Force Account - Miscellianeous         1 to 10% of (I)         \$%         \$4           CONTINGENCY & INFLATION         (I)+(J)         \$83         \$25           TOTAL OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI         (K)+(L)         \$108         \$25           Contingency         30% of (K)         30%         \$25           TOTAL OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI         (K)+(L)         \$108           Construction Engineering, CE & Indirects         26% of (M)         25% of \$28	Eresion Control / La	andscaping / SWMP	1 to 5% of (A)		5%	\$26,00	
Construction Phasing & Traffic Centrol         10 to 25% of (A)+(B)+(C)         10%         \$55           Utilines         1 to 10% of (A)         10%         \$55           Signing & Striping         1 to 5% of (A)         10%         \$55           Lighting         5 to 10% of (A)         5%         \$32           Lighting         5 to 10% of (A)         5%         \$32           Mobilization         10% of (A)         5%         \$32           TOTAL OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI         (A)+(B)+(C)+(D)+(E)+(F)+(G)         10%         \$77           Force Account - Miscellaneous         1 to 10% of (I)         \$79         \$70         \$60	Construction Surve	lying	1 to 5% of (A)		5%	\$26,00	
Utilities         1 to 10% of (A)         10%         55           Signing & Stripling         1 to 5% of (A)         5%         \$2           Lightling         5 to 10% of (A)         5%         \$2           Mobilization         10% of [A]+(B)+(C)+(D)+(E)+(F)+(G)         10%         \$7           TOTAL OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI         (A)+(B)+(C)+(D)+(E)+(F)+(G)+(H)         \$79           Force Account - Miscellaneous         1 to 10% of (I)         5%         \$83           CONTINGENCY & INFLATION         (I)+(J)         \$83         \$25           TOTAL OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI         (K)+(L)         \$1.08           Contingency.         30% of (K)         30%         \$25           TOTAL OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI         (K)+(L)         \$1.08           Construction Engineering, CE & Indirects         26% of (M)         25%         \$28	Construction Phase	ng & Traffic Control	10 to 25% of (A)+	(B)+(C)	40%	\$57,00	
Signing & Striping         To 5% of (A)         5%         52           Lighting         5 to 10% of (A)         5%         52           Mathilization         10% of (A)+(B)+(C)+(D)+(E)+(F)+(G)         10%         57           TOTAL OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI         (A)+(B)+(C)+(D)+(E)+(F)+(G)+(H)         579           Force Account - Miscellaneous         1 to 10% of (I)         5%         54           CONTINGENCY & INFLATION         (I)+(J)         5%         52           TOTAL OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI         (K)+(L)         5%         54           CONTINGENCY & INFLATION         (I)+(J)         5%         52           TOTAL OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI         (K)+(L)         51.08           Construction Engineering, CE & Indirects         26% of (M)         25%         528	Ullities	fact and the set	1 to 10% of (A)		10%	\$51,00	
Lightling         5 to 10% of (A)         5%         32           Mabilitzation         10% of (A)+(B)+(C)+(D)+(E)+(F)+(G)         10%         \$7           TOTAL OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI         (A)+(B)+(C)+(D)+(E)+(F)+(G)+(H)         \$79           Forces Account - Miscellaneous         1 to 10% of (I)         \$%         \$4           CONTINGENCY & INFLATION         (I)+(J)         \$%         \$42           TOTAL OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI         (K)+(L)         \$1.08           Contingency.         30% of (K)         30%         \$25           TOTAL OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI         (K)+(L)         \$1.08           Construction Engineering, CE & Indirects         26% of (M)         25%         \$28	Signing & Striping		1 to 5% of (A)		5%	\$26.00	
Mabilization         10% of (A)+(B)+(C)+(D)+(E)+(F)+(G)         10%         \$77           TOTAL OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI         (A)+(B)+(C)+(D)+(E)+(F)+(G)+(H)         \$79           Force Account - Miscellaneous         1 to 10% of (I)         \$%         \$4           CONTINGENCY & INFLATION         (H)+(J)         \$83         \$30% \$225           TOTAL OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI         (K)+(L)         \$1.08           Contingency         30% of (K)         30% \$225           TOTAL OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI         (K)+(L)         \$1.08           Construction Engineering, CE & Indirects         26% of (M)         25% \$28	Lighting		5 to 10% of (A)		5%	\$26,00	
TOTAL OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI         IA)+(B)+(C)+(D)+(E)+(F)+(G)+(H)         \$79           Forces Account - Miscellianeous         1 to 10% of (I)         5%         \$4           CONTINGENCY & INFLATION         (I)+(J)         \$83         Contingency.         30% of (K)         30%         \$25           TOTAL OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI         (K)+(L)         \$1.08         Construction Engineering, CE & Indirects         26% of (M)         25%, \$28	Mobilization		10% of (A)+(B)+(	C)+(D)+(E)+(F)+(G)	10%	\$73,00	
Force. Account - Miscellaneous         1 to 10% of (l)         5%         \$4           CONTINGENCY & INFLATION         (I)+(J)         \$83           Contingency         30% of (K)         30%         \$25           TOTAL OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI         (K)+(L)         \$1.08           Construction Engineering, CE & Indirects         26% of (M)         25%         \$28	TOTAL OPINION (	OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI	(A)+(B)+(C)+(D)+	•(E)+(F)+(G)+(H)		\$795,00	
CONTINGENCY & INFLATION         (I)+(J)         \$83           Contingency         30% of (K)         30%         \$25           TOTAL OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI         (K)+(L)         \$1,08           Construction Engineering, CE & Indirects         26% of (M)         25%         \$28	Force Account - Mi	scellaneous	1 to 10% of (I)		5%	\$40,00	
Contingency         30% of (K)         30%         \$25           TOTAL OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI         (K)+(L)         \$1,08           Construction Engineering, CE & Indirects         26% of (M)         25%         \$28	CONTINGENCY &	INFLATION	(I)+(J)			\$835,00	
TOTAL OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI         (K)+(L)         \$1,08           Construction Engineering, CE & Indirects         26% of (M)         26%         \$28	Contingency		30% of (K)		30%	\$251,00	
Construction Engineering, CE & Indirects 26% of (M) 26% \$28	TOTAL OPINION	OF PROBABLE CONSTRUCTION ITEMS COST, CI	(K)+(L)			\$1,086,00	
Design Engineering 10% of (M) 10% Cto							
	Construction Engin	eering, CE & Indirects	26% of (M)		26%	\$283,00	



COLORADD DEPARTMENT OF TRANSPORTATION R3 ENGINEER'S OPINION OF PROBABLE COST		Project® x0000				
5 5 C O 9 - W	fillowbrook Rd & Smith Ranch Rd	<b>16</b> 01	OLORADO	Stol	fus	
Project Lame	US 6 CO 9 - Willowbrook Rd & Smith Ranch Rd	Da	ite;	PE Project code )	20000	
County of	Summit County		-	Loopin in Fed	Langth In Miles	
Тупа		Roadwa	Pavament	Asph	alt	
Prepared by	Stolfus & Associates, Inc.	Thickness in Inches, Polyame		Paymment 6'	Basse, 6"	
equipm the basi express	entry opinions of program construction cost, the othern tinternation has a ent or materials, or over the Contractor's method of pricing, and that the is of our qualifications and experience. These costs do not reflect escalati ed or implied, as to the accuracy of such opinions as compared to bid or a ITEM DESCRIPTION	opinions of probable consti ion for fature costs. Stolfus actual costs.	& Associates, Inc	UNIT COST	cost	
02.00100	REMOVAL OF CONCRETE MEDIAN COVER MATERIAL	SV.	400	\$25	\$10,000 (	
02-00190	REMOVAL OF SIDEWALK	SY	50	\$40	\$2,000.0	
02-00203	REMOVAL OF CURB AND GUTTER	LP	2,200	\$25	\$55,000.0	
02-00220	REMOVAL OF ASPHALT MAT	SY	1,900	\$15	\$28,500.0	
03-00000	UNCLASSIFIED EXCAVATION	CY	900	\$30	\$27,000.0	
04-06007	AGGREGATE BASE COURSE (CLASS 6)	CY	700	\$80	\$56,000.0	
03-37831	CONCRETE SIDEWALK	ION	650	\$120	\$78,000.0	
09-21010	CURB AND GUTTER TYPE 2 (SECTION (-B)	1F	1.500	\$40	\$60,000.0	
09-21020	CURB AND GUTTER TYPE 2 (SECTION II-B)	LF	1,050	\$50	\$52,500.0	
10-00020	MEDIAN COVER MATERIAL (PATTERNED CONCRETE)	SF	10.600	\$20	\$212,000.0	
	Total Major Items		_		\$590,00	
ttom		Percor	nt Range	Selected	Costs 5	
Major It	ems			1	\$590,00	
Erosion	Control / Landscaping / SWMP	1 to 5% of (A)		5%.	\$30,00	
Construe	ction Surveying	1 to 5% of (A)		5%	\$30,00	
Construe	ation Phasing & Traffic Control	10 to 25% of (A)+	(B)+(C)	10%	\$65,00	
Utilities		1 to 10% of (A)		10%	\$59.00	
Signing	š Striping	1 to 5% of (A).		4%	\$24,0	
Lighting		5 to 10% of (A)		5%	\$30,00	
Mobilizar	lion	10% of (A)+(B)+(0	C)+(D)+(E)+(F)+(G)	10%	\$83,00	
TOTAL	OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI	(A)+(B)+(C)+(D)+	(E)+(F)+(G)+(H)		\$911,00	
Force Ar	count - Miscellaneous	1 to 10% of (I)		5%	\$46,00	
CONTIN	GENCY & INFLATION	(I)+(J)			\$957,00	
Continge	incy	30% of (K)		30%	\$288,00	
-					\$1,245,00	
TOTAL	OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI	(K)+(L)				
Construe Design En	OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI ction Engineering, CE & Indirects gimeering,	(K)+(L) 26% of (M) 10% of (M)		26% 10%	\$324,00 \$125,00	



COLORADD DEPARTMENT OF TRANSPORTATION R3 ENGINEER'S OPINION OF PROBABLE COST		Project # 20000				
S 5 CO 9 - R	uby Ranch Rd & 13th St	<b>KO</b> 3	OLORADO	Stol	fus	
Project Litarsia	US 5 CO 9 - Ruby Ranch Rd & 13th St	Da	Date,		20000	
Charity Di-	Summit County		-	Loopin in Feet	Length In Miles	
Тупа		Ronothe	y Elsesment	Asph	alt	
Prepared by	Stolfus & Associates, Inc.	mitkiness in inchas, Powe		Payament 6'	Base 6	
In provi equipm the basi express	iding opinions of probable construction cost, the Client understands the tent or materials, or over the Contractor's method of pricing, and that ( is of our qualifications and experience. These costs do not reflect esca and or implied, as to the accuracy of such opinions as compared to bid TTEM DESCRIPTION	at Stolfus & Associates Inc. as he opinions of probable consti- lation for future costs. Stolfus or actual costs.	as no control over ruction costs prov & Associates, Inc	costs or the price ided herein are to . makes no warra	of labor, be made on nty,	
TEM NO.		UNIT	COANTIT	town cost	0031	
202-00190	REMOVAL OF CONCRETE MEDIAN COVER MATERIAL	SY	300	\$40	\$12,000.0	
202-00203	REMOVAL OF CURB AND GUTTER	LP	5,200	\$25	\$130.000.0	
202-00220	REMOVAL OF ASPHALT MAT	SY	1,800	\$15	\$27,000.0	
203-00000	UNCLASSIFIED EXCAVATION	CY	1,100	\$30	\$33,000.0	
\$04-06007	AGGREGATE BASE COURSE (CLASS 6)	CY	1,100	\$80	\$88,000.0	
103-37831	HOT MIX ASPHALT (GRADE SF)(100)(PG 58-34)	TON	780	\$120	\$93,600.0	
00000-806	CONCRETE SIDEWALK	SY	300	\$120	\$36,000.0	
09-21010	CURB AND GUTTER TYPE 2 (SECTION I-B)	LF	3,900	\$40	\$156,000.0	
10.00000	MEDIAN COVER MATERIAL (BATTERNED CONCRETE)	LF pr	23,000	004	\$440,000.0	
10-00020	NEDHA COVER WATERIAE (PATTERIED CONDRETE)		22,000		3440,000.0	
			1000-00	1	_	
					_	
	Total Major Items	-			\$1,130,00	
ttem		Percor	nt Range	Selected	Costs 5	
Major Ite	ems			(	\$1,130,00	
Erosion	Control / Landscaping / SWMP	1 to 5% of (A)		5%.	\$57,00	
Construc	ction Surveying	1 to 5% of (A)		5%	\$57,00	
Construc	ation Phasing & Traffic Control	10 to 25% of (A)+	(B)+(C)	10%	\$125,00	
Utilities		1 to 10% of (A)		10%	\$113.00	
Signing (	& Striping	1 to 5% of (A)		4%	\$46,0	
Lighting		5 to 10% of (A)		5%	\$57.00	
Mobilizat	tion	10% of (A)+(B)+(I	C)+(D)+(E)+(F)+(G)	10%	\$159.00	
TOTAL	OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI	(A)+(B)+(C)+(D)+	(E)+(F)+(G)+(H)		\$1,744,00	
Force Ad	ccount - Miscellaneous	1 to 10% of (i)		5%	\$88,00	
CONTIN	IGENCY & INFLATION	(I)+(J)		_	\$1,832,00	
Continge	ancy	30% of (K)		30%	\$550,00	
TOTAL	OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI	(K)+(L)			\$2,382,00	
Ave.	diag Engineering (PE 2 Indiantia	26% of (M)		26%	\$620.00	
Construc	cool chigh eening. Oc a moveds	To the link		CC 710		
Construc Design En	gineering.	10% of (M)		10%	\$239.0	



INGINEER'S OPINION OF PROBABLE COST	Project # XXXXX				
8 B CO 9 - 9th St through 12th St	<b>16</b> 0 :	OLORADO	Stol	fus	
Propertianee US 6 CO 9 - 9th St through 12th St	Da	le;	P.E. Project code )	00000	
County 01 Summit County			Leagen in Feet	Longih In Miles	
1900	Rondway	Parament	Asp)	nalt	
Prepared by Stolfus & Associates, Inc.	Mickness in inchas.		Payment 6'	Base, 5"	
In providing opinions of probable construction cost, the Client understands that Stolfus equipment or materials, or over the Contractor's method of pricing, and that the opinion the basis of our qualifications and experience. These costs do not reflect escalation for expressed or implied, as to the accuracy of such opinions as compared to bid or actual	& Associates Inc. ha ns of probable consti future costs. Stolfus costs.	ts no control over cuction costs prov & Associates, Inc	costs or the price ided herein are to . makes no warra	of labor, be made on inty,	
ITEM NO. ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST	
202-00190 REMOVAL OF CONCRETE MEDIAN COVER MATERIAL	SY	500	\$25	\$12,500.0	
202-00203 REMOVAL OF CURB AND GUTTER	LF	2,700	\$25	\$67,500.0	
203-00060 EMBANKMENT MATERIAL (COMPLETE IN PLACE)	CY	800	\$30	\$24,000.0	
304-06007 AGGREGATE BASE COURSE (CLASS 6)	CY	500	\$80	\$40,000.0	
403-37631 HOT MIX ASPHALT (GRADE SF)(100)(PG 58-34)	TON	80	\$120	\$9,600.0	
609-21010 CURB AND GUTTER TYPE 2 (SECTION I-B)	LF	3,200	\$40	\$128,000.0	
Total Major Home	- 8-			\$700.00	
Item	Percer	nt Range	Percent	Costa S	
Major Items			20100000	\$700,00	
Erosion Control / Landscaping / SWMP	1 to 5% of (A)		5%	\$35,00	
Construction Surveying	1 to 5% of (A)		5%	\$35,00	
Construction Phasing & Traffic Control	10 to 25% of (A)+	(B)+(C)	10%	\$77,00	
Ullities	1 to 10% of (A)		10%	\$70,00	
Signing & Striping	T to 5% of (A)		4%	\$28.00	
	5 to 10% of (A)				
Lighting	5 to 10% of (A)		5%	\$35,00	
Lighting Mobilization	10% of (A)+(B)+(0	C)+(D)+(E)+(F)+(G)	5% 10%	\$35,00	
Lightling Mobilization TOTAL OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI	10% of (A)+(B)+(C)+(D)+	C)+(D)+(E)+(F)+(G) (E)+(F)+(G)+(H)	5% 10%	\$35,00 \$98,00 \$1,078,00	
Ughtling Mobilization TOTAL OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI Force Account - Miscellaneous	10% of (A)+(B)+(C (A)+(B)+(C)+(D)+ 1 to 10% of (I)	C)+(D)+(E)+(F)+(G) (E)+(F)+(G)+(H)	5% 10% 5%	\$35,00 \$98,00 \$1,078,00 \$54,00	
Lighting Mobilization TOTAL OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI Force Account - Miscellaneous CONTINGENCY & INFLATION	5 to 10% of (A) 10% of (A)+(B)+(C) (A)+(B)+(C)+(D)+ 1 to 10% of (I) (I)+(J)	C)+(D)+(E)+(F)+(G) (E)+(F)+(G)+(H)	5% 10% 5%	\$35,00 \$98,00 \$1,078,00 \$54,00 \$1,132,00	
Lightling Mobilization TOTAL OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI Fores Account - Miscellaneous CONTINGENCY & INFLATION Contingency	10% of (A)+(B)+(C) (A)+(B)+(C)+(D)+ 10-10% of (I) (I)+(J) 30% of (K)	C)+(D)+(E)+(F)+(G) (E)+(F)+(G)+(H)	5% 10% 5% 30%	\$35,00 \$98,00 \$1,078,00 \$54,00 \$1,132,00 \$340,00	
Lighting Mobilization TOTAL OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI Fores Account - Miscellaneous CONTINGENCY & INFLATION Conlingency TOTAL OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI	5 10 10% of (A) 10% of (A)+(B)+(C) (A)+(B)+(C)+(D)+ 1 to 10% of (I) (I)+(J) 30% of (K) (K)+(L)	C)+(D)+(E)+(F)+(G) (E)+(F)+(G)+(H)	5% 10% 5% 30%	\$33,00 \$98,00 \$1,078,00 \$54,00 \$1,132,00 \$340,00 \$1,472,00	
Lighting Mobilization TOTAL OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI Force Account - Miscellaneous CONTINGENCY & INFLATION Contingency TOTAL OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI Construction Engineering, CE & Indirects Design Engineering	5 10 10% of (A) 10% of (A)+(B)+(C)+(D)+ (A)+(B)+(C)+(D)+ 1 to 10% of (I) (I)+(J) 30% of (K) (K)+(L) 26% of (M) 10% of (M)	C)+(D)+(E)+(F)+(G) (E)+(F)+(G)+(H)	5% 10% 5% 30% 26%	\$33,00 \$98,00 \$1,078,00 \$54,00 \$1,132,00 \$340,00 \$1,472,00 \$1,472,00 \$148,00	



COLORADD DEPARTMENT OF TRANSPORTATION R3 ENGINEER'S OPINION OF PROBABLE COST		Project # KOROCH				
IS 6 CO 9 - 6	th St & Annie Rd		OLORADO	Stol	fus	
Project likense	US 5 CO 9 - 5th St & Annie Rd	Date;		PE Project code )	DOOOK	
Chartly DI	Summit County		-	Loopin in Fed	Longth In Miles	
Туля		Roadwa	Pavement	Asph	alt	
Prepared by	Stolfus & Associates, Inc.	mickness in inches. Powerest		Paymment	Base,	
In prov equipm the bas express	iding opinions of probable construction cost, the Client understands that tent or materials, or over the Contractor's method of pricing, and that (the is of our qualifications and experience. These costs do not reflect escala sed or implied, as to the accuracy of such opinions as compared to bid or	t Stolfus & Associates Inc. ha e opinions of probable const tion for future costs. Stolfus r actual costs.	as no control over ruction costs prov & Associates, Inc	costs or the price ided herein are to makes no warra	of labor, be made on nty,	
TEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST	
202-00190	REMOVAL OF CONCRETE MEDIAN COVER MATERIAL	SY	700	\$25	\$17,500.0	
02-00200	REMOVAL OF SIDEWALK	SY	100	\$40	\$4,000.0	
202-00203	REMOVAL OF CURB AND GUTTER	LF	1,900	\$25	\$47,500.0	
02-00220	INCOLOF ASPHALT MAT	SY	700	\$15	510,500.0	
104 06007	UNGLASSIFIED EXCAVATION	6Y	300	\$30	\$15,000.0	
102.27821	HOT MIX ASPHALT (GRADE SEVINOVDC 58.34)	TON	100	900 \$100	519 200 (	
508-00000	CONCRETE SIDEWALK	SV	100	\$120	512.000 0	
09-21010	CURB AND GUTTER TYPE 2 (SECTION I-B)	LF	2,100	\$40	\$84,000.0	
09-21020	CURB AND GUTTER TYPE 2 (SECTION II-B)	LF	200	\$50	\$10,000.0	
10-00020	MEDIAN COVER MATERIAL (PATTERNED CONCRETE)	SF	9,400	\$20	\$188,000.0	
			1		a distante of a	
			20 cl 1	11		
				t t		
	Tant Marshall		-t-	6 <u></u>	2440.00	
Hom	Total Major items	Patron	t Ranna	Percent	Costs 5	
Major It	ems	1 21221	te inelitäte.	Selected	\$440.00	
Description	Control ( Landstranius / 20040	5 km 584 mf (A)		582	\$92.00	
Erosion	Control / Landscaping / Swive-	1 10 3% OF (A)		2791.	\$22.00	
Constru	ction Surveying	1 to 5% of (A)		5%	\$22,00	
Constru	ation Phasing & Traffic Control	10 to 25% of (A)+	(B)+(C)	10%	\$49,00	
Utilities		1 to 10% of (A)		10%	\$44,00	
Signing	& Striping	1 to 5% of (A).		4%	\$18,00	
Lighting		5 to 10% of (A)		5%	\$22.00	
Mobiliza	tion	10% of (A)+(B)+((	C)+(D)+(E)+(F)+(G)	10%	\$62.00	
TOTAL	OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST. CBI	(A)+(B)+(C)+(D)+	(E)+(F)+(G)+(H)		\$679.00	
Force A	ccount - Miscaltaneous	1 to 10% of (i)		5%	\$34.00	
CONTIN	IGENCY & INFLATION	(D+(J)			\$713.00	
Contrast		20% of (K)		20%	\$214.00	
Cottange		3076 UT (N)		30.76	.0214,00	
TOTAL	IP IN IN THE PROBABLE LOWSTRICTION ITEMS COST CI	(K)+(L)			\$927,00	
TOTAL						
Construe	ction Engineering, CE & Indirects	26% of (M)		26%	\$242,00	
Construi Design En	ction Engineering, CE & Indirects	26% of (M) 10% of (M)		26% 10%	\$242,0 \$93,0	
TOTAL Construi Design En	ction Engineering, CE & Indirects gimeering . PROJECT OPINION OF PROBABLE COST	26% of (M) 10% of (M) (M)+(N)+(O)		26%. 10%	\$242,0 \$93.0 \$1,260.00	



JULDIAND DEPARTMENT OF TRANSPORTATION NA INSINERES OWNION OF PROBABLE COST IS B CO 9 - 3m St		Project# 00000				
					fus	
Project Litarnia	US 6 CO 9 - 5th St	Da	ite;	P ∈ Project code )	20000	
Charity DI	Summit County			Leager in Feet	Longih In Miles	
Тура		Rondwa	Planement	Asph	alt	
Prepared by	Stolfus & Associates, Inc.	Thickne	ss in inches	Payoment 6'	Basse, 6	
In provi equipme the basis expressed	ding opinions of probable construction cost, the Client understands that ont or materials, or over the Conteactor's method of pricing, and that th is of our qualifications and experience. These costs do not reflect escala ed or implied, as to the accuracy of such opinions as compared to bid o	it Stolfns & Associates Inc. h: e opinions of probable const ation for future costs. Stolfus ir actual costs.	is no control over ruction costs prov & Associates, Inc	costs or the price ided herein are to . makes no warra	of labor, be made on nty,	
TEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST	
202-00190	REMOVAL OF CONCRETE MEDIAN COVER MATERIAL	SY	200	\$25	\$5,000.0	
202-00203	REMOVAL OF CURB AND GUTTER	LF	650	\$25	\$16,250.	
203-000220	EMBANKMENT MATERIAL (COMPLETE IN PLACE)	CY	500	\$30	\$12,000.0	
04-06007	AGGREGATE BASE COURSE (CLASS fi)	CY	300	\$80	\$24,000.0	
509-21010	CURB AND GUTTER TYPE 2 (SECTION 1-B)	LF	800	\$40	\$32,000.0	
510-00020	MEDIAN COVER MATERIAL (PATTERNED CONCRETE)	SF	12,700	\$20	\$254,000.0	
-	Total Major Items				\$360,00	
Item		Percer	nt Range	Percent Selected	Costs \$	
Major Ite	អ្នកទ				\$360,00	
Erosion (	Control / Landscaping / SWMP	1 to 5% of (A)		5%	\$18,00	
Construc	tion Surveying	1 to 5% of (A)		5%	\$18,00	
Construc	tion Phasing & Traffic Control	10 to 25% of (A)+	(B)+(C)	10%	\$40,00	
Utilities		1 to 10% of (A)		10%	\$36,00	
Signing 8	t Striping	1 to 5% of (A)		196	\$15,00	
Lighting		5 to 10% of (A)		5%	\$18,00	
Mobilizat	ion.	10% of (A)+(B)+(f	C)+(D)+(E)+(F)+(G)	10%	\$51.0	
TOTAL C	OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI	(A)+(B)+(C)+(D)+	(E)+(F)+(G)+(H)		\$556,00	
Force Ac	count - Miscellaneous	1 to 10% of (I)		5%.	\$28.0	
CONTINGENCY & INFLATION		(L)+(I)			\$584,00	
		3100 c (202)		30%	\$176.00	
Continge	ncy	20% OF (K)		23/10		
Continge TOTAL C	INCY OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI	(K)+(L)			\$760,00	
Continge TOTAL C	Incy DPINION OF PROBABLE CONSTRUCTION ITEMS COST, Cl tion Engineering, CE & Indiracts	26% of (M)		26%	\$760,0 \$198,0	
Continge TOTAL C Construc Design Eng	Incy DPINION OF PROBABLE CONSTRUCTION ITEMS COST, Cf thon Engineering, CE & Indiracts. gineering.	26% of (M) 10% of (M)		26% 10%	\$760,0 \$198,0 \$76,0	

COLORADD DEPARTMENT OF TRANSPORTATION R3 ENGINEER'S OPINION OF PROBABLE COST		Project # 20(X0)				
S & CO 9 - 4th St and !	Sth St (Alternative 1)		- Stolfus			
Project lizance	US 6 CO 9 - 4th St and 5th St	Date:		PE Project code J	00000	
County of	Summit County		-	Loopin in Feet	Length In Miles	
Тупя		Roadwa	Pavamant	Asp	nalt	
Prepared by	Stolfus & Associates, Inc.	Thickness in Inchas		Payoment	Bace,	
equipment or m the basis of our expressed or in TEM NO.	national of probability of the construction cost, the Charlen Understanding that anatorials, or over the Constructor's method of pricing, and that the capalifications and experience. These costs do not reflect escalat nplied, as to the accuracy of such opinions as compared to bid or ITEM DESCRIPTION	opinions of probable constr ion for future costs. Stalfus actual costs. UNIT	& Associates, Inc	UNIT COST	cost	
202-00190 REMOV	AL OF CONCRETE MEDIAN COVER MATERIAL	SY	400	\$25	\$10,000.0	
202-00203 REMOV	AL OF CURB AND GUTTER	LF	1,850	\$25	\$46,250.0	
02-00220 REMOV	SSIFIED EXCAVATION	SY CY	1,500	\$15	\$22,500.0	
04-06007 AGGRE	GATE BASE COURSE (CLASS 6)	CY	700	\$80	\$56,000.0	
03-37831 HOT MI	X ASPHALT (GRADE SF)(100)(PG 58-34)	TON	40	\$120	\$4,800.0	
08-00000 CONCR	RETE SIDEWALK	SY	100	\$120	\$12,000.0	
510-00020 MEDIAN	N COVER MATERIAL (PATTERNED CONCRETE)	SF	31,900	\$20	\$638,000.0	
			1			
-			19.1 I			
Tota	al Major Items	Percer	t Ranne	Percent	\$930,00 Costs \$	
Major Items				Selected	\$930,00	
Erosion Control /	Landscaping / SWMP	1 to 5% of (A)		5%	\$47,00	
Construction Sun	vaving	1 to 5% of (A)		5%	547.00	
Construction Day	ena L Teatle Control	10 to 25% of (A)+	(B)L(C)	104	\$103.00	
- Consciousner ena	ising a mane cooper-	1010203001(1)	(9)+(6).	4005	\$100,00	
Unones		1 (b. 10% br (A)		10%	\$93,00	
Signing & Sinping	0	(A) to % of (A)		4%	\$38,00	
Lighting.		5 to 10% of (A)		5%	\$47,00	
Mobilization	The second se	10% of (A)+(B)+(0	3)+(D)+(E)+(F)+(G)	10%	\$131,00	
TOTAL OPINION	N OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI	(A)+(B)+(C)+(D)+	(E)+(F)+(G)+(H)		\$1,436,00	
Force Account - 1	Miscellaneous	1 to 10% of (I)		5%	\$72,00	
CONTINGENCY	& INFLATION	(I)+(J)			\$1,508,00	
Contingency		30% of (K)		30%	\$453,00	
	N OF PROBABLE CONSTRUCTION ITEMS COST, CI	(K)+(L)			\$1,961,00	
TOTAL OPINION		(K)+(L) 26% of (M) 26% 40% = 5(M) 26%			\$510.00	
Gonstruction Engineering	pineering, CE & Indirects 9	26% of (M) 10% of (M)		10%	\$197.00	



COLORADD DEPARTMENT OF TRANSPORTATION R3 ENGINEER'S OPINION OF PROBABLE COST		Project # 20000				
S 5 CO 9 - 3r	rd St & Wildermast Road		OLORADO	Stol	fus	
Project Lanse	US 6 CO 9 - 3rd St & Wildernest Road	De	ite;	PE Project code A	20000	
Countly Di	Summit County		-	Leager in Feet	Longth In Miles	
Тупа		Routive	/ Elsement	Asph	Bit	
Prepared by	Stolfus & Associates, Inc.	Wickness in inchas,		Payament 6'	Base 6	
In provi equipm the basi express	iding opinions of probable construction cost, the Client understands the tent or materials, or over the Contractor's method of pricing, and that th is of our qualifications and experience. These costs do not reflect escal eed or implied, as to the accuracy of such opinions as compared to bid o	at Stolfus & Associates Inc. ha e opinions of probable const ation for fature costs. Stolfus practual costs.	is no control over ruction costs prov & Associates, Inc	costs or the price ided herein are to :. makes no warra	of labor, be made on nty,	
TEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST	
201-00000	CLEARING AND GRUBBING	LS	-1	\$20,000	\$20,000.0	
02-00190	REMOVAL OF CONCRETE MEDIAN COVER MATERIAL	SY	1,200	\$25	\$30,000.0	
02-00200	REMOVAL OF SIDEWALK	SY	4 700	\$40	\$117 500.0	
02-00203	REMOVAL OF ASPHALT MAT	SV	1,300	\$15	\$19,500.0	
03-00060	EMBANKMENT MATERIAL (COMPLETE IN PLACE)	CY	900	\$30	\$27.000 0	
04-06007	AGGREGATE BASE COURSE (CLASS 6)	CY	900	\$80	\$72,000.0	
03-37831	HOT MIX ASPHALT (GRADE SF)(100)(PG 58-34)	TON	490	\$120	\$58,800.0	
00000-800	CONCRETE SIDEWALK	SY	300	\$120	\$36,000.0	
09-21010	CURB AND GUTTER TYPE 2 (SECTION I-B)	LF	3,600	\$40	\$144,000.0	
09-21020	CURB AND GUTTER TYPE 2 (SECTION II-B)	LF.	1,650	\$50	\$82,500.0	
10-00020	MEDIAN COVER MATERIAL (PATTERNED CONCRETE)	SF	23.100	\$20	\$462,000.0	
-		1			_	
_	Total Major Items	-		Brownet	\$1,090,00	
ttem		Percer	nt Range	Selected	Costs 5	
Major Ite	ems			1	\$1,090,00	
Erosion	Control / Landscaping / SWMP	1 to 5% of (A)		5%	\$55,00	
Construc	stion Surveying	1 to 5% of (A)		5%	\$55.00	
Construc	ation Phasing & Traffic Control	10 to 25% of (A)+	(B)+(C)	10%	\$120,00	
Utilities		1 to 10% of (A)		10%	\$109,00	
Signing &	& Striping	1 to 5% of (A)		4%	\$44,0	
Lighting		5 to 10% of (A)		5%	\$55.00	
Mobilizat	tion	10% of (A)+(B)+(	C)+(D)+(E)+(F)+(G)	10%	\$153,00	
TOTAL	OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI	(A)+(B)+(C)+(D)+(E)+(F)+(G)+(H)			\$1,681,00	
Force Ad	ccount - Miscellaneous-	1 to 10% of (I) 59			\$85,00	
CONTIN	IGENCY & INFLATION	(L)+(J)			\$1,766,00	
	and and a second se	30% of (K)		30%	\$530,00	
Continge	nuy_					
Continge	OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI	(K)+(L)			\$2,296,00	
Continge TOTAL Construct Design En	OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI ction Engineering, CE & Indirects gineering.	(K)+(L) 26% of (M) 10% of (M)		26% 10%	\$2,296,0 \$597,0 \$230.0	



CUCURADO LIEVARTNENT DE TRANSPORTATION KA INGINEERS ODINION DE FROBALE COUT US 8 CO 9 - Stephens Way 4 Lane		Project # 20000				
					fus	
Project i kamie	US 6 CO 9 - Stephens Way 4 Lane	De	ite;	P.E. Project code	00000	
Claurily DI	Summit County		-	Leoph in Fed	Longth In Miles	
Tyma		Routhe	y Pisoamant	Asp	nalt .	
Prepared by	Stolfus & Associates, Inc.	Witkee	es in jachas.	Payament	Base, 5 <sup>4</sup>	
In providing opinions of equipment or materials, the basis of our qualifics expressed or implied, a	probable construction cost, the Client understands the or over the Contractor's method of pricing, and that th ilons and experience. These costs do not reflect escal s to the accuracy of such opinions as compared to bid	at Stolfus & Associates Inc. h. 10 opinions of probable const lation for future costs. Stolfus or actual costs.	as no control over ruction costs prov 1 & Associates, Inc	costs or the price ided herein are to c. makes no warra	of labor, be made on inty,	
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST	
202-00160 REMOVAL OF W	ALL	SF	1,600	\$25	\$40,000.0	
202-00200 REMOVAL OF SIL	DEWALK	SY	400	\$40	\$16,000.0	
202-00203 REMOVAL OF CL	IRB AND GUTTER	LF	400	\$25	\$10,000.0	
202-00220 REMOVAL OF AS	PHALT MAT	SY	5,200	\$15	\$78,000.0	
203-00000 UNCLASSIFIED E	XCAVATION	CY	5,300	\$30	\$159,000.0	
304-06007 AGGREGATE BA	SE COURSE (CLASS 6)	CY	1,500	\$80	\$120,000.	
403-37831 HOT MIX ASPHA	T (GRADE SF)(100)(PG 58-34)	TON	2,610	\$120	\$313,200.0	
04-00640 SOIL NAIL WALL		SF	3,000	\$300	\$900,000.0	
508-00000 CONCRETE SIDE	WALK	SY	1,100	\$120	\$132,000.0	
509-21020 CURB AND GUTT	ER TYPE 2 (SECTION II-B)	LF	2,950	\$50	\$147,500.0	
BRIDGE RECONS	STRUCTION	SF	2,655	\$175	\$464,630.0	
			- J	L	a service and	
Total Major II	ims				\$2,390,00	
Item		Perce	nt Range	Selected	Costs 5	
Major Items					\$2,390,00	
Eresion Control / Landscap	ing / SWMP	1 to 5% of (A)		5%	\$120,00	
Construction Surveying		1 to 5% of (A)		5%	\$120,00	
Construction Phasing & Tra	iffic Control	10 to 25% of (A)	(B)+(C)	10%	\$263.00	
1 Minutes		1 to 10% of (A)	352.354	1096	\$239.00	
Cinica & Orden		5 to 10% of (A)		1014	#00.00	
signing & striping		( to 5% of (A).		9.70	\$90.00	
Lighting		5 to 10% of (A)	-	5%	\$120,00	
Mobilization		10% of (A)+(B)+(	10% of (A)+(B)+(C)+(D)+(E)+(F)+(G) 10%		\$335,00	
TOTAL OPINION OF PRO	BABLE CONSTRUCTION BID ITEMS COST, CBI	(A)+(B)+(C)+(D)+	(E)+(F)+(G)+(H)		\$3,683,00	
Force Account - Miscellane	ans.	1 to 10% of (I)		5%	\$185,00	
CONTINGENCY & INFLAT	ION	(L)+(I)			\$3,868,00	
Carlonna		30% of (K)		30%	\$1,161,00	
Committericy					PE 020 0	
TOTAL OPINION OF PRO	BABLE CONSTRUCTION ITEMS COST, CI	(K)+(L)			\$5,029,00	
TOTAL OPINION OF PRO	BABLE CONSTRUCTION (TEMS COST, C)	(K)+(L) 26% of (M)		26%	\$1,308,00	
TOTAL OPINION OF PRO Construction Engineering, ( Design Engineering	BABLE CONSTRUCTION ITEMS COST, CI 22 & Indirects	(K)+(L) 26% of (M) 10% of (M)		26%, 10%	\$1,308,00 \$503,00	



ENGINEER'S OPINION OF PROBABLE COST		Project W XXXXX				
a u co a opinitira			OLOBADO	- Stolfus		
Project Nemo	US 6 CO 9 Option 4	Da	te:	P.E. Project code X	000XX	
Coursy of	Summit County			Length In Feat	Cenglin In Mihris	
Турас		Roattway	Pavament	Asph	all	
Prepared by	Stoifus & Associates, Inc.	Tholoes	sininches	Pavement:	Billet.	
In provi equipm the basi express	ding opinions of probable construction cost, the Client understands that ent or materials, or over the Contractor's method of pricing, and that the s of our qualifications and experience. These costs do not reflect escala ed or implied, as to the accuracy of such opinions as compared to bid a	t Stolfus & Associates Inc. ha a opinions of probable const tion for future costs. Stolfus r actual costs.	us no control over ruction costs prov & Associates, In	costs or the price ided herein are t c. makes no warr	s of labor, o be made or ranty.	
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST	
202-00190	REMOVAL OF CONCRETE MEDIAN COVER MATERIAL	SY	1,000	\$25	\$25,000.0	
202-00200	REMOVAL OF SIDEWALK	SY	2,400	\$40	\$96,000,0	
202-00203	REMOVAL OF CURB AND GUTTER	LF -	4,300	\$25	\$107,500.0	
202-00220	REMOVAL OF ASPHALT MAT	SY	2,300	\$15	\$34,500.0	
202-00240	REMOVAL OF ASPHALT MAT (PLANING)	SY	13,600	\$12	\$163,200.0	
203-00060	EMBANKMENT MATERIAL (COMPLETE IN PLACE)	CY	6,300	\$30	\$189,000.0	
304-06007	AGGREGATE BASE COURSE (CLASS 6)	CY	3,100	\$80	\$248,000.0	
103-37831	HOT MIX ASPHALT (GRADE SF)(100)(PG 58-34)	TON	5,870	\$120	\$704,400.0	
508-00000	CONCRETE SIDEWALK	SY	4,700	\$120	\$564,000.0	
509-21010	CURB AND GUTTER TYPE 2 (SECTION I-B)	LF	3,800	\$40	\$152,000.0	
09-21020	CURB AND GUTTER TYPE 2 (SECTION II-B)	LF	5,800	\$50	\$290,000,0	
510-00020	MEDIAN COVER MATERIAL (PATTERNED CONCRETE)	SF	12,500	\$20	\$250,000.0	
1000	EXTEND CULVERT	LF	30	\$3,500	\$105,000.0	
	PRE-FABRICATED PEDESTRIAN BRIDGE	SF	840	\$450	\$378,000,0	
	MODIFY TRAFFIC SIGNAL	EACH	1	\$250,000	\$250,000.0	
-	TRAFFIC SIGNAL	EACH	1 1	\$750,000	\$750,000.0	
	Total Major Items				\$4,310,00	
Rem		Percen	it Range	Percent	Costs 5	
Major Ite	2015		_		\$4,310,00	
Erosion (	Control / Landscaping / SWMP	1 to 5% of (A)		Б‰	\$216,00	
Construc	tion Surveying	L to 5% of (A) 5%			\$216,00	
Construc	tion Phasing & Traffic Control	10 to 25% of (A)+	(B)+(C)	20%	\$949.00	
Utilities		-1 to 10% of (A)		10%	\$431,00	
Signing &	& Striping	F to 5% of (A)		4%	\$173,00	
Lighting		5 to 10% of (A)		Б‰	\$216,00	
Mobilizat	lon	10% of (A)+(B)+(	C)+(D)+(E)+(F)+(G	10%	\$652.00	
TOTAL	DPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI	(A)+(B)+(C)+(D)+	+(E)+(F)+(G)+(H)		\$7,163,00	
Force Ac	count - Miscellaneous	1.to 70% of (I) 5%			\$359,00	
CONTIN	GENCY & INFLATION	(L)*(I)			\$7,522,00	
Continge	incy	30% of (K)		30%	\$2,257.00	
TOTAL	DPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI	(K)+(L)			\$9,779,00	
	tion Engineering, CE & Indirects	26% of (M)		26%	\$2,543.00	
Construct				~~ // /n	04.1040.00	
Construct Design P	ngineering	10% of (M)		10%	\$978,00	
Construct Design E	ingineering	10% of (M)		10%	\$978,00	

COLORADD DEPARTMENT OF TRANSPORTATION R3 ENGINEER'S OPINION OF PROBABLE COET		Project# XXXXX				
S 5 CO 9 - D	iliion Ridgs Rd & Anemons Trail		DLORADO	Stol	fus	
Project likense	US 6 CO 9 - Dillon Ridge Rd & Anemone Trail	Da	Date.		20000	
Grantly DI	Summit County		-	Loopen in Fed	Longth In Miles	
Туля		Roamie	Pagement	Asph	alt	
Prepared by	Stolfus & Associates, Inc.	Thicknes	s in inches	Payment B	Base, 6	
In prov equipm the basi express	iding opinions of probable construction cost, the Client understands that sent or materials, or over the Contractor's method of pricing, and that the is of our qualifications and experience. These costs do not reflect escala ed or implied, as to the accuracy of such opinions as compared to bid on	Stolfus & Associates Inc. ha opinions of probable consti- tion for future costs. Stolfus actual costs.	s no control over uction costs prov & Associates, Inc	costs or the price ided herein are to . makes no warra	of labor, be made on nty,	
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST	
202-00200	REMOVAL OF SIDEWALK	SY	500	\$40	\$20,000.0	
202-00203	REMOVAL OF CORBIND GUTTER	LF EV	1,500	\$25	\$37,500.0	
202-00220	INCLASSIFIED EXCAVATION	or CV	800	\$15	\$24 000.0	
304-06007	AGGREGATE BASE COURSE (CLASS 6)	CY	600	\$80	\$48,000.0	
403-37831	HOT MIX ASPHALT (GRADE SF)(100)(PG 58-34)	TON	530	\$120	\$63,600.0	
608-00000	CONCRETE SIDEWALK	SY	600	\$120	\$72,000.0	
609-21010	CURB AND GUTTER TYPE 2 (SECTION I-B)	LF	1,600	\$40	\$64,000.0	
609-21020	CURB AND GUTTER TYPE 2 (SECTION II-B)	LF	1,600	\$50	\$80,000.0	
610-00020	MEDIAN COVER MATERIAL (PATTERNED CONCRETE)	SF	2,700	\$20	\$54,000.0	
-	Total Mainr tiems	1	4		\$480.00	
Item		Percer	t Range	Percent	Costs \$	
Major It	ems.			Selected	\$480,00	
Erosion	Control / Landscaping / SWMP	1 to 5% of (A)		5%	\$24,00	
Construe	ction Surveying	1 to 5% of (A)		5%	\$24,00	
Construe	ction Phasing & Traffic Control	10 to 25% of (A)+	(B)+(C)	20%	\$106.00	
Utilities		1 to 10% of (A)		10%	\$48.00	
Signing a	& Striping	1 to 5% of (A)		5%	\$24,00	
Lighting		5 to 10% of (A)		5%	\$24,00	
			01+(D)+(E)+(F)+(G)	10%	\$73,00	
Mobiliza	tion	10% of (A)+(B)+(C	1 131 001 1 1 1 1 1			
Mobiliza	Non OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI	10% of (A)+(B)+(C)+(D)+	(E)+(F)+(G)+(H)		\$803,00	
Mobilizat TOTAL Force A	Ilion OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI ccount - Miscellaneous	1 to 10% of (I)	(E)+(F)+(G)+(H)	5%	\$803,00 \$41,00	
Mobiliza TOTAL Force Ar CONTIN	lion OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI ccount - Miscellaneous IGENCY & INFLATION	10% of (A)+(B)+(C)+(D)+ (A)+(B)+(C)+(D)+ 1 to 10% of (I) (I)+(J)	(E)+(F)+(G)+(H)	5%	\$803,00 \$41,00 \$844,00	
Mobiliza TOTAL Force Ar CONTIN Continge	Ition OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI Eccount - Miscellaneous IGENCY & INFLATION ency	10% of (A)+(B)+(C) (A)+(B)+(C)+(D)+ 1 to 10% of (I) (I)+(J) 30% of (K)	(E}+{F}+{G}+{H}	5% 30%	\$803,00 \$41,00 \$844,00 \$254,00	
Mobiliza TOTAL Force Ar CONTIN Continge TOTAL	Ition OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI account - Miscellaneous IGENCY & INFLATION ancy OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI	10% of (A)+(B)+(C)+(D)+ (A)+(B)+(C)+(D)+ 1 to 10% of (I) (I)+(J) 30% of (K) (K)+(L)	(E)+(F)+(G)+(H)	5% 30%	\$803,00 \$41,00 \$844,00 \$254,00 \$1,098,00	
Mobilizal TOTAL Force Ar CONTIN Continge TOTAL	tion OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI CCOUNT - Miscellaneous IGENCY & INFLATION ency OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI Ction Engineering, CE & Indirects	10% of (A)+(B)+(C)+(O)+ (A)+(B)+(C)+(O)+ 1 to 10% of (I) (I)+(J) 30% of (K) (K)+(L) 26% of (M)	(E)+(F)+(G)+(H)	5% 30% 26%	\$803,00 \$41,00 \$844,00 \$254,00 \$1,098,00 \$286,00	
Mobilizai TOTAL U Force Ar CONTIN Continge TOTAL U Construi Design En	Ition OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI Eccount - Miscellaneous IGENCY & INFLATION ency OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI CONTENDING OF PROBABLE CONSTRUCTION ITEMS COST, CI Cotion Engineering. CE & Indirects geneering.	10% of (A)+(B)+(C)+(O)+ (A)+(B)+(C)+(O)+ 1 to 10% of (I) (I)+(J) 30% of (K) (K)+(L) 26% of (M) 10% of (M)	(E)+(F)+(G)+(H)	5% 30% 26% 10%	\$803,00 \$41,00 \$844,00 \$254,00 \$1,098,00 \$286,00 \$110,00	
Mobiliza TOTAL Force Ar CONTIN Continge TOTAL Construe Design En TOTAL	tion OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI CCOUNT - Miscellaneous IGENCY & INFLATION ancy OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI ction Engineering, CE & Indirects ginaering, PROJECT OPINION OF PROBABLE COST	10% of (A)+(B)+(C)+(D)+ (A)+(B)+(C)+(D)+ 1 to 10% of (I) (I)+(J) 30% of (K) (K)+(L) 26% of (M) 10% of (M) (M)+(N)+(O)	(E)+{F}+{G)+{H}	5% 30% 26% 10%	\$803,00 \$41,00 \$844,00 \$254,00 \$1,098,00 \$1,098,00 \$110,00 \$1,490,000	



INGINEERS OPINION OF PROBABLE COST		Project # 20000				
IS & CO 9 - Dillion	Dam Rd		OLORADO	Stol	fus	
Project Name	US 6 CO 9 - Ollion Dam Rd	Da	Date,		20000	
Citatity Di	Summit County			Leagen in Feet	Longih In Miles	
Type		Rondway	Pavament	Asph	alt	
Prepared by	Stolfus & Associates, Inc.	Thicknes	s in inches	Payment 6'	Base, 6	
In providing equipment the basis of expressed o	y opinions of probable construction cost, the Client understands th or materials, or over the Contractor's method of pricing, and that () our qualifications and experience. These costs do not reflect esca or implied, as to the accuracy of such opinions as compared to bid	at Stolfus & Associates Inc. ha he opinions of probable consti- lation for future costs. Stolfus or actual costs.	is no control over ruction costs prov & Associates, Inc	costs or the price ided herein are to makes no warra	of labor, be made on nty,	
TEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST	
202-00220 REM	IOVAL OF ASPHALT MAT	SY	730	\$15	\$10,950.0	
203-00060 EMB	BANKMENT MATERIAL (COMPLETE IN PLACE)	CY	200	\$30	\$6,000.0	
04-06007 AGO	GREGATE BASE COURSE (CLASS 6)	CY	200	\$80	\$16,000.0	
209-21010 GUP	NAN COVER MATERIAL (RATTERNED CONCRETE)	LI- SE	1,700	\$40	\$68,000.0	
				- Fas		
-					200	
	Total Major Items	1 *		Percent	\$200,00	
Major Items		Percor	it Range	Selected	Costs 5 \$200.00	
Erresion Cont	mi / Landecapina / SWMP	1 to 5% of (A)		5%	\$10.00	
Creation Com	Constanting, Contract	1 40 500 - F 24 1		20/	\$10,00	
Construction	Surveying	1 to 3% of (A)		0%	\$10,00	
Construction	Phasing & Traffic Control	10 to 25% of (A)+	(B)+(C)	10%	\$22,00	
Utilities		7 to 10% of (A)	_	10%	\$20,00	
Signing & Str	iping .	1 to 5% of (A)		4%	\$8,00	
Lighting		5 to 10% of (A)		5%	\$10,00	
Mobilization		10% of (A)+(B)+(6	10% of (A)+(B)+(C)+(D)+(E)+(F)+(G)		\$28.00	
TOTAL OPIN	ION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI	(A)+(B)+(C)+(D)+	(E)+(F)+(G)+(H)		\$308.00	
Force Account	nt - Miscellaneous	1 to 10% of (I)		5%	\$16,00	
CONTINGEN	ICY & INFLATION	(l)+(J)			\$324,00	
Contingency		30% of (K)		30%	\$98.00	
		(K)+/()			\$422,00	
TOTAL OF I	ION OF PROBABLE CONSTRUCTION ITEMS COST, CI	(K)+(L)				
Construction	ION OF PROBABLE CONSTRUCTION ITEMS COST, CI	26% of (M)		26%	\$110.00	
Construction Design Engine	ION OF PROBABLE CONSTRUCTION ITEMS COST, CI Engineering, CE & Indirects aring	28% of (M) 10% of (M)		26% 10%	\$110,00 \$43,00	



OLORADO DEPARTMEN	NT OF TRANSPORTATION R3 PROBABLE COST		Project (	XXXXXX	
IS 6 CO 9 - Lake Dillon		<b>\$\$</b>	GLOBADO	Stol	fus
Project Nemo	US 6 CO 9 - Lake Dillon	Da	ite)	P.E. Project code X	XXXX
County of	Summit County			Length In Feet	Length In Miles
Турыс		Resigning	y Pawament	Asph	alf
Prepared.by	Stolfus & Associates, Inc.	Thicknes	ss in inches	Pavement: 6'	Base 6"
In providing opinio equipment or mate the basis of our qu expressed or impli	ons of probable construction cost, the Client understands that vials, or over the Contractor's method of pricing, and that the altifications and experience. These costs do not reflect escala ied, as to the accuracy of such opinions as compared to bid or	Stolfus & Associates Inc. he opinions of probable const tion for future costs. Stolfus actual costs.	as no control over ruction costs prov s & Associates, In	costs or the price ided herein are t c. makes no warr	of labor, o be made on anty,
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST
202-00220 REMOVAL	L OF ASPHALT MAT	SY	730	\$15	\$10,950.00
203-00060 EMBANK	MENT MATERIAL (COMPLETE IN PLAGE)	CY	800	\$30	\$24,000.00
304-06007 AGGREG	ATE BASE COURSE (CLASS 6)	CY	200	\$80	\$16,000.00
309-21010 CURB AN	D GUTTER TYPE 2 (SECTION I-B)	LF	1,700	\$40	\$68,000.00
509-21020 CURB AN	D GUTTER TYPE 2 (SECTION II-B)	LF	600	\$50	\$30,000.00
510-00020 MEDIAN (	COVER MATERIAL (PATTERNED CONCRETE)	SF	4.900	\$20	\$98,000.00
			-		
			1		
T	alay Waxin			Ť	\$250.000
rotal Mi	ajor usus	1		Percent	4150,000
Item		Percer	nt Range	Selected	Costs 5
Major Items					\$250,000
Erosion Control / Lan	idscaping / SWMP	1 to 5% of (A)		5%	\$13,000
Construction Queuni	22	110 5% of (A)		59/	\$12.000
Construction Survey		1 (0 3 % 01 (A)		23 770	1010100
Construction Phasing	a & Traffic Control	10 to 25% of (A)+	-(B)+(C)	10%	\$28,000
Utilities		1 to 10% of (A)		10%	\$25.000
Classical P. Otrining		1 to 5% of (A)		48.	\$10.000
argaining a starthing		1 to 5% or (A)		6 M	310,000
Lighting		5 to 10% of (A)		5%	\$13,000
Mobilization		10% of (A)+(B)+(	C)+(D)+(E)+(F)+(G	10%	\$36,000
TOTAL OPINION OF	F PROBABLE CONSTRUCTION BID ITEMS COST, CBI	(A)+(B)+(C)+(D)+	+(E)+(F)+(G)+(H)		\$388,000
Force Account - Mise	cellaneous	1 to 10% of (I)		5%	\$20,000
CONTINGENCY & I	NFLATION	(l)+(l)			\$408,000
Contingency		30% of (K)		30%	\$123,000
TOTAL OPINION OF	F PROBABLE CONSTRUCTION ITEMS COST. CI	(K)+(L)			\$531.000
		10.00 NT		2.1-1	
		COMPANY OF THEY		26%	\$139.000
Construction Engine	ening, CE & Indirects	26% di (M)		409/	CEA OD
Design Engineering	enng, CE-& Indirects	10% of (M)		10%	\$54,000
Design Engineering	enng, CE & Indirects	10% of (M)		10%	\$54,000

IR ENGINEE	DEPARTMENT OF TRANSPORTATION R3 R'S OPINION OF PROBABLE COST	1.	Project #	Project # XXXXX	
IS & CO 9 - M	Aultimodal Improvements (CO 9)	160 s	DLORADO	Stol	fus
Project Name	US 6 CO 9 - Multimodal Improvements (CD 9)	Da	te;	P.E. Project code X	2000000
County of	Summit County	14.14		Length In Feel	Longth In Miles
Тура		Powwe	Parement	Áspin	alt
Prepared by	Stolfus & Associates, Inc.	Thurstone	Thurkness in inches		Basse' õ"
In prov equipm the bas express	iding opinions of probable construction cost, the Client understands tha nent or materials, or over the Contractor's method of pricing, and that th is of our qualifications and experience. These costs do not reflect escal sed or implied, as to the accuracy of such opinions as compared to bid o	t Stolfus & Associates Inc. ha e opinions of probable consu ation for fature costs. Stolfus r actual costs.	ts no control over cuction costs prov & Associates, Inc	costs or the price ided heroin are to :. makes no warra	of labor, be made on nty,
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST
203-00060	EMBANKMENT MATERIAL (COMPLETE IN PLACE)	CY	1,000	\$30	\$30,000.0
304-06007	AGGREGATE BASE COURSE (CLASS 6)	CY	600	\$80	\$48,000.
508-00000	CURS AND GUTTER TYPE 2 (SECTION I-B)	Yc. I F	1,300	\$50	\$55,000
4/A	Wall #1 (12th St to 13th St. 500 LF at 6-ft tall)	SF	3,000	\$250	\$750,000.0
					0.000
	Total Major Items		1. A.	Percent	\$1,250,00
/tem		Percer	it Hange	Selected	Costs 5
Major It	iems.				\$1,250,00
Erosion	Control / Landscaping / SWMP	1 to 5% of (A)		5%	\$63,0
Constru	ction Surveying	1 to 5% of (A)		5%	\$63,0
Constru	ction Phasing & Traffic Cootrol	10 to 25% of (A)+	(B)+(C)	10%	\$136,0
Utilities		1 to 10% of (A)		10%	\$125,0
Signing	& Striping	1 to 5% of (A)		4%	\$50,0
Lighting		5 to 10% of (A)	_	5%	\$63,00
Mobiliza	ilion	10% of (A)+(B)+(I	C)+(D)+(E)+(F)+(G)	10%	\$176,00
TOTAL		(A)+(B)+(C)+(D)+	(E)+(F)+(G)+(H)		\$1,928,0
Force Account - Miscellaneous					
Force A	OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI	1 to 10%-of (I)		5%	\$97,0
CONTIN	OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI account - Miscellaneous IGENCY & INFLATION	1 to 10% of (I) (1)+(J)		5%	\$97,0 \$2,025,0
CONTIN Continge	OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI account - Miscellaneous NGENCY & INFLATION BROY	1 to 10% of (I) (I)+(J) 30% of (K)		5%. 30%	\$97,0 \$2,025,0 \$608,0
CONTIN Continge TOTAL	OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI account - Miscellaneous IGENCY & INFLATION ency OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI	5 16 10% of (1) (1)+(J) 30% of (K) (K)+(L)		5%. 30%	\$97,0 \$2,025,0 \$608,0 \$2,633,0
CONTIN Continge TOTAL Construe	OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI account - Miscellaneous INGENCY & INFLATION ENCY OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI Chin Engineering, CE & Indirects	5 16 10% of (i) (i)+(J) 30% of (K) (K)+(L) 26% of (M) 30% of (M)		5%. 30% 26%	\$97,0 \$2,025,0 \$608,0 \$2,633,0 \$685,0
Force A CONTIN Continge TOTAL Construct Design En	OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI account - Miscellaneous VGENCY & INFLATION ency OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI action Engineering, CE & Indirects agringering	5 to 50% of (i) (i)+(J) 30% of (K) (K)+(L) 26% of (M) 10% of (M)		5% 30% 26% 40%	\$97,0 \$2,025,0 \$608,0 \$2,633,0 \$685,0 \$264,0



NGINEER'S	DEPARTMENT OF TRANSPORTATION R3 OPINION OF PROBABLE COST	1	Project	100000	-
S 5 CO 9 - M	luitimodal Improvements (Pedestrien Bridge)		OLORADO	Stol	fus
Project Lanse	US 5 CO 9 - Multimodal Improvements (Pedestrian Bridge)	Da	le,	P E. Project code	100000
Charity Di	Summit County		-	Leagen in Feet	Longih In Miles
Type	2	Roadwa	Pavament	Asphalt	
Prepared by	Stolfus & Associates, Inc.	Thickne	s in inches	Payment: 6'	Base 6
In provi equipm the basi express	iding opinions of probable construction cost, the Client understands that sent or materials, or over the Contractor's method of pricing, and that (th is of our qualifications and experience. These costs do not reflect escala sed or implied, as to the accuracy of such opinions as compared to bid o	t Stolfus & Associates Inc. ha e opinions of probable consti- tion for future costs. Stolfus r actual costs.	as no control over auction costs prov & Associates, Inc	costs or the price ided herein are t . makes no warr	e of labor, o be made on anty,
TEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST
203-00060	EMBANKMENT MATERIAL (COMPLETE IN PLACE)	CY	1,600	\$30	\$48,000.0
304-06007	AGGREGATE BASE COURSE (CLASS 6)	CY	100	\$80	\$8,000.0
N/A	Wall for Bridge Ramps (4-ft high; 320-ft long)	SF	1,280	\$250	\$320,000.0
N/A	Pedestrian Bridge (160-ft long, 10-ft wide)	SF	1,600	\$1,200	\$1,920,000.0
	Total Major Kems				\$2,350,00
Item		Percer	nt Range	Percent	Costs 5
Major Ite	ems			ouncing	\$2,350,00
Erosion	Control / Landscaping / SWMP	1 to 5% of (A)		5%	\$118,00
Construc	ction Surveying	1 to 5% of (A)		5%	\$118,00
Construe	ction Phasing & Traffic Control	10 to 25% of (A)+	(B)+(C)	10%	\$259,00
Utilities		1 to 10% of (A)		10%	\$235,00
Signing	& Striping	1 to 5% of (A)		11%	\$94,00
Lighting		5 to 10% of (A)	5 to 10% of (A)		
Mobiliza	tion	10% of (A)+(B)+(	10% of (A)+(B)+(C)+(D)+(E)+(F)+(G)		
TOTAL	OPINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI	(A)+(B)+(C)+(D)+	(E)+(F)+(G)+(H)		\$3,622,00
Force Ad	ccount - Miscelianeous	1 to 10% of (I)	1 to 10% of (I)		
CONTIN	CONTINGENCY & INFLATION		(I)+(J)		\$3,804,00
Continge			3//19/	\$1 142 0	
	ency	30% of (K)		20 74	91,146,0
TOTAL	ency OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI	30% of (K) (K)+(L)		50 m	\$4,946,00
Construe	ency OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI ction Engineering, CE & Indiracts	30% of (K) (K)+(L) 26% of (M)		26%	\$4,946,0 \$1,286,0
Construe Design En	ency OPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI ction Engineering, CE & Indirects gineering	30% of (K) (K)+(L) 26% of (M) 10% of (M)		26% 10%	\$4,946,0 \$1.286,0 \$495,0



OLORADO DE	EPARTMENT OF TRANSPORTATION R3 PINION OF PROBABLE COST	1 1 1	Project	100000	-	
IS 6 CO 9 - Mu	ihimodal improvements (Underpass)		OLORADO	Stol	fus	
Project literals	US 6 CO 9 - Multimodal Improvements (Underpass)	Da	ite,	P E Project code	NORMA	
Chartly DI	Summit County		-	Leager in Feet	Longth In Miles	
Тура	);	Roadwa	/ Pavement	Asphalt		
Prepared by	Stolfus & Associales, Inc.	Thickne	Thickness in inches		Base, 6"	
In provid equipme the basis expresse	ding opinions of probable construction cost, the Client understands that ent or materials, or over the Contractor's method of pricing, and that the s of our qualifications and experience. These costs do not reflect escala ed or implied, as to the accuracy of such opinions as compared to bid or	Stolfus & Associates Inc. ha opinions of probable consti- tion for fature costs. Stolfus actual costs.	is no control over ruction costs prov & Associates, Inc	costs or the price ided herein are t . makes no warr	e of labor, o be made on anty,	
ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST	
203-00060	EMBANKMENT MATERIAL (COMPLETE IN PLACE)	CY	1,000	\$30	\$30,000.0	
304-06007	AGGREGATE BASE COURSE (CLASS 6)	CY	300	\$80	\$24,000.0	
508-00000 1 601-03030 0	CONCRETE SIDEWALK	CY	600	\$120	\$1.800.000.0	
_		a da	1	1.		
Baun	Total Major Items	Duren	t Panna	Percent	\$1,950,00	
Major Ite	ms		(receiving)	Selected	\$1,950,00	
Emsion C	Control / Lanciscoping / SWMP	1 to 5% of (A)		5%	\$98.00	
Construct	tion Surveying	1 to 5% of (A)		5%	\$98,00	
Construct	tion Phasing & Traffic Control	10 to 25% of (A)+	(B)+(C)	10%	\$215.00	
Utilities		1 to 10% of (A)		10%	\$195,00	
Signing &	Striping	1 to 5% of (A)		4%	\$78,00	
Lighting		5 to 10% of (A)	5 to 10% of (A)			
Mobilizati	00	10% of (A)+(B)+(	10% of (A)+(B)+(C)+(D)+(E)+(F)+(G)			
TOTAL C	PINION OF PROBABLE CONSTRUCTION BID ITEMS COST, CBI	{A)+(B)+(C)+(D)+	(E)+(F)+(G)+(H)		\$3,006,00	
Force Ac	count - Miscellaneous	1 to 10% of (I)	5%	\$151,00		
CONTING	GENCY & INFLATION	(l)+(l)			\$3,157,00	
Continger	ney	30% of (K)		30%	\$948,00	
TOTAL C	PPINION OF PROBABLE CONSTRUCTION ITEMS COST, CI	(K)+(L)			\$4,105,00	
Construct Design Eric	tion Engineering, CE & Indirects Jineering	26% of (M) 10% of (M)		26% 10%	\$1,068,00	
the second secon				14.40		
TOTAL	PRO JECT OPINION OF PROBABLE COST	MULINILION			\$5 590 00	

Project # 0000				
	Stol	fus		
Da	le;	P ∈ Project code .		
		Leagen in Feet	Longth In Miles	
Roadway	Payament	Asphalt		
Thicknes	Thickness in inches		Base, 6'	
Stolfus & Associates Inc. ha opinions of probable consti- tion for future costs. Stolfus actual costs.	s no control over uction costs prov & Associates, Inc	costs or the price ided herein are to . makes no warr	e of labor, 5 be made on anty,	
UNIT	QUANTITY	UNIT COST	COST	
CY	1,800	\$30	\$54,000.0	
CY	1,000	\$80	\$80,000.0	
SY IC	1,100	\$120	\$132,000.0	
SF	8,400	\$250	\$2.100.000.0	
SF	3,000	\$250	\$750,000.0	
			\$3,230,00	
Percer	t Range	Percent Selected	Costs \$	
2			\$3,230,00	
1 to 5% of (A)		5%	\$162,00	
1 to 5% of (A)		5%	\$162,00	
1 to 5% of (A)	(B)+(C)	5% 10%	\$162,00	
1 to 5% of (A) 10 to 25% of (A)+ 1 to 10% of (A)	(B)+(C)	5% 10% 10%	\$162,00 \$356,00 \$323,00	
1 to 5% of (A) 10 to 25% of (A) 1 to 10% of (A) 1 to 5% of (A)	(B)+(C)	5% 10% 10%	\$162,00 \$356,00 \$323,00 \$130,00	
1 to 5% of (A) 10 to 25% of (A)+ 1 to 10% of (A) 1 to 5% of (A) 5 to 10% of (A)	(B)+(C)	5% 10% 10% 4% 5%	\$162,00 \$356,00 \$323,00 \$130,00 \$162,00	
1 to 5% of (A) 10 to 25% of (A)+ 1 to 10% of (A) 1 to 5% of (A) 5 to 10% of (A) 10% of (A)+(B)+((	(B)+(C) C)+(D)+(E)=(F)+(G)	5% 10% 10% 10%	\$162,00 \$356,00 \$323,00 \$130,00 \$162,00 \$162,00	
1 to 5% of (A) 10 to 25% of (A)+ 1 to 10% of (A) 1 to 5% of (A) 5 to 10% of (A) 10% of (A)+(B)+(C)+(D)+	(B)+(C) C)+(D)+(E)+(F)+(G) (E)+(F)+(G)+(H)	5% 10% 10% 10% 10%	\$162,00 \$356,00 \$323,00 \$130,00 \$162,00 \$463,00 \$463,00 \$4,978,00	
1 to 5% of (A) 10 to 25% of (A)+ 1 to 10% of (A) 1 to 5% of (A) 5 to 10% of (A) 10% of (A)+(B)+(C (A)+(B)+(C)+(D)+ 1 to 10% of (I)	(B)+(C) C)+(D)+(E)+(F)+(G) (E)+(F)+(G)+(H)	5% 10% 10% 10% 10% 5%	\$162,00 \$356,00 \$323,00 \$130,00 \$162,00 \$162,00 \$453,00 \$453,00 \$4,978,00 \$249,00	
1 to 5% of (A) 10 to 25% of (A)+ 1 to 10% of (A) 1 to 5% of (A) 5 to 10% of (A) 10% of (A)+(B)+(C)+(D)+ (A)+(B)+(C)+(D)+ 1 to 10% of (I) (0)+(J)	(B)+(C) C)+(D)+(E)+(F)+(G) (E)+(F)+(G)+(H)	5% 10% 10% 10% 10% 5% 10% 5%	\$162,00 \$356,00 \$323,00 \$130,00 \$162,00 \$463,00 \$463,00 \$4,978,00 \$249,00 \$5,227,00	
1 to 5% of (A) 10 to 25% of (A)+ 1 to 10% of (A) 1 to 5% of (A) 5 to 10% of (A) 10% of (A)+(B)+(C)+(D)+ (A)+(B)+(C)+(D)+ 1 to 10% of (I) (D)+(J) 30% of (K)	(B)+(C) C)+(D)+(E)=(F)+(G) (E)+(F)+(G)+(H)	5% 10% 10% 4% 5% 10% 5% 30%	\$162,00 \$356,00 \$323,00 \$130,00 \$162,00 \$463,00 \$463,00 \$46,978,00 \$249,00 \$5,227,00 \$1,569,00	
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## Appendix D

## APPENDIX D

Intersection	Improvement	Safety Benefits
Hamilton Creek	No Changes	N/A
Bald Eagle Rd/ Golden Eagle Rd	No Changes	N/A
	Restricting EB left turn (full movement to 3/4 movement)	No CMF provided for converting a full movement intersection to a 3/4 movement intersection, however, the CMFs (#9821 & #9823) for converting a full movement intersection to RIRO report a reduction of 45% of total crashes and 80% of severe crashes. This treatment is similar to a RIRO treatment, but since the left turn onto the side street will still be permitted, it is unlikely to reduce crash rates to the extent that a RIRO treatment would. The proposed treatment at this intersection is expected to reduce the total and severe crashes, most predominantly for angled crash types.
Willowbrook Rd	Install EB Right Turn Acceleration Lane (southbound along CO-9)	No CMF provided for the installation of an acceleration lane. The addition of an acceleration lane for the eastbound right turn movement onto CO-9 is expected to provide safety benefits and has the potential to reduce rear end crashes since drivers will have their own lane to accelerate in, keeping them separate from vehicles traveling at speed in the adjacent thru lane. It also has the potential to reduce angled crashes, as the eastbound right turn movement will no longer be conflicting with the southbound thru movement at the intersection.
	Install SB Right Turn Lane	CMF Description: Provide a right-turn lane on one major-road approach CMF ID 285: 14% reduction of total crashes This treatment is expected to predominantly reduce the number of rear end crashes as the right turn lane will provide refuge for right turning vehicles to decelerate and stop outside of the thru lane.
	Extend NB Left Turn Lane	No CMF provided. Extending the turn lane has the potential to reduce rear end crashes by providing vehicles more distance to decelerate within the turn lane as well as reducing the likelihood of queues exceeding their provided storage length and extending into the adjacent thru lane.
Smith Ranch Rd	Restrict EB, SB and WB Left Turn Movements (full movement to RIRO)	CMF Description: Install right-in-right-out (RIRO) operations at stop-controlled intersections CMF ID 9821: 45% reduction of all crashes CMF ID: 9823: 80% reduction of all severe crashes Restricting left turns into and out of the side streets is particularly effective at reducing angled crashes. As angled crashes are often severe in nature, this treatment has the potential to significantly reduce the frequency of severe crashes.

Intersection	Improvement	Safety Benefits
	Extend NB Left Turn Lane	No CMF provided. Extending the turn lane has the potential to reduce rear end crashes by providing vehicles more distance to decelerate within the turn lane as well as reducing the likelihood of queues exceeding their provided storage length and extending into the adjacent thru lane.
	Signalize Intersection	CMF Description: Install a Traffic Signal CMF ID 325: 44% reduction of total crashes Signalization of the intersection will provide safety benefits, especially for left turns from the side streets onto CO-9.
Ruby Ranch Rd	Install Dual NB Left Turn	No CMF provided. This treatment will be most effective at reducing rear end crashes since dual left turn lanes will increase the available storage length, reducing the likelihood of queues exceeding their storage length and extending into the adjacent thru lane.
	Install SB Right Turn	CMF Description: Provide a right-turn lane on one major-road approach CMF ID 285: 14% reduction of total crashes This treatment is expected to predominantly reduce the number of rear end crashes as the right turn lane will provide refuge for right turning vehicles to decelerate and stop outside of the thru lane.
W 13th St.	Restrict Left Turns (RIRO)	CMF Description: Install right-in-right-out (RIRO) operations at stop-controlled intersections CMF ID 9821: 45% reduction of all crashes CMF ID: 9823: 80% reduction of all severe crashes Restricting left turns into and out of the side streets is particularly effective at reducing angled crashes. As angled crashes are often severe in nature, this treatment has the potential to significantly reduce the frequence of the side.
W 12th St.	Restrict Left Turns (RIRO)	CMF Description: Install right-in-right-out (RIRO) operations at stop-controlled intersections CMF ID 9821: 45% reduction of all crashes CMF ID: 9823: 80% reduction of all severe crashes Restricting left turns into and out of the side streets is particularly effective at reducing angled crashes. As angled crashes are often severe in nature, this treatment has the potential to significantly reduce the frequency of severe crashes.
W 11th St.	Restrict EB Left Turn(full movement to 3/4 movement)	No CMF provided for converting a full movement intersection to a 3/4 movement intersection, however, the CMFs (#9821 & #9823) for converting a full movement intersection to RIRO report a reduction of 45% of total crashes and 80% of severe crashes. This treatment is similar to a RIRO treatment, but since the left turn onto the side street will still be permitted, it is unlikely to reduce crash rates to the extent that a RIRO treatment would. The proposed treatment at this intersection is expected to reduce the total and severe crashes, most predominantly for angled crash types.

tersection	Improvement	Safety Benefits
	Extend NB Left Turn	No CMF provided. Extending the turn lane has the potential to reduce rear end crashes by providing vehicles more distance to decelerate within the turn lane as well as reducing the likelihood of queues exceeding their provided storage length and extending into the adjacent thru lane.
W 10th St.	Restrict Left Turns (RIRO)	CMF Description: Install right-in-right-out (RIRO) operations at stop-controlled intersections CMF ID 9821: 45% reduction of all crashes CMF ID: 9823: 80% reduction of all severe crashes Restricting left turns into and out of the side streets is particularly effective at reducing angled crashes. As angled crashes are often severe in nature, this treatment has the potential to significantly reduce the frequency of severe crashes.
W 9th St.	Restrict Left Turns (RIRO)	CMF Description: Install right-in-right-out (RIRO) operations at stop-controlled intersections CMF ID 9821: 45% reduction of all crashes CMF ID: 9823: 80% reduction of all severe crashes Restricting left turns into and out of the side streets is particularly effective at reducing angled crashes. As angled crashes are often severe in nature, this treatment has the potential to significantly reduce the frequency of severe crashes.
Annie Rd	Extend NB and SB Left Turn	No CMF provided. Extending the turn lane has the potential to reduce rear end crashes by providing vehicles more distance to decelerate within the turn lane as well as reducing the likelihood of queues exceeding their provided storage length and extending into the adjacent thru lane.
W 7th St.	Restrict Left Turns (RIRO)	CMF Description: Install right-in-right-out (RIRO) operations at stop-controlled intersections CMF ID 9821: 45% reduction of all crashes CMF ID: 9823: 80% reduction of all severe crashes Restricting left turns into and out of the side streets is particularly effective at reducing angled crashes. As angled crashes are often severe in nature, this treatment has the potential to significantly reduce the frequency of severe crashes
	Extend SB Left Turn	No CMF provided. Extending the turn lane has the potential to reduce rear end crashes by providing vehicles more distance to decelerate within the turn lane as well as reducing the likelihood of queues exceeding their provided storage length and extending into the adiacent thru lane.
W 6th St.	Install SB Right Turn	CMF Description: Provide a right-turn lane on one major-road approach CMF ID 285: 14% reduction of total crashes This treatment is expected to predominantly reduce the number of rear end crashes as the right turn lane will provide refuge for right turning vehicles to decelerate and stop outside of the thru lane.

Intersection	Improvement	Safety Benefits
W 5th St.	Restrict Left Turns (RIRO)	CMF Description: Install right-in-right-out (RIRO) operations at stop-controlled intersections CMF ID 9821: 45% reduction of all crashes CMF ID: 9823: 80% reduction of all severe crashes Restricting left turns into and out of the side streets is particularly effective at reducing angled crashes. As angled crashes are often severe in nature, this treatment has the potential to significantly reduce the frequency of severe crashes.
W 4th St.	No Changes	N/A
	Restrict WB, SB, and EB Left Turns (RIRO)	CMF Description: Install right-in-right-out (RIRO) operations at stop-controlled intersections CMF ID 9821: 45% reduction of all crashes CMF ID: 9823: 80% reduction of all severe crashes Restricting left turns into and out of the side streets is particularly effective at reducing angled crashes. As angled crashes are often severe in nature, this treatment has the potential to significantly reduce the frequency of severe crashes.
W 3rd St.	Extend NB Left Turn	No CMF provided. Extending the turn lane has the potential to reduce rear end crashes by providing vehicles more distance to decelerate within the turn lane as well as reducing the likelihood of queues exceeding their provided storage length and extending into the adjacent thru lane.
	Install SB Right Turn	CMF Description: Provide a right-turn lane on one major-road approach CMF ID 285: 14% reduction of total crashes This treatment is expected to predominantly reduce the number of rear end crashes as the right turn lane will provide refuge for right turning vehicles to decelerate and stop outside of the thru lane.
Private Access	Restrict Left Turns (RIRO)	CMF Description: Install right-in-right-out (RIRO) operations at stop-controlled intersections CMF ID 9821: 45% reduction of all crashes CMF ID: 9823: 80% reduction of all severe crashes Restricting left turns into and out of the side streets is particularly effective at reducing angled crashes. As angled crashes are often severe in nature, this treatment has the potential to significantly reduce the frequency of severe crashes.
Wildernest Rd.	Install NB Dual Lefts	No CMF provided. This treatment will be most effective at reducing rear end crashes since dual left turn lanes will increase the available storage length, reducing the likelihood of queues exceeding their storage length and extending into the adjacent thru lane.
	Install SB Right Turn	CMF Description: Provide a right-turn lane on one major-road approach CMF ID 285: 14% reduction of total crashes This treatment is expected to predominantly reduce the number of rear end crashes as the right turn lane



Intersection	Improvement	Safety Benefits
		will provide refuge for right turning vehicles to decelerate and stop outside of the thru lane.
	Free NB Right (yield to free)	No CMF provided. Converting the right turn yield movement to a right turn free movement may reduce the number of rear end crashes since right turning vehicles will not need to come to a complete stop. Sideswipe crashes may also be reduced since the right turning vehicles will no longer be turning into the adjacent thru lane.
	Extend SB Right Turn	No CMF provided. Extending the turn lane has the potential to reduce rear end crashes by providing vehicles more distance to decelerate within the turn lane as well as reducing the likelihood of queues exceeding their provided storage length and extending into the adjacent thru lane.
Private Properties Between Wildernest Rd and I-70	Close RIRO Access	No CMF provided. It can be assumed that since the access is being closed, thus removing all conflict points, the potential for crashes in the area will be significantly reduced.
I-70 WB Ramps	Extend WB Left Turn	No CMF provided. Extending the turn lane has the potential to reduce rear end crashes by providing vehicles more distance to decelerate within the turn lane as well as reducing the likelihood of queues exceeding their provided storage length and extending into the adjacent thru lane.
I-70 EB Ramps	No Changes	N/A
Stephens Way/Little Beaver Trail	Stephens Way Shifted East & Little Beaver Trail Shifted West to Make a 4- Legged Intersection	No CMF provided for the overall impact of this realignment. The 4-legged intersection at the existing location of Beaver Trail/CO-9 is being converted to a 3-legged intersection, and the existing 3-legged intersection at Stephens Way/CO-9 is being converted to a 4-legged intersection, so the total number of conflict points remain similar. This proposed configuration, however, will improve circulation through the area, and reduce the number of conflict points through the local streets north of CO-9, thus providing safety benefits in that area.
	İnstall Dual EB, WB Left Turns	No CMF provided. This treatment will be most effective at reducing rear end crashes since dual left turn lanes will increase the available storage length, reducing the likelihood of queues exceeding their storage length and extending into the adjacent thru lane.

Intersection	Improvement	Safety Benefits
	Add WB Right Turn	CMF Description: Provide a right-turn lane on one major-road approach CMF ID 285: 14% reduction of total crashes This treatment is expected to predominantly reduce the number of rear end crashes as the right turn lane will provide refuge for right turning vehicles to decelerate and stop outside of the thru lane.
Existing Little Beaver Trail	Close Access to for North Leg	CMF Description: Convert four-leg intersection into two three-leg intersections CMF ID 2734. 40% reduction in total crashes Closing access to the north leg of the intersection, thus converting the four-leg intersection to a three-leg intersection is anticipated to reduce the number of crashes due to the reduction of conflict points.
W Anemone Trail	Restrict Left Turns (RIRO)	CMF Description: Install right-in-right-out (RIRO) operations at stop-controlled intersections CMF ID 9821: 45% reduction of all crashes CMF ID: 9823: 80% reduction of all severe crashes Restricting left turns into and out of the side streets is particularly effective at reducing angled crashes. As angled crashes are often severe in nature, this treatment has the potential to significantly reduce the frequency of severe crashes.
	Clear Landscaping from South Median to Improve Sight Distance	<b>No CMF provided.</b> This treatment will improve safety for southbound left turning vehicles, as they will be able to see northbound approaching vehicles from a farther distance once the landscaping has been cleared. This improvement has the potential to reduce the risk of angled crashes at the intersection.
E Anemone	İnstall Dual SB Left Turn	No CMF provided. This treatment will be most effective at reducing rear end crashes since dual left turn lanes will increase the available storage length, reducing the likelihood of queues exceeding their storage length and extending into the adjacent thru lane.
Ridge Rd.	Extend NB & SB Left Turn	No CMF provided. The extension of the NB and SB left turn lanes has the potential to reduce rear end crashes by providing vehicles more distance to decelerate within the turn lane as well as reducing the likelihood of queues exceeding their provided storage length and extending into the adjacent thru lane.
S	Extend WB Left Turn	No CMF provided. Extending the turn lanes has the potential to reduce rear end crashes by providing
Dillon Dam Rd.	Extend EB Right Turn	vehicles more distance to decelerate within the turn lane as well as reducing the likelihood of queues exceeding their provided storage length and extending into the adjacent thru lane.
Lake Dillon Dr.	Extend EB Left Turn	No CMF provided. Extending the turn lane has the potential to reduce rear end crashes by providing vehicles more distance to decelerate within the turn lane as well as reducing the likelihood of queues exceeding their provided storage length and extending into the adjacent thru lane.



Intersection	Improvement	Safety Benefits
Stephens Way/Wildernest Rd	Roundabout (Signal to Roundabout)	CMF Description: Conversion of signal-controlled intersection to roundabout CMF ID 4881: 98% increase in total crashes CMF ID 4880: 70% reduction in severe crashes While the number of property damage only crashes are expected to increase, the number of severe and fatal crashes is expected to be significantly reduced as the roundabout will meter approach speeds and will reduce the likelihood of angled crashes.