

Concrete Box Culvert and Corrugated Metal Pipe Culvert Program (Region 2 Bundle)

In Response to Federal Highway Administration's Notice of Funding Opportunity for the Department of Transportation's Competitive Highway Bridge Program for Fiscal Year 2018



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Application Information

The following table contains summary information about the Concrete Box Culvert and Corrugated Metal Pipe Culvert Program (referred to as the Region 2 Bundle).

Table 1: Application Summary

Applicant Name	Colorado Department of Transportation
Applicant Key Contact	Michael Collins, PE State Bridge Engineer Colorado Department of Transportation 2829 W Howard Place Denver, CO 80204 303.757.9190 Michael.Collins@state.co.us
Project Name	Concrete Box Culvert and Corrugated Metal Pipe Culvert Program (Region 2 Bundle)
Project Description	This project comprises the replacement of fourteen (14) rural bridges spread across key highway corridors in southern and western Colorado. These bridges are located on key corridors for rural mobility as well as intra- and interstate commerce, particularly for the movement of agricultural and access to tourist destinations. All of the bridges are well past their design life and 13 of the bridges are at least 80 years old. The condition for 13 of the bridges is categorized as 'poor', leading to increased frequency and intensity of maintenance.
State Priority Ranking	2
Previously Incurred Project Eligible Costs	N/A
Project Previously Submitted for Federal Grants	No
If so, which?	N/A
Total Project Cost	\$34,255,000
Project Cost Expended in Rural Region	100%
Non-Federal Match	\$17,127,500 (50%)
Competitive Bridge Program Grant Funds Requested	\$17,127,500 (50%)
Federal (DOT) Funding including Program Funds Requested	\$17,127,500 (50%)

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Project Description

Colorado is one of the fastest growing states in the country, and with that growth comes significant strain on aging transportation systems that has significant and tangible consequences in the form of growing safety and mobility problems. The rural highways which house the bridges put forward in this grant application are essential to enabling not just the mobility of the populace which lives in the southern and western portions state, but are also key to supporting intra- and interstate commerce, particularly regarding the movement of agricultural products and access to tourist destinations. This application seeks partial funding from the Federal Highway Administration (FHWA) for the replacement of a bundle of bridges on three rural highway corridors in southern and western Colorado. As all the bridges are located within Colorado Department of Transportation's (CDOT's) Region 2, this grouping of candidate bridges for replacement is called the Region 2 Bundle.

The three rural highway corridors – State Highway (SH) 9, United States Highway (US) 24, and US 350 - serve as vital transportation routes for rural communities, freight movement, and support for agriculture. The importance of the corridors includes:

SH9 Corridor

- Provides vital access for residents and tourists to many of the recreation destinations in the Rocky Mountains, which is essential to supporting the rural tourist-based communities
- Major north/south corridor through the middle part of Colorado
- Alternate route for floods & fires, community evacuation route

US 24 Corridor

- Part of the National Highway System
- Provides route across the Rocky Mountains
- Vital economic corridor connecting front range communities to western slope communities
- One of only three major east/west alternatives in Colorado

US 350 Corridor

- Provides a connection between Interstate 25 (I-25) and US 50 (saving many miles for freight traffic)
- Designated route for hazardous waste, gasoline, diesel, and liquefied petroleum
- Major access point to the US Army's Pinyon Canyon Maneuver Site

The identification of the bridges to include in the Bundle was based on field inspections and evaluations that assessed the bridge conditions and identified potential safety risks, while looking for long-term improvements to the corridors. The structures were also bundled based on similar site characteristics and probable replacement type, with the goal of achieving economy of scale. The probable replacement type for each of the structures in the bundle is a Concrete Box Culvert or Reinforced Concrete Pipe based on



hydraulic analysis and high level scoping performed by CDOT. Culverts are an inexpensive replacement design and construction allowing CDOT to address the replacements while meeting all design requirements. Reduction in replacement cost allows CDOT to maximize the amount of bridges addressed in this project with a low maintenance asset that will reduce long term treatment costs. Based on the evaluation, 14 bridges were identified as candidates for replacement and comprise the Region 2 Bundle (Table 2). All of the bridges are decades past their original design life, with 13 of the bridges being at least 80 years old. None of the bridges meet FHWA roadway standard shoulder width or current construction standards. Three (3) of the bridges are Load Restricted limiting trucking routes through major sections of the US 24 and US 350 corridors. Thirteen (13) of the bridges are rated as "Poor" per the FHWA National Bridge Inspection Standards (NBIS) and are eligible for funding through CDOT's bridge replacement program, the Colorado Bridge Enterprise (CBE). While the structures are eligible for funding, resources are currently not available to advance the project in its entirety. The remaining bridge is rated "Fair", and it is anticipated that it will continue to deteriorate to "Poor" condition in the near future, despite significant maintenance investments.

Table 2: Bridges Included in Region 2 Bundle

National Bridge Structure Number	Highway Corridor	Year Built	Condition Rating	Load Restricted	Current Bridge Type*	Replacement and Bridge Type*	Replacement Cost
G-12-C	SH 9	1938	Poor	No	CBC	CBC	\$1,795,000
J-14-C	SH 9	1934	Fair	No	TTS	CBC	\$2,634,000
J-15-G	SH 9	1971	Poor	No	CMP	RCP	\$1,441,000
I-13-G	US 24	1937	Poor	Yes	TTS	CBC	\$2,902,000
I-15-AO	US 24	1937	Poor	No	CBC	CBC	\$2,462,000
I-15-T	US 24	1937	Poor	No	CBC	CBC	\$2,184,000
H-13-N	US 24	1937	Poor	No	TTS	CBC	\$2,104,000
M-21-B	US 350	1937	Poor	No	CI	CBC	\$3,738,000
M-21-C	US 350	1937	Poor	No	CI	CBC	\$3,367,000
M-21-J	US 350	1935	Poor	Yes	TTS	CBC	\$1,897,000
M-22-U	US 350	1935	Poor	No	CI	CBC	\$1,590,000
M-22-Y	US 350	1935	Poor	Yes	TTS	RCP	\$1,177,000
N-21-C	US 350	1936	Poor	No	TTS	CBC	\$3,289,000
N-21-F	US 350	1937	Poor	No	CI	CBC	\$3,672,000

Total \$34,255,000

* Bridge Types: CBC = concrete box culvert

CMP = corrugated metal pipe CI = concrete on I-beam RCP = reinforced concrete pipe TTS = treated timber stringer

The existing bridges in the Region 2 Bundle are constructed of timber, concrete, and steel. While CDOT has been actively maintaining the bridges, age and severe seasonal weather have led to wooden supports and girders splitting, wooden piles rotting, support walls cracking, concrete spalling, and bridge decks deteriorating. General issues that arise from the major components of the bridges include:



- Timber elements

- Loose connections. Timber decks are just planks on edge that are nailed together. As
 the bridge ages, the nailed connections loosen and the asphalt above tends to crack,
 requiring more frequent crack filling, patching, overlays and total replacement.
- Timber girders split and crack. Split girders are often repaired by drilling lag bolts from the bottom up through the crack. Steel plates are often attached to the bottom of the girder for extra strength (often worn-out snowplow blades are used for the plates). When 25 percent of the girders have been repaired the bridge will be rerated, which can result in load posting/restriction of the structure.
- Water and timber rot. Timber piles at the water line are susceptible to section loss from rot. Lagging behind abutments exposed to moist soil can rot over time. Water can degrade curbs or other components.

- Concrete elements

- Aggregate quality. Requirements for aggregate were not as stringent 80 years ago.
 Smooth river stones were used as aggregate for many of the bridges, which has led to spalling and severe deterioration of the concrete. Angular crushed rock is required today.
- Concrete strength. Required concrete strength for structures was typically 2,500 pounds per square inch (psi), where current standards are 4,500 psi. Lower strength concrete also has greater permeability, which has led to intrusion of deicing chemicals and other contaminants over time.
- **Erosion of concrete.** Fast moving mountain streams (such as along US 24) carry small abrasive sands and gravels that over time erode the bottom slabs of concrete box culverts (CBCs).
- **Cracking concrete.** As rust forms on reinforcing steel it expands causing the surrounding concrete to crack, delaminate, and ultimately spall, resulting in a loss of capacity.

- Steel elements

 Rust. Rusting steel rusts over time leads to section loss and, also, may cause the lockup of bearings and expansion devices.

The frequency and magnitude of maintenance and associated emergency closures of the bridges has accelerated and will reach the point where replacement is the only reasonable option. This need for replacement of the bridges is evident by the replacement of approximately 40 adjacent bridges that has occurred in the same corridors. The bridges replaced by CDOT were of similar age, similar design, and followed similar construction practices as the bridges in the Bundle. This highlights the increased needs of these corridors as the infrastructure ages and also CDOT's ongoing efforts to maintain a state of good repair for the rural highway system.

The implementation and delivery of the replacement of the Region 2 Bundle of bridges represents an opportunity for the State of Colorado to effectively improve mobility and safety outcomes along several of the state's rural corridors while concurrently ensuring that the economic vitality provided by these crucial corridors is maintained.



Replacement of the Region 2 Bundle is a priority of CDOT and the CBE, which is committed to providing approximately \$17 million (50 percent) of the required funding to carry out the replacements. Innovative design, contracting, and construction will be utilized throughout the planning and delivery of the bridge replacement. The Bundle will be procured under a single design-build contract that emphasizes expedited construction. It is estimated that bundling the replacement of the bridges together, placing them under a single contract, and utilizing similar design elements and construction activities will result in a total replacement cost \$4.9 million (12.3 percent) less than if the bridges were to be replaced individually.

A benefits-cost analysis (BCA) has been developed for the replacement of bridges in the Region 2 Bundle to support the application. The BCA estimated that replacement of the bridges will generate \$29.6 million and \$65.4 million in net benefits at 7 percent and 3 percent discount rates, respectively. These represent benefit-cost ratios (BCRs) of 2.1:1 and 3.1:1 at their respective discount rates.





Project Location

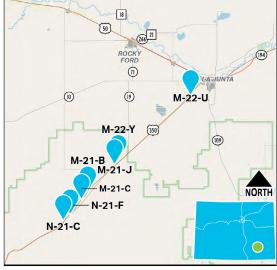
The Region 2 Bundle is comprised of 14 bridges located in southern and western Colorado. All of the bridges are located in rural areas on US or state highways. **Table 3** lists the bridges and their location, while **Figure 1** shows their locations in Colorado.

Table 3: Locations of the Bridges in Region 2 Bundle

National Bridge Structure Number	Highway Corridor	Mile Marker	Lattitude	Longitude
G-12-C	SH 9	71.445	39.294832	-106.065515
J-14-C	SH 9	20.107	38.722203	-105.515615
J-15-G	SH 9	15.970	38.670035	-105.484821
I-13-G	US 24	227.095	38.924533	-105.95706
I-15-AO	US 24	271.900	38.945138	-105.254776
I-15-T	US 24	271.691	38.947936	-105.258143
H-13-N	US 24	240.686	39.030422	-105.768882
M-21-B	US 350	51.682	37.771306	-103.826926
M-21-C	US 350	50.582	37.758789	-103.8398
M-21-J	US 350	57.069	37.829246	-103.761091
M-22-U	US 350	69.817	37.954765	-103.589936
M-22-Y	US 350	57.474	37.832897	-103.756219
N-21-C	US 350	47.131	37.722008	-103.882712
N-21-F	US 350	48.744	37.74034	-103.863659

Figure 1: Locations of Bridges in Region 2 Bundle







The following sections describe each of the bridges in the bundle in greater detail and provides more focused location maps.

Bridge G-12-C

Bridge G-12-C is a concrete box culvert that was built 80 years ago and is currently well past its design life. **Table 4** provides summary information about the bridge. **Photo 1** shows the bridge.

Table 4: Bridge G-12-C Summary Informatio	Table 4:	Bridge	G-12-C	Summary	Information
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3	
National Bridge Structure Number	G-12-C
Year Built	1938
Construction Type	concrete box culvert
Condition Rating	Poor
Bridge Span Length	23 feet
Bridge Width	38 feet
Water Crossing	Platte Gulch
Detour Length (if closed)	137 miles
ADT (2018)	4,880
Percent Commercial Traffic	6%
Replacement Bridge Type	Concrete box culvert (2 cell, 10 feet x5 feet)
Replacement Cost (\$2018)	\$1,795,000

Bridge G-12-C is located on SH 9, to the southeast of Fairplay. SH 9 is a key corridor connecting residents and tourists from Colorado Springs and southern Colorado to the recreational activities in the Rocky Mountains. The location of Bridge G-12-C is shown in **Figure 2**.

The age of Bridge G-12-C and the severe deterioration of the concrete structure requires frequent inspection and repair, which includes patching of concrete and the replacement of wing walls. There is severe deterioration of the divider wall, with exposed rebar and up to 75 percent section loss of thickness in some areas. The wing walls also have severe scale and deterioration, with exposed rebar. When the bridge was constructed, river stones were used in the concrete mix, which does not meet current construction standards. This form of aggregate does not have the bonding ability of crushed stones and the use of this material has accelerated the formation of the numerous concrete defects. **Photos 2** and **3** show how the continued disintegration is impacting the wing walls.



Photo 1: Bridge G-12-C Source: CDOT



Figure 2: Bridge G-12-C Location Source: Google, CDOT





Photo 2: Bridge G-12-C – Disintegration of East Wing Wall
Source: CDOT



Photo 3: Bridge G-12-C – Disintegration of West Wing Walls

Source: CDOT

Bridge J-14-C

Bridge J-14-C is a treated timber stringer bridge that was built over 80 years ago, which is well past its design life. **Table 5** provides summary information about the bridge. **Photo 4** shows the bridge.

Table 5: Bridge J-14-C Summary Information

National Bridge Structure Number	J-14-C
Year Built	1934
Construction Type	Treated timber stringer
Condition Rating	Fair
Bridge Span Length	48 feet
Bridge Width	25 feet
Water Crossing	Louis Gulch
Detour Length (if closed)	47 miles
ADT (2018)	930
Percent Commercial Traffic	13%
Replacement Bridge Type	Concrete box culvert (2 cell, 20 feet x8 feet)
Replacement Cost (\$2018)	\$2,634,000

Bridge J-14-C is located on SH 9, to the southeast of Hartsel. SH 9 is a key corridor connecting residents and tourists from Colorado Springs and southern Colorado to the recreational activities in the Rocky Mountains. The location of Bridge J-14-C is shown in **Figure 3**.

The age of Bridge J-14-C and concerns with the wing walls requires frequent inspection and repair. Inspections have found movement of the abutments, coupled with rotten and bowed timber backing planks. Earlier this year numerous girders were found to be split, and several split girders have already been spliced. Deadmen have been placed at the Abutment #1 wingwall to mitigate previously documented movement. **Photos 5** and **6** show displacement and bulging of the wing walls. Rot, checks, shakes, and deterioration are present throughout numerous primary structural components.





Photo 4: Bridge J-14-C Source: CDOT



Photo 5: Bridge J-14-C – Wing Wall Displaced 13 Inches Source: CDOT



Figure 3: Bridge J-14-C Location Source: Google, CDOT



Photo 6: Bridge J-14-C – Bulge in Wing Wall
Source: Google, CDOT

Bridge J-15-G

Bridge J-15-G is comprised of a set of seven foot diameter corrugated metal pipes that were built almost 50 years ago. The structure is nearing the end of its design life. **Table 6** provides summary information about the bridge. **Photo 7** shows the bridge.

Table 6: Bridge J-15-G Summary Information

,	
National Bridge Structure Number	J-15-G
Year Built	1971
Construction Type	Corrugated metal pipe
Condition Rating	Poor
Bridge Span Length	24 feet
Bridge Width	42 feet
Water Crossing	Mack Gulch
Detour Length (if closed)	124 miles
ADT (2018)	1,240
Percent Commercial Traffic	5%
Replacement Bridge Type	reinforced concrete pipe (3 -6 feet)
Replacement Cost (\$2018)	\$1,441,000



Photo 7: Bridge J-15-G Source: CDOT



Figure 3: Bridge J-15-G Location Source: Google, CDOT

Bridge J-15-G is located on SH 9, to the southeast of Hartsel. SH 9 is a key corridor connecting residents and tourists from Colorado Springs and southern Colorado to the recreational activities in the Rocky Mountains. The location of Bridge J-15-G is shown in **Figure 4**.

The age of Bridge J-15-G and corrosion of the pipes require frequent inspection and repair. Due to age, much of the two pipes are severely corroded and areas of section loss ranging from 25 percent to 100 percent are present along the length of the pipes. The corrosion has allowed removal of the surrounding sediment leading to bulging and distortion in several areas. In addition, part of the exposed portion of one pipe shows impact damage. **Photos 8** and **9** show corrosion and bulging of the pipes, respectively.



Photo 8: Bridge J-15-G – Corrosion inside Pipe Source: CDOT



Photo 9: Bridge J-15-G – Bulging of Pipe Source: CDOT

Bridge I-13-G

Bridge I-13-G is a treated timber stringer bridge that was built over 80 years ago, which is well past its design life. The bridge is load restricted because of the condition. **Table 7** provides summary information about the bridge. **Photo 10** shows the bridge.



Table 7: Bridge I-13-G Summary Information

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National Bridge Structure Number	I-13-G
Year Built	1937
Construction Type	Treated timber stringer
Condition Rating	Poor
Bridge Span Length	71 feet
Bridge Width	30 feet
Water Crossing	Seasonal wash
Detour Length (if closed)	48 miles
ADT (2018)	1,670
Percent Commercial Traffic	8%
Replacement Bridge Type	Concrete box culvert (3 cell, 14 feet x 6 feet)
Replacement Cost (\$2018)	\$2,902,000

Bridge I-13-G is located on US 24, between Hartsel and Antero Junction. US 24 is a major east-west route in Colorado and traverses the Rocky Mountains. The location of Bridge I-13-G is shown in **Figure 5**.

The age of Bridge I-13-G and the condition of the bridge requires frequent inspection and repair. In addition to repairs to the girders, inspections have found the timber posts that were broken/split and heavy erosion of the banks. Rot, mold, water staining, checks, shakes, and deterioration are present throughout numerous primary structural components. **Photo 11** shows repairs to the girders. I-13-G is load restricted, limiting routes through major sections of the US 24 corridor.



Photo 10: Bridge I-13-G Source: CDOT



Figure 5: Bridge I-13-G Location Source: Google, CDOT



Photo 11: Bridge I-13-G – Repaired Girders
Source: CDOT



Bridge I-15-AO

Bridge I-15-AO is a concrete box culvert that was built over 80 years ago, which is well past its design life. **Table 8** provides summary information about the bridge. **Photo 12** shows the bridge.

Table 8: Bridge I-13-G Summary Information

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National Bridge Structure Number	I-15-AO
Year Built	1937
Construction Type	Concrete box culvert
Condition Rating	Poor
Bridge Span Length	21 feet
Bridge Width	45 feet
Water Crossing	Seasonal wash
Detour Length (if closed)	11 miles
ADT (2018)	6,480
Percent Commercial Traffic	6%
Replacement Bridge Type	Concrete box culvert (2 cell, 10 feet x 8 feet)
Replacement Cost (\$2018)	\$2,462,000

Bridge I-15-AO is located on US 24, to the east of Hartsel. US 24 is a major east-west route in Colorado and traverses the Rocky Mountains. The location of Bridge I-15-AO is shown in **Figure 6**.

The age of Bridge I-15-AO and the severe deterioration of the concrete structure requires frequent inspection and repair, which includes patching of concrete and the replacement of wing walls. Currently, there are numerous failed shotcrete repairs throughout the structure. The right wall has deteriorated to the point that there is now seepage and disintegration to the top slab behind the headwall. When the bridge was constructed, river stones were used in the concrete mix, which does not meet current construction standards. This form of aggregate does not have the bonding ability of crushed stones and the use of this material has accelerated the formation of the numerous concrete defects. Timber planks have been used to stabilize fill above the headwall. **Photo 13** and **14** show how disintegration is impacting the headwall and efforts to stabilize fill.



Photo 12: Bridge I-15-AO Source: CDOT



Figure 6: Bridge I-15-AO Location Source: Google, CDOT





Photo 13: Bridge I-15-AO – Timber Planks Retaining Roadway Source: CDOT



Photo 14: Bridge I-15-AO – Disintegration of Concrete
Source: Google, CDOT

Bridge I-15-T

Bridge I-15-T is a concrete box culvert that was built over 80 years ago, which is well past its design life. **Table 9** provides summary information about the bridge. **Photo 15** shows the bridge.

Table 9: Bridge I-15-T Summary Information

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National Bridge Structure Number	I-15-T
Year Built	1937
Construction Type	Concrete Box Culvert
Condition Rating	Poor
Bridge Span Length	21 feet
Bridge Width	41 feet
Water Crossing	Seasonal wash
Detour Length (if closed)	11 miles
ADT (2018)	6,480
Percent Commercial Traffic	6%
Replacement Bridge Type	Concrete Box Culvert (2 cell, 10 feet x 8 feet)
Replacement Cost (\$2018)	\$2,184,000

Bridge I-15-T is located on US 24, to the east of Hartsel. US 24 is a major east-west route in Colorado and traverses the Rocky Mountains. The location of Bridge I-15-T is shown in **Figure 7.**

The age of Bridge I-15-T and the severe deterioration of the concrete structure requires frequent inspection and repair. There is heavy deterioration of the bottom slab, head walls, and wing walls. The bottom slab of one cell has exposed rebar its entire length and severe deterioration at the bottom slab-wall interface. When the bridge was constructed, river stones were used in the concrete mix, which does not meet current construction standards. This form of aggregate does not have the bonding ability of crushed stones and the use of this material has accelerated the formation of the numerous concrete defects. Timber beams have been installed to retain the embankment. **Photo 16** and **17** are representative of the condition of concrete elements throughout the structure.





Photo 15: Bridge I-15-T Source: CDOT

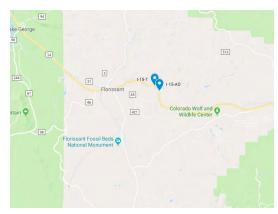


Figure 7: Bridge I-15-T Location
Source: Google, CDOT



Photo 16: Bridge I-15-T – Deteriorating Concrete and Timber Retaining Wall Repair
Source: CDOT



Photo 17: Bridge I-15-T – Exposed Bottom Slab Rebar at Wall Interface Source: CDOT

Bridge H-13-N

Bridge H-13-N is a treated timber stringer bridge that was built over 80 years ago, which is well past its design life. **Table 10** provides summary information about the bridge. **Photo 18** shows the bridge.



Photo 18: Bridge H-13-N Source: CDOT



Figure 8: Bridge H-13-N Location Source: Google, CDOT



Table 10: Bridge Bridge H-13-N Summary Information

National Bridge Structure Number	H-13-N
Year Built	1937
Construction Type	Treated timber stringer
Condition Rating	Poor
Bridge Span Length	24 feet
Bridge Width	30 feet
Water Crossing	Seasonal wash
Detour Length (if closed)	24 miles
ADT (2018)	2,950
Percent Commercial Traffic	5%
Replacement Bridge Type	Concrete box culvert (2 cell, 12 feet x 10 feet)
Replacement Cost (\$2018)	\$2,104,000

Bridge H-13-N is located on US 24, to the east of Hartsel. US 24 is a major east-west route in Colorado and traverses the Rocky Mountains. The location of Bridge H-13-N is shown in **Figure 8**.

The age of Bridge H-13-N and ongoing issues requires frequent inspection and repair. Issues include the piles splitting (requiring banding) and being pushed out from beneath the abutment caps (**Photo 19**), resulting in loss of load bearing at numerous piles. The worst case is one pile with a 60 percent loss of bearing. The settling of pavement on the approaches has caused issues with the road surface (**Photo 20**).



Photo 19: Bridge H-13-N – Deflection of Repaired Piling
Source: CDOT



Photo 20: Bridge H-13-N – Settling of Roadway
Source: CDOT



Bridge M-21-B

Bridge M-21-B is a concrete on I-beam bridge that was built over 80 years ago, which is well past its design life. **Table 11** provides summary information about the bridge. **Photo 21** shows the bridge.

Table 11: Bridge M-21-B Summary Information

M-21-B		
1937		
Concrete on I-beam		
Poor		
84 feet		
33 feet		
Tree Arroyo		
170 miles		
600		
15%		
Concrete box culvert (3 cell, 20 feet x 8 feet)		
\$3,738,000		

Bridge M-21-B is located on US 350, southwest of La Junta. US 350 is a key corridor between La Junta and Trinidad and connects Interstate 25 (I-25) and US 50. The location of Bridge M-21-B is shown in **Figure 9**.

The age of Bridge M-21-B requires frequent inspection and repairs. Cracking has been found on the wing walls and abutments, some 0.25 inches wide. Bearing anchor bolts have been bending and shearing due to movement and apparent seized expansion bearings. The underside of the deck has cracking and efflorescence throughout. The deck overhangs have severe cracking, spalls with exposed reinforcing, active leakage, rust staining, efflorescence, and loose coarse aggregate the full length of the bridge. **Photos 22** and **23** show cracking of the substructure units and deterioration of the deck overhang.



Photo 21: Bridge M-21-B Source: CDOT



Figure 9: Bridge M-21-B Location Source: Google, CDOT





Photo 22: Bridge M-21-B – Typical Cracking of Substructure Units Source: CDOT



Photo 23: Bridge M-21-B – Typical Deterioration of Deck Overhang Source: CDOT

Bridge M-21-C

Bridge M-21-C is a concrete on I-beam bridge that was built over 80 years ago, which is well past its design life. **Table 12** provides summary information about the bridge. **Photo 24** shows the bridge.

Table 12: Bridge M-21-C Summary Information

National Bridge Structure Number	M-21-C
Year Built	1937
Construction Type	Concrete on I-beam
Condition Rating	Poor
Bridge Span Length	126 feet
Bridge Width	33 feet
Water Crossing	Hoe Ranch Arroyo
Detour Length (if closed)	170 miles
ADT (2018)	600
Percent Commercial Traffic	15%
Replacement Bridge Type	Concrete box culvert (3 cell, 20 feet x 8 feet)
Replacement Cost (\$2018)	\$3,367,000



Photo 24: Bridge M-21-C Source: CDOT



Figure 10: Bridge M-21-C Location Source: Google, CDOT





Photo 25: Bridge M-21-C – Hole in Deck at Pier Joint Source: CDOT



Photo 26: Bridge M-21-C – Deterioration of Concrete and Exposed Rebar Source: CDOT

Bridge M-21-C is located on US 350, southwest of La Junta. US 350 is a key corridor between La Junta and Trinidad and connects I-25 and US 50. The location of Bridge M-21-C is shown in **Figure 10**.

The age of Bridge M-21-C and the deterioration of the concrete elements requires frequent inspection and repair. Issues have been identified with movement and cracking of the abutments and wing walls and heavy spalling on the bridge overhangs. Additionally, the underside of the deck has cracking and efflorescence throughout. Deterioration of the deck ends at the expansion joints continues to worsen with holes developing near the curbline. When the bridge was constructed, river stones were used in the concrete mix, which does not meet current construction standards. This form of aggregate does not have the bonding ability of crushed stones and the use of this material has accelerated the formation of the numerous concrete defects. **Photos 25** and **26** are representative of the overall condition of the bridge deck.

Bridge M-21-J

Bridge M-21-J is a treated timber stringer bridge that was built over 80 years ago, which is well past its design life. **Table 13** provides summary information about the bridge. **Photo 27** shows the bridge.

Table 13: Bridge M-21-J Summary Information

<u> </u>	
National Bridge Structure Number	M-21-J
Year Built	1937
Construction Type	Treated timber stringer
Condition Rating	Poor
Load Restricted	Yes
Bridge Span Length	47 feet
Bridge Width	26 feet
Water Crossing	Seasonal wash
Detour Length (if closed)	170 miles
ADT (2018)	600
Percent Commercial Traffic	17%
Replacement Bridge Type	Concrete box culvert (2 cell, 18 feet x 6 feet)
Replacement Cost (\$2018)	\$1,897,000





Photo 27: Bridge M-21-J Source: CDOT



Photo 28: Bridge M-21-J – Repaired Girders (Typical)
Source: CDOT



Figure 11: Bridge M-21-J Location Source: Google, CDOT



Photo 29: Bridge M-21-J – Heavy Splintering of Guardrail Source: CDOT

Bridge M-21-J is located on US 350, southwest of La Junta. US 350 is a key corridor between La Junta and Trinidad and connects I-25 and US 50. The location of Bridge M-21-J is shown in **Figure 11**.

The age of Bridge M-21-J requires frequent inspection and repairs. Thirty-seven (37) percent of the girders have been repaired with lag bolts, so it is now considered a temporary structure. Other issues include:

- Exterior girders are weathered
- Thirteen piles have cracks penetrating 5-50 percent of pile thickness
- All wing walls are bowed and have been pushed outward
- Guard rails are weathered and splintered
- Rot, mold, water staining, checks, shakes, and deterioration are present throughout numerous primary structural components

Because of the condition, M-21-J is load restricted, which limits trucking routes through major sections of the US 350 corridor.

Photos 28 and 29 show repairs to the girders and heavy splintering of the guardrail.



Bridge M-22-U

Bridge M-22-U is a concrete on I-beam bridge that was built over 80 years ago, which is well past its design life. **Table 14** provides summary information about the bridge. **Photo 30** shows the bridge.

Table 14: Bridge M-22-U Summary Information

Table 141 Bridge in 22 6 Cammary information		
National Bridge Structure Number	M-22-U	
Year Built	1935	
Construction Type	Concrete on I-beam	
Condition Rating	Poor	
Bridge Span Length	44 feet	
Bridge Width	33 feet	
Water Crossing	Otero Ditch	
Detour Length (if closed)	30	
ADT (2018)	600	
Percent Commercial Traffic	9%	
Replacement Bridge Type	Concrete box culvert (14 feet x 10 feet)	
Replacement Cost (\$2018)	\$1,590,000	

Bridge M-22-U is located on US 350, just southwest of La Junta. US 350 is a key corridor between La Junta and Trinidad and connects I-25 and US 50. The location of Bridge M-22-U is shown in **Figure 12**.

The age of Bridge M-22-U and the deterioration of the concrete elements requires frequent inspection and repair. The abutments have cracks and spalling of concrete and 65 percent of the deck has map cracks, efflorescence, and exposed aggregate. **Photos 31** and **32** show the typical condition of the deck and the state of the wearing surface.



Photo 30: Bridge M-22-U Source: CDOT



Figure 12: Bridge M-22-U Location Source: Google, CDOT





Photo 31: Bridge M-22-U – Typical Deck Condition
Source: CDOT



Photo 32: Bridge M-22- U – Deteriorated Wearing Surface on Approach Source: CDOT

Bridge M-22-Y

Bridge M-22-Y is a treated timber stringer bridge that was built over 80 years ago, which is well past its design life. **Table 15** provides summary information about the bridge. **Photo 33** shows the bridge.

Table 15: Bridge M-22-Y Summary Information

Table 10. Bridge in 22 1 Cammary information		
National Bridge Structure Number	M-22-Y	
Year Built	1935	
Construction Type	Treated timber stringer	
Condition Rating	Poor	
Load Restricted	Yes	
Bridge Span Length	24 feet	
Bridge Width	26 feet	
Water Crossing	Seasonal wash	
Detour Length (if closed)	170 miles	
ADT (2018)	600	
Percent Commercial Traffic	17%	
Replacement Bridge Type	Reinforced concrete pipe (5 feet)	
Replacement Cost (\$2018)	\$1,177,000	



Photo 33: Bridge M-22-Y Source: CDOT



Figure 13: Bridge M-22-Y Location Source: Google, CDOT





Photo 34: Bridge M-22-Y – Repaired Girders
Source: CDOT



Photo 35: Bridge M-22- Y – Splintered Wing Wall Source: CDOT

Bridge M-22-Y is located on US 350, southwest of La Junta. US 350 is a key corridor between La Junta and Trinidad and connects I-25 and US 50. The location of Bridge M-22-Y is shown in **Figure 13**.

M-22-Y is Load Restricted limiting trucking routes through major sections of the US 350 corridor. Because of the age and condition of Bridge M-22-Y, it requires frequent inspection and repair. All of the girders are water stained and 33 percent of the girders have been repaired with lag bolts. Ten (10) of the piles have cracks that are between 5 and 50 percent of the pile thickness. All of the wing walls have deflected and segments of the wall are splintered. Rot, mold, water staining, checks, shakes, and deterioration are present throughout numerous primary structural components. **Photos 34** and **35** show repaired girders and damage to the wing wall.

Bridge N-21-C

Bridge N-21-C is a treated timber stringer bridge that was built over 80 years ago, which is well past its design life. **Table 16** provides summary information about the bridge. **Photo 36** shows the bridge.

Table 16: Bridge N-21-C Summary Information

National Bridge Structure Number	N-21-C
Year Built	1936
Construction Type	Treated timber stringer
Condition Rating	Poor
Bridge Span Length	69 feet
Bridge Width	30 feet
Water Crossing	Seasonal wash
Detour Length (if closed)	170 miles
ADT (2018)	600
Percent Commercial Traffic	15%
Replacement Bridge Type	Concrete box culvert (3 cell, 14 feet x 6 feet)
Replacement Cost (\$2018)	\$3,289,000





Photo 36: Bridge N-21-C Source: CDOT



Photo 37: Bridge N-21-C – Displaced Wing Wall Source: CDOT



Figure 14: Bridge N-21-C Location Source: Google, CDOT



Photo 38: Bridge N-21-C – Wearing Surface Deterioration
Source: CDOT

Bridge N-21-C is located on US 350, southwest of La Junta. US 350 is a key corridor between La Junta and Trinidad and connects I-25 and US 50. The location of Bridge N-21-C is shown in **Figure 14**.

The age of Bridge N-21-C and condition of the bridge requires frequent inspection and repair. A number of the girders have been repaired with lag bolts, and the deck is loose in some bays due to excessive abutment movement and corresponding displacement and twisting of numerous girders. The piles are leaning due to the abutment pushing them in, with some displaced four inches. The abutments are severely displaced and are 10-14 inches out of plumb. Rot, mold, water staining, checks, shakes, and deterioration are present throughout numerous primary structural components. **Photos 37** and **38** show displaced wing wall and deterioration of the wearing surface.



Bridge N-21-F

Bridge N-21-F is a concrete on I-beam bridge that was built over 80 years ago, which is well past its design life. **Table 17** provides summary information about the bridge. **Photo 39** shows the bridge.

Table 17: Bridge N-21-F Summary Information

National Bridge Structure Number	N-21-F	
Year Built	1937	
Construction Type	Concrete on I-beam	
Condition Rating	Poor	
Bridge Span Length	166 feet	
Bridge Width	33 feet	
Water Crossing	Sheep Canyon Arroyo	
Detour Length (if closed)	170 miles	
ADT (2018)	600	
Percent Commercial Traffic	15%	
Replacement Bridge Type	Concrete box culvert (3 cell, 20 feet x 8 feet)	
Replacement Cost (\$2018)	\$3,672,000	
Replacement Cost (\$2018)	\$3,672,000	

Bridge N-21- is located on US 350, southwest of La Junta. US 350 is a key corridor between La Junta and Trinidad and connects I-25 and US 50. The location of Bridge N-21-F is shown in **Figure 15**.

The age of Bridge N-21-F and condition of the bridge requires frequent inspection and repair. Spalling has exposed rebar in many of the bays and potholes are going through the concrete deck. Movement and rotation of abutment has sheared anchor bolts and is displacing and twisting the girders. **Photos 40** and **41** show deteriorated deck and displaced girders.



Photo 39: Bridge N-21-F Source: CDOT



Figure 15: Bridge N-21-F Location Source: Google, CDOT





Photo 40: Bridge N-21-F – Exposed Rebar and Hole Through Deck Source: CDOT



Photo 41: Bridge N-21-F – Displacement and Twisting of Girder due to Abutment Rotation

Source: CDOT





Project Parties

The Colorado Department of Transportation (CDOT) and the Colorado Bridge Enterprise (CBE) will be the responsible parties to complete the replacement of the bridges in the Region 2 Bundle. These entities have collaborated on over 100 bridge replacement projects throughout the state.

CDOT exists to ensure that Colorado has a safe and efficient highway system by building and maintaining interstates, U.S. highways and state highways. CDOT:

- Maintains, repairs and plows over 23,000 total lane miles of highway
- Maintains 3,447 bridges
- Oversees 28 billion miles of vehicle travel annually

The CBE was formed in 2009 as part of Colorado's Funding Advancement for Surface Transportation and Economic Recovery (FASTER) legislation. CBE operates as a government-owned business within the Colorado Department of Transportation, but derives its dedicated funding from annual vehicle registration fees. The CBE has a separate board of directors that convenes each month to monitor program progress and approve programming plans and budget supplements. The statutory purpose of the CBE is to finance, repair, reconstruct and replace designated bridges.

In addition to the CDOT and CBE, the program to replace the bridge in the Region 2 Bundle is strongly supported by Federal representatives, Governor Hickenlooper, state representatives, and local jurisdictions. Letters of support are provided in **Appendix A – Letters of Support**.





Grant Funds, Sources, and Uses of Project Funds

The following sections present the costs for the Region 2 Bundle and how the project will be funded.

Project Costs

The total estimated project cost for delivering the Region 2 Bundle is approximately \$34.3 million. Project funding will go toward the staged replacement of the 14 candidate rural bridges and include costs for construction, professional services (such as design and project management), and for temporary acquisition of right of way (if required). Project costs were built from a granular level and were subjected to a probabilistic risk assessment. The P70 cost estimate (representing an appropriate level of risk and associated uncertainty with project costs) were used.

Funding

The total cost of the Region 2 Bundle is \$34.3 million. Half of the total project cost, \$17.13 million, will be provided by the Colorado Bridge Enterprise (a non-federal source) with the remaining 50 percent coming from the requested Federal funding. To demonstrate commitment to completing the program, CBE has signed a resolution committing the CBE to providing the non-federal match (see **Appendix B – Funding Commitment** for executed resolution). This grant request is the only request for Federal funds that have been sought for the Region 2 Bundle. **Table 18** provides a summary of the funding sources.

Table18: Project Funding Summary

Entity	Contribution
Colorado Bridge Enterprise	\$17,127,500
Total Non-Federal Match	\$17,127,500 (50% of total cost)
Federal Funds Sought (Grant Ask)	\$17,127,500
Total Project Cost	\$34,255,000

Budget

The total cost of the project is \$34.3 million. **Table 19** provides a summary of the costs for each bridge in the Region 2 Bundle. A full breakdown of costs for each individual bridge can be found in **Appendix C – Detailed Cost Estimate**.



Table19: Summary of Project Cost by Bridge

National Bridge Structure Number	ROW (including utilities)	Professional Services	Construction	Total
G-12-C	\$28,000	\$58,000	\$1,709,000	\$1,795,000
J-14-C	\$87,000	\$176,000	\$2,372,000	\$2,634,000
J-15-G	\$35,000	\$71,000	\$1,335,000	\$1,441,000
I-13-G	\$79,000	\$160,000	\$2,663,000	\$2,902,000
I-15-AO	\$72,000	\$146,000	\$2,244,000	\$2,462,000
I-15-T	\$46,000	\$94,000	\$2,043,000	\$2,184,000
H-13-N	\$44,000	\$90,000	\$1,970,000	\$2,104,000
M-21-B	\$137,000	\$278,000	\$3,323,000	\$3,738,000
M-21-C	\$121,000	\$245,000	\$3,002,000	\$3,367,000
M-21-J	\$56,000	\$113,000	\$1,728,000	\$1,897,000
M-22-U	\$67,000	\$136,000	\$1,388,000	\$1,590,000
M-22-Y	\$25,000	\$50,000	\$1,103,000	\$1,177,000
N-21-C	\$115,000	\$234,000	\$2,940,000	\$3,289,000
N-21-F	\$134,000	\$272,000	\$3,267,000	\$3,672,000
Total	\$1,045,000	\$2,122,000	\$31,089,000	\$34,255,000

Note: Right-of-way (ROW) includes utility relocation and any temporary easements that may be needed during construction. No permanent acquisition of property will be required for the replacement bridges.





Selection Criteria

As discussed in the Notice of Funding Opportunity, the following sections describe how the Region 2 Bundle exceeds expectations for the selection criteria.

Innovation

This section describes the innovative technologies, project delivery, and financing that will be implemented to successfully replace the bridges in the Region 2 Bundle. The innovative methods will reduce costs and ensure timely completion of the program.

Innovative Technologies

CDOT and CBE will be using a number of innovative technologies and strategies for the replacement of the bridges in the Region 2 Bundle. Their efforts include using Accelerated Bridge Construction and enhancing the service life of the bridges.

Accelerated Bridge Construction

CDOT and CBE have successfully leveraged Accelerated Bridge Construction (ABC), and have identified potential methods for replacing a bridge that reduce costs. ABC techniques such as Prefabricated Bridge Elements and Systems (PBES), bridge movement technologies such as bridge moves with Self Propelled Modular Transporters (SPMT) and "lateral sliding" of bridges have been successfully leveraged on numerous bridge projects throughout the state. CDOT and CBE will continue to investigate and evaluate other ABC techniques and will champion these techniques where appropriate.

The bridges in the Region 2 Bundle are expected to be replaced with concrete box culverts or reinforced concrete pipes. Since the project will be delivered using the Design-Build model, multiple DB teams will have an opportunity to value engineer structures within the bundle that are expected to have similar replacement types. Efficiencies in cost and project schedule are expected through utilization of prefabricated structural elements to replace structures that are located in close geographic proximity. Construction crews will benefit from a steep learning curve that will result in increased production rates.

In this scenario, the culverts and pipes would be constructed off-site and transported to the site for placement. Constructing the culverts off-site would allow for greater control over the quality (i.e., better control over the concrete mixture and site conditions) and reduce the amount of time that is needed at the site to replace the bridge – saving time and reducing the impact on the public.

Additionally, the Request-for-Proposal (RFP) will stipulate that full road closures are not permitted to further reduce the impact on the public. Based on site evaluations performed during scoping and preliminary design, it appears that temporary detour roadways can be constructed adjacent to the existing structures and within CDOT ROW at the majority of the project sites. Implementing these detours will eliminate the need for roadway closures.



Enhanced Service Life

As part of its mission, the CBE is charged with bringing innovation to the practice of bridge design and construction through research and implementation of innovative practices. As funding for bridge projects becomes impacted by large replacement projects, CBE realized that one way to get the most long-term benefit from available funding was to design and construct bridges that are able to provide significantly longer terms of service, balanced with higher initial costs. As part of the effort, CBE researched and developed strategies for enhancing the service life of bridges.

The current AASHTO Bridge Design Guidelines provide a standardized approach to bridge design and indicates a 75-year design life is expected when the guidelines are implemented. These guidelines are applied nationwide, but are not able to account for the microclimates across North America. Taking into consideration the microclimates of Colorado, CBE research¹ identified strategies that enhance the AASTHO guidelines to increase the expected service life of bridges to 100 years. For example, the strategies that reduce corrosion of the superstructure and substructure include macro and micro fiber reinforcement, using corrosion inhibiting admixtures, and using low carbon chromium reinforcing steel. The strategies will be used to enhance the service life of the bridges in the Region 2 Bundle to 100 years.

Innovative Project Delivery

The project delivery method is the process by which a construction project is comprehensively designed and constructed, including project scope definition, organization of designers, constructors and various consultants, sequencing of design and construction operations, execution of design and construction, and closeout and start-up. Thus, the different project delivery methods are distinguished by the manner in which contracts between the agency, designers and builders are formed and the technical relationships that evolve between each party inside those contracts.

Currently, there are several types of project delivery systems available for publicly funded transportation projects. The most common systems are Design-Bid-Build (DBB), Design-Build (DB), and Construction Manager/General Contractor (CMGC). No single project delivery method is appropriate for every project. Each project must be examined individually to determine how it aligns with the attributes of the delivery methods.

The grant application team has performed a preliminary evaluation of the grant application bundles through the use of the CDOT Project Delivery Selection Matrix (PDSM) tool. The general logic of the PDSM tool is illustrated in the flowchart below.

¹ See research document Strategies for Enhancing Bridge Services Life, Colorado Bridge Enterprise, June 30, 2015



Figure 16: CDOT Decision Making Process for Determining Optimal Project Delivery Method Source: CDOT

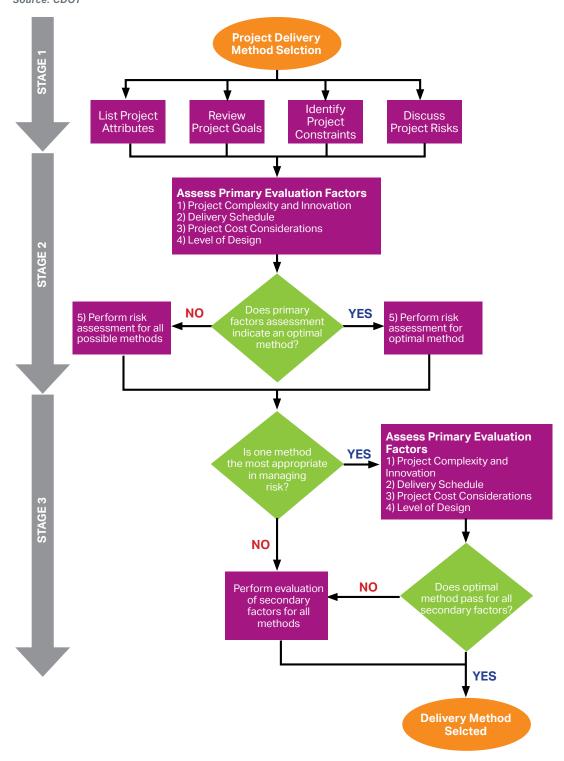




Table 20: CDOT GRANT APPLICATION #2 (Region 2 CBC/CMP Bundle) PROJECT DELIVERY METHOD OPPORTUNITY/OBSTACLE SUMMARY

	Design/Bid/ Build (DBB)	Design/Build (DB)	Const. Mgr./ Gen Contractor (CMGC)
Primary Section Factors			
1. Project Complexity & Innovation	++	+	-
2. Project Delivery Schedule	X	++	+
3. Project Cost Considerations	+	++	-
4. Level of Design	-	+	++
5. Risk Assessment	++	-	+
Secondary Selection Factors			
6. Staff Experience/Availability (Agency)	++	+	++
7. Level of Oversight and Control	++	-	+
8. Competition and Contractor Experience	++	+	+

Rating Key

- ++ Most appropriate delivery method
- + Appropriate delivery method
- Least appropriate delivery method
- X Fatal flaw (discontinue evaluation of this method)
- NA Factor not applicable or not relevant to the selection



Project Delivery Selection Summary

Evaluation of the bundle resulted in the following:

- DBB was identified as fatally flawed due to the potential for delays extending beyond the CHBP funding obligation deadline. Additionally, this delivery method limits the contractor's ability to innovate, and does not allow for contractor input on ABC construction techniques and/or construction phasing to limit impacts to the travelling public.
- DB is likely to be the most cost effective solution since multiple DB teams will have an opportunity to value engineer structures within the bundle that are expected to have similar replacement types. Efficiencies in project schedule are expected through utilization of prefabricated structural elements to replace structures that are located in close geographic proximity on three corridors. Construction crews will benefit from a learning curve that will result in increased production rates. Initial analysis has discovered that right-of-way and environmental are low risk. Utilizing CDOT's well established templates will allow assembly of the essential procurement documents quickly so that we can focus on managing higher risk register entries such as project agreements to be executed. CDOT has a great deal of experience utilizing the DB model to deliver complex projects typically in 11 months, and does not see reason that this project would be an exception.
- CMGC has similar advantages as DB, however not to the extent or as early in the delivery process. Innovation may be limited when compared to DB since the design will be optimized to the strengths of a single contractor. Additionally, with an absolute fixed scope, the CMGC delivery process may expose CDOT to cost control challenges during the "CAP" negotiations. The design flexibility afforded by this delivery method has marginal value for Region 2 Bundle structures which are located in close geographic proximity and have similar, well-known site characteristics. Risks that would be allocated to Contractor are well-defined, which would minimize contractor contingency pricing, giving a slight advantage to DB over CM/GC.
- * Design-build was selected as the preferred project delivery method.

Innovative Financing

On March 2, 2009, former Colorado Governor Bill Ritter signed into law Colorado State Senate Bill 09-108, Funding Advancement for Surface Transportation and Economic Recovery, otherwise known as FASTER. The legislation was the first new dedicated and sustainable funding source for Colorado transportation infrastructure in nearly twenty years.

The law increases revenues from various sources for transportation improvements at the state and local level. A portion of the funding designated as the "Bridge Safety Surcharge" is imposed on vehicle registration based on vehicle weight and ranges from \$13 to \$32. Revenues from the surcharge are dedicated specifically for Colorado's most deficient bridges — those bridges rated "poor" by the Colorado Department of Transportation (CDOT) and by statute cannot be used for other CDOT purposes.

To focus on Colorado's poor bridges, the legislation in addition to authorizing the Bridge Safety Surcharge, created the Colorado Bridge Enterprise (CBE). The CBE is an autonomous program that is a wholly owned subsidiary of CDOT, established to "finance, repair, reconstruct, and replace any designated bridge in the state" per C.R.S. 43-4-805 (2) (b) and is, by statute, to have a separate Board of Directors.



On June 18, 2009, the CBE Board officially approved the enactment of the Bridge Safety Surcharge, as required by law. In Fiscal Year 2018, Bridge Safety Surcharge revenues were \$106M. The current outstanding CBE program liability for eligible structures is estimated at \$1.5B, and the funding shortfall is projected to increase over time as additional structures become eligible for the program. Current forecasts estimate that the outstanding program liability will increase to nearly \$2.5B by Fiscal Year 2040.

Pursuant to one of the program goals adopted by the Bridge Enterprise Board of Directors (a program delivery plan that evaluates various options, encourages creativity, and a variety of innovative solutions), the program continues to explore and deploy innovative contracting delivery methods that (1) expedite the start of construction, and/or (2) accelerate overall project completion. This includes utilization of both Design/Build (D/B), Construction Manager/General Contractor (CM/GC), and Public Private Partnership (P3) contract delivery methods.

Since program inception, CBE has addressed 33 bridges using Design-Build, 8 bridges through CM/GC, and 8 bridges through P3s. This experience, along with CDOT's extensive knowledge of alternative delivery, will be leveraged for the replacement of the bridges in the Region 2 Bundle.

Life-Cycle Costs and State of Good Repair

As previously noted, all of the bridges in the Region 2 Bundle are decades past their original design life. Because of their age and deterioration, maintenance activities are increasing over time. While maintenance activities have been ongoing, several issues were identified with the bridges that are inherent in their design and/or original construction. These issues include loose connections and differential movement in timber bridges that leads to rapid deterioration of the wearing surface, and poor quality concrete used in the concrete structures that has led to deterioration of the bridges. These issues have resulted in 13 of the bridges in the Region 2 Bundle being rated as "poor". Structural Inventory and Appraisal Item 41 is coded "D" for three of the structures in the bundle, which indicates the bridges are Load Restricted - limiting trucking routes through major sections of the US 24 and US 350 corridors.

The need for replacement of the bridges in the Region 2 Bundle is evident by the replacement activities of other bridges in the same corridors (**Figure 16**). The bridges that have already been replaced by CDOT were of similar age, similar design, and followed similar construction practices as the bridges in the Bundle. This highlights the increased needs of these corridors as the infrastructure ages and also CDOT's ongoing efforts to maintain a state of good repair for the rural highway system.

Following bridge replacement, all for the bridges will be ranked as "good", indicating that there are no design or structural issues with the bridges. The replacement of these bridges is expected to address all deficient bridges in the corridors, which will provide a good state of repair to the length of these major rural corridors. For example, US 350 between La Junta and Trinidad will not be weight restricted to oversize loads and allow for easier movement of large loads.



Figure 16: Similar Bridges Already Replaced by CDOT



As discussed previously, enhanced strategies will be used to extend the service life of the replaced bridges to 100 years, which will provide assurance of a good state of repair for a century. In addition, maintenance activities are anticipated to be limited to preventative maintenance for the replaced bridges, leading to less vehicle delays during these activities.

Replacement of these structures will allow CDOT to divert resources to keep other bridges throughout Colorado in a state of good repair.

Economic Vitality

The replacement of the bridges in the Region 2 Bundle will deliver economic benefits to the rural region, the state, and the nation. To estimate the economic benefits, a benefit-cost analysis (BCA) was conducted in accordance with the 2018 Benefit-Cost Analysis Guidance for Discretionary Grant Programs. Project benefits following replacement were estimated over a 20-year analysis period (2023 through 2042). The BCA estimated that replacement of the bridges will generate \$29.6 million and \$65.4 million in net benefits at 7 percent and 3 percent discount rates, respectively. These represent benefit-cost ratios (BCRs) of 2.1:1 and 3.1:1 at their respective discount rates. **Table 21** summarizes the results of the BCA. Details of the BCA can be found in **Appendix D - Benefit Cost Analysis**.



Table 21: BENEFITS COSTS ANALYSIS IMPACT MATRIX

Current Status/ Baseline & Problem to be Addressed	Change to Baseline or Alternatives	Types of Impacts	Affected Population	(Net Prese	c Benefit ent Values, 18 M)	
				Discounted at 7%	Discounted at 3%	
			Safety			
	The project would replace 14 bridges, bringing them up to a state of good repair, and thus reducing maintenance expenditures and driving miles incurred by motorists due to detours. The reduced driving	The project would	Reduced Roadway Fatalities and Crashes	Traveling Public	\$7.72	\$13.04
Fourteen (14) bridges are past		Safety Improvements at Bridges	Traveling Public	\$0.09	\$0.15	
their useful life			State of Good	Repair		
and as a result require frequent	maintenance	Roadway	CDOT	40.04	40.07	
maintenance and have the potential		Maintenance Savings	Taxpayers	\$0.04	\$0.07	
for emergency closure. The	motorists due	Net Operating & Maintenance	CDOT	\$21.22	\$33.13	
emergency	I .	Er	nvironmental Pi	rotection		
closures create delays and detours for motorists.	miles results in travel cost savings	Emissions Savings	The Public	\$0.60	\$1.01	
These delays and	for autos, operating cost savings for	Eco	onomic Compe	titiveness		
detours result in costs incurred by	trucks, emissions savings, safety	Travel Time Savings	Traveling Public	\$9.66	\$16.28	
motorists, CDOT, and trucking businesses.	improvements and crash reductions,	Auto Travel Cost Savings	Drivers	\$10.43	\$17.61	
24011000001	and roadway maintenance	Residual	CDOT	\$2.14	\$7.24	
	savings.	Savings	Taxpayers	Ψ2.14	Ψ1.24	
		Truck Operating	Freight operators	4.54	47.0 5	
		Savings	Shippers	\$4.54	\$7.65	
			Customers			
		Total Ber	nefits (\$2018M)	\$56.45	\$96.17	
			Capital Costs	\$27.09	\$30.91	
			nefits (\$2018M)	\$29.35	\$65.26	
		Benefi	ts-Costs Ratio	2.1	3.1	

Source: AECOM



The largest generator of economic benefits is the savings in travel time and truck operating savings reflective of the avoidance of emergency closures of bridges, and the subsequent emergency replacement of the bridges. Additional benefits generated by the implementation of the Region 2 Bundle include a reduction in accidents and fatalities and nominal reductions in emissions and roadway wear and tear. The replacement of the bridges in the Regions 2 Bundle will improve the aggregate State of Good Repair along these rural highway and interstate corridors, thereby ensuring that the both commercial and personal traffic can continue to functional as normal.

AECOM'S cost estimation team estimated that bundling the replacement of the bridges together, placing them under a single contract, and utilizing similar design elements and construction activities will result in a total replacement cost 12.3%, or \$4.9 million, less than if the bridges were to be replaced individually. As this is a comparison between build options, and not viewed against the baseline do-nothing option, this cost savings is not incorporated into the BCA.

Project Readiness

Planning by the CDOT and CBE for the replacement of the bridges in the Region 2 Bundle has been ongoing. The planning activities will continue, which will allow the project to be implemented immediately after grant award by the FHWA. The following sections discuss the project feasibility and schedule that demonstrate the project readiness of the Region 2 Bundle.

Project Feasibility

Thirteen (13) of the bridges in the Region 2 Bundle have been identified by the CBE as candidates for replacement based on their classification of "poor". These structures have been included in the CBE Prioritization Plan; the majority of the structures fall within the top two tiers of the plan, which correlates high or medium priority. Since then, CDOT engineers in Region 2 have performed high-level scoping and hydrologic analysis to identify potential project risks and identify the probable structure replacement type. Standardized designs were selected for the replacement bridges, which will speed construction and reduce costs. Standard design drawings and construction documents have been prepared for each bridge (see **Appendix E – Design Examples**). Currently, the design level is approximately 10 percent, which will allow for expedited development of design-build procurement documents if the grant is awarded.

The bridges are included in the Statewide Transportation Improvement Program (STIP) under STIP ID: SST8000.126, which will allow CDOT Region 2 to continue design efforts up to the 30 percent design level. Following grant award, the project will be fully funded and the STIP will be amended to include the construction phase.

Project Schedule

A schedule has been prepared by CBE for the replacement of the bridges in the Region 2 Bundle (**Figure 17**). It is anticipated that the actual replacement of the bridges will occur between January 2021 and October 2022. Design-build procurement will ensure that funding is obligated more than a year in advance of the statutory deadline for Competitive Highway Bridge Program funds (September 30, 2021). Additionally, project completion has been scheduled over three years in advance of the September 30, 2026 deadline.

A number of steps have already been taken to move the process forward to ensure that the schedule can be met, including:



- Conducted preliminary engineering and hydraulic analysis
- Performed high level scoping and site visits to identify potential project risks
- Executed a resolution committing the CBE to providing the non-Federal funding match so that that obtaining required funding will not be a concern
- Incorporated the bridges into the STIP (30 percent design)
- Verified that no local agency approvals are required to advance the project
- Confirmed that the majority of the replacements can be performed within CDOT ROW temporary easements may be obtained for construction of temporary detour roadways, however it is feasible to phase the construction of each structure to mitigate this need
- Prepared list of qualified contractors who can complete the bridge replacement each of the contractors has the required experience and capabilities to replace the 14 bridges in the Region 2 Bundle under one contract and within the scheduled time

Right-of-Way

The existing bridges and adjacent property are owned by CDOT, therefore no permanent easement or land acquisition will be required to replace the bridges. For some bridges, temporary easements may be needed for construction staging and traffic bypass routes. These easements would only be required during construction activities and the property would be brought back to its current state following construction. CDOT and CBE have a lot of experience obtaining temporary easements for bridge maintenance and replacement activities; therefore, no issues are expected that would stop or delay replacement activities.



5 Q4 Q1 Q2 o 1 õ Application #2 Schedule Region 2 CBC Project 8 150 12-Mar-20 08-Aug-20 12 10-Aug-20 21-Aug-20 27-Aug-20 02-Dec-22* 183 01-Apr-19 30-Sep-19 200 14-Oct-19 30-Apr-20 100 28-Aug-20 05-Dec-20 15 30-Sep-19 14-Oct-19 648 22-Jan-21 31-Oct-22 453 14-Oct-19 08-Jan-21 292 14-Oct-19 31-Jul-20 194 20-Jan-20 31-Jul-20 48 06-Dec-20 22-Jan-21 22-Jan-21 Finish 0 04-Dec-18* 0 16-May-19 0 01-Apr-19 0 30-Apr-19 0 05-Dec-20 Rem Start 0 183 200 150 453 292 12 648 15 194 100 48 **CDOT STIP Final Design and Construction Amendment** Department of Transportation FHWA Construction Phase Authorization / Obligation **CDOT Transportation Commission STIP Adoption** COLORADO **Utility Coordination and Agreements** FHWA Design Phase Authorization Environmental Clearance (CATEX) **CDOT Design Development FHWA Negotiation Period CDOT Grant Submission** Request for Proposals **FHWA Grant Awarded** Contract Documents Contract Execution Notice-to-Proceed ROW Acquisition Project Complete **CDOT Award** Construction Procurement

Figure 17: Schedule for Region 2 Bundle





Environmental Readiness

CDOT has institutionalized several FHWA Every Day Counts measures to ensure streamlined project delivery while maintaining regulatory compliance and environmental stewardship:

- Mitigation Banking: CDOT has created the first Permanent Water Quality (PWQ) Mitigation program of its type: it uses a mitigation fund for more effective watershed-level projects instead of on-site mitigation-by-project for Permanent Water Quality (PWQ) impacts, it encourages partnerships with our municipal stakeholders that should also reduce the maintenance burden on CDOT crews, and compliance is easily tracked by use of funds instead of tracking water or area treated.
- Programmatic Agreements: CDOT has agreements with EPA, CPW, USFWS, CDPHE, USACE, USFS, BLM, FHWA, SHPO. All establish streamlined approaches for handling routine environmental requirements, reducing review times and accelerating project delivery. While each bridge will be evaluated, it is anticipated that all of the bridge projects in the Region 2 Bundle will be approved as categorical exclusions (CEs).
- NEPA 404 Merger: Integrate NEPA and the permitting process seeks to transform how agencies and stakeholders conduct concurrent, synchronize environmental and permitting reviews, saving time and cost for the agencies involved.
- Implementing Quality Environmental Documents: CDOT has developed templates for CEs, EAs and FONSIs. This has streamlined the NEPA process: reducing costs and review times while maintaining document quality.
- **Liaisons:** CDOT also uses liaisons with USFWS and the state health department (CDPHE) to ensure consistency and accelerate project delivery.

As noted above, it is anticipated that replacement of all of the bridges in the Region 2 Bundle will be approved as categorical exclusions (CEs) based on existing programmatic agreements. The anticipation of CEs is based on CDOT's previous experience replacing similar bridges (both in type of bridge and existing environment) within the two highway corridors covered in the bundle and throughout the Colorado highway system.



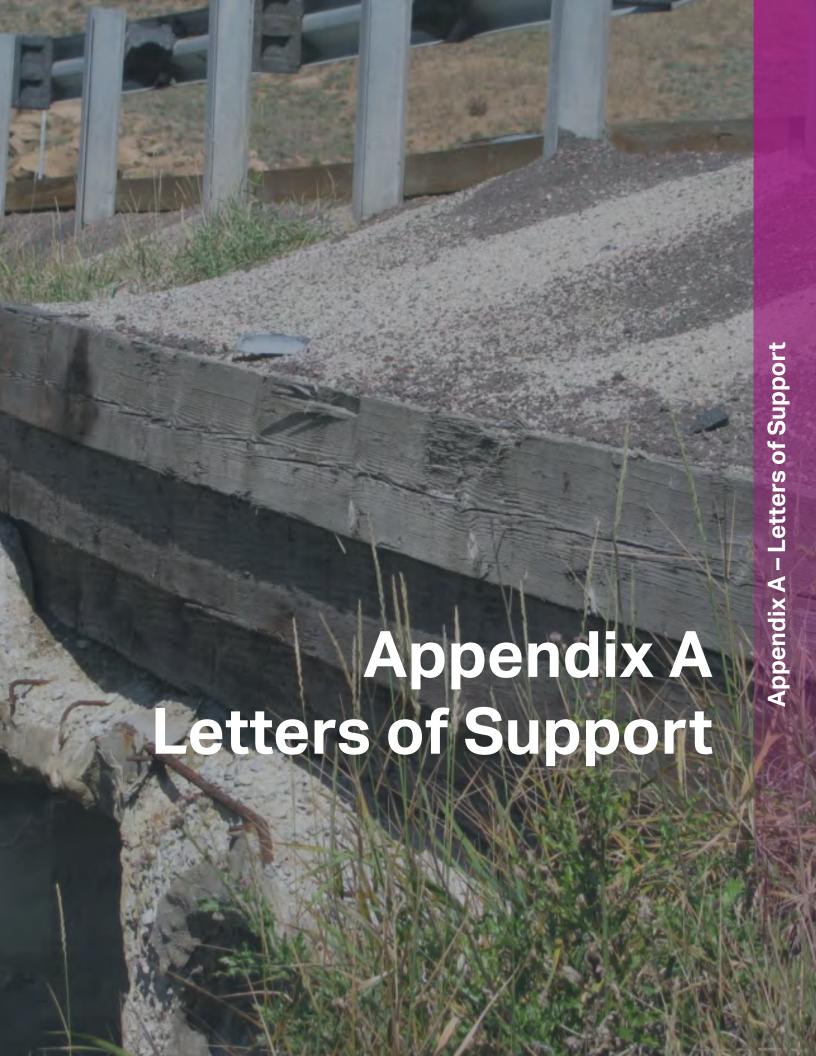


Project Risks and Mitigation Strategies

Several project risks and their mitigation strategies have been discussed throughout this application. Steps taken by CDOT and CBE include:

- Completed multiple actions to reduce the risk to the schedule (see Project Schedule)
- Design-Build procurement will provide cost certainty earlier in the project (see Innovative Project Delivery)
- Incorporation of the bridges into the STIP and verification that no local agency approvals are necessary to advance the project (see Project Feasibility)
- Institutionalizing several FHWA Every Day Counts measures to ensure streamlined project delivery (see Environmental Readiness)
- Conducting high level scoping, preliminary design and hydraulic analysis to identify potential project risks and identify probable replacement type for the bridges (see Project Feasibility)
- Obtaining a signed resolution from the CBE Board of Directors committing CBE to providing the non-federal match (see Funding)

CDOT and CBE have extensive experience collaborating to replace bridges and care for aging infrastructure, with CBE being established for the purpose of addressing aging bridges in Colorado. This experience reduces the risk since the knowledge and lessons learned will be put to use when replacing the bridges in the Region 2 Bundle.





November 30, 2018

The Honorable Elaine Chao Secretary U.S. Department of Transportation 1200 New Jersey Avenue, SE Washington, D.C. 20590

RE: Colorado Department of Transportation USDOT Competitive Highway Bridge Replacement Grant Applications

Dear Secretary Chao:

I am writing in support of the Colorado Department of Transportation's (CDOT) application for funding under the USDOT Competitive Highway Bridge Replacement Grant Program for our bridge projects. The three grant requests include partial funding for the replacement of 33 bridges throughout the state, including 1) The replacement of ten bridges on Interstate 70 (I-70) near Golden between Colfax Ave. and Harlan Street; 2) The replacement of fourteen bridges on US 350 in Colorado between Delhi and La Junta and in the area of US 24 near Hartsel, CO; and 3) The replacement of 9 bridges on rural highways and service roads in Northeastern Colorado.

The State of Colorado is facing severe and growing transportation challenges that threaten the safety, efficiency, and economy of Colorado. The State's transportation infrastructure has seen usage and congestion grow significantly, reflective of both the increased population and economic boom the state has enjoyed over the past decade. This has meant a substantial cohort of the state's bridges are now operating past their design life and/or are in poor condition. In the case of the bridges proposed for replacement in CDOT's applications, their deterioration has accelerated in recent years, leading to escalating maintenance costs and an increasing frequency of lane and bridge closures to carry out planned and unplanned repairs.

Interstate 70 is the primary gateway to the recreational areas of the Rocky Mountains and, as part of the National Freight System, it is the most significant east-west highway for goods movement in the state. Seven of the bridges in the second bundle of 14 are along US 350, which is a significant rural highway that provides a crucial transportation corridor for agriculture and freight between La Junta and Trinidad, connecting Interstate 25 and US 50. The other seven bridges are located on US 24 and Route 9, near Hartsel, which is another primary gateway to the recreational areas of the Rocky Mountains.



These corridors are some of the most highly trafficked roadways in the state and ensuring improvements that maintain their condition is imperative. Road closures and delays as a result of planned and unplanned maintenance on bridges due to their deterioration have had an adverse impact on the efficacy of the larger transportation network. In fact, closures of these bridges incur significant delays, causing detour distances of over 100 miles in some instances. Improving their condition will ensure Colorado's continued economic competitiveness.

The implementation and delivery of the replacement of these three bundles of bridges represent an opportunity for the State of Colorado to effectively improve mobility and safety outcomes along the state's busiest road corridors while concurrently ensuring that the economic vitality provided by these crucial routes are maintained. Thank you for your consideration.

Sincerely,

John W. Hickenlooper

Governor



November 14, 2018

The Honorable Elaine Chao Secretary, U.S. Department of Transportation 1200 New Jersey Avenue, SE Washington, D.C. 20590

RE: Colorado Department of Transportation FHWA Rural Bridge Replacement Grant Application – Concrete Box Culvert and Corrugated Metal Pipe Culvert Program – (Region 2 Bundle).

Honorable Secretary Chao:

I am writing on behalf of Teller County to express our support of the Colorado Department of Transportation's (CDOT) application for the funding under the FHWA Rural Bridge Replacement Grant Program for their project, Region 2 Bundle. The grant request is for partial funding for the replacement of 14 bridges on US 350 between Delhi and La Junta and in the area of US 24 near Hartsel.

The State of Colorado is facing severe and growing transportation problems that threaten the safety, efficiency, and economy of Colorado. Within the context of stagnate or declining funding, the State's transportation infrastructure has seen usage and congestion grow significantly, reflective of both the increased population and economic boom the state has endured over the past decade. A substantial cohort of the state's bridges are operating past their design life and/or are in poor condition. In the case of the bridges proposed for replacement in CDOT's application, their deterioration has accelerated in recent years, leading to escalating maintenance costs and an increasing frequency of lane/bridge closures to carry out planned and unplanned repairs.

Seven of the bridges in this bundle of 14 are along US 350, which is a significant rural highway that provides a crucial transportation corridor for agriculture and serves as a key freight link between La Junta and Trinidad by connecting I-25 and US 50. The other seven bridges are located on US 24 and Route 9, near Hartsel, which is a primary gateway to the recreational areas of the Rocky Mountains and provides access for recreationists and the goods needed to support the rural economies that survive on the recreational opportunities of the area. Road closures and delays along these corridors as a result of planned and unplanned maintenance on its bridges due to their deterioration have had an adverse impact on the efficacy of the larger transportation network and will hinder the region's economic competitiveness if they are not replaced in the near term.

The implementation and delivery of the replacement of the Region 2 Bundle of bridges represents an opportunity for the State of Colorado to effectively improve mobility and safety outcomes along important state road corridors while concurrently ensuring that the economic vitality provided by these crucial rural routes is maintained.

Kind regards,

Marc Dettenrieder, MBA

Teller County Commissioner



Fremont County Board of Commissioners

615 Macon Ave., Room 105 - Cañon City, Colorado 81212 Phone (719) 276-7300 - Fax (719) 276-7412

Tim Payne District 1 Debbie Bell District 2 Dwayne McFall District 3

November 15, 2018

The Honorable Elaine Chao Secretary, U.S. Department of Transportation 1200 New Jersey Avenue, SE Washington, D.C. 20590

RE: Colorado Department of Transportation FHWA Rural Bridge Replacement Grant Application – Concrete Box Culvert and Corrugated Metal Pipe Culvert Program – (Region 2 Bundle).

Honorable Secretary Chao:

We are writing on behalf of Fremont County, Colorado, to express our support for the Colorado Department of Transportation's (CDOT) application for funding under the FHWA Rural Bridge Replacement Grant Program for the project known as Region 2 Bundle. The grant request is for partial funding for the replacement of 14 bridges on US 350, between Delhi and La Junta, and in the area of US 24 and Route 9, near Hartsel.

The Highway 9 corridor is a major access into our county, providing entrance from Park and Teller Counties. The thoroughfare is vital to our economy which relies heavily on recreational opportunities. Frequent closures threatens our region's vitality and economic competitiveness.

The State of Colorado is facing severe and growing transportation problems that threaten the safety, efficiency, and economy of Colorado. Within the context of stagnate or declining funding, a substantial cohort of the state's bridges are operating past their design life and/or are in poor condition. In the case of the bridges proposed for replacement in CDOT's application, their deterioration has accelerated in recent years, leading to escalating maintenance costs and an increasing frequency of lane/bridge closures to carry out planned and unplanned repairs.

The implementation and delivery of the replacement of the Region 2 Bundle of bridges represents an opportunity for the State of Colorado to effectively improve mobility and safety outcomes along important state road corridors while concurrently ensuring that the economic vitality provided by these crucial rural routes is maintained.

Sincerely,

Tim Payne

Commissioner, District 1

Debbie Rell

Commissioner, District 2

Dwayne McFall

Commissioner, District 3





Statewide Bridge Enterprise

2829 W Howard PI., 3rd Floor Denver, CO 80204

MEMORANDUM

TO: BRIDGE ENTERPRISE BOARD OF DIRECTORS

FROM: JERAD ESQUIBEL, DIRECTOR OF PROJECT SUPPORT

DATE: NOVEMBER 15, 2018

SUBJECT: RESOLUTION TO APPROVE STATE FUNDING MATCH FOR FY 2018-19 FHWA

COMPETITIVE HIGHWAY BRIDGE GRANT

Purpose:

The Bridge Enterprise Board of Directors (Board) is being asked to approve the attached resolution that endorses the grant applications for the fiscal year (FY) 2018-19 FHWA Competitive Highway Bridge Program, and commits Bridge Enterprise funding for BE eligible structures as a portion of the state funding match.

Background:

In October, CDOT Staff Bridge Branch and BE Staff held a joint workshop to inform the Board and the Transportation Commission of key details provided in the Notice of Funding Opportunity (NOFO) released by the FHWA on September 5, 2018, and to provide the selection methodology for the structure bundles being submitted in the grant applications. State funding match levels are recommended at 50% or greater to increase the probability of award. Based on the selection criteria outlined in the NOFO, the following projects and funding matches were recommended:

App#	Description	Requested CBE Match (est.)	Requested TC Match	USDOT Grant	Total Cost (est.)
1	R1: I-70 between Colfax Ave. and Harlan St. (10 Structures)	\$41.7M	\$15M	\$24.3M	\$81M
2	R2: Concrete Box Culvert and Corrugated Metal Pipe Culvert Program (14 Structures)	\$17M	-	\$17M	\$34M
3	R1/R4: Eastern Plains Timber Bridge Replacement Program (9 Structures)	\$11M	-	\$11M	\$22M
	Total Match Being Requested	\$69.7M	\$15M	\$52.3M	\$137M

Staff requested consideration and feedback from the Board and the Transportation Commission regarding the proposed grant applications and funding levels and the response was positive. As discussed in the October workshop, the potential exists for USDOT to award multiple grants. Based on BE program forecasts, the estimated \$69.7M maximum in CBE match funding is currently available between FY 2019-20 and FY 2024-25 in the unlikely event that all three grants are awarded.

Next Steps:

- 1. Staff will submit applications for all three project bundles by the FHWA December 4th deadline
- 2. If any bundle is awarded, BE staff will return to the Board requesting specific funding for each project within the bundles as part of the monthly budget supplement process.

Attachment

Attachment A: Resolution # BE 18-11-X: Instructing the Department to submit an application under the Competitive Highway Bridge Program and support priority bridge projects submitted by the Colorado Bridge Enterprise and CDOT Staff Bridge Program



Resolution #BE-18-11-07

Instructing the Department to submit an application under the USDOT Competitive Highway Bridge Program and support priority bridge projects submitted by the Colorado Bridge Enterprise and CDOT Staff Bridge Program

Approved by the Colorado Bridge Enterprise Board of Directors on November 15, 2018

WHEREAS, the Colorado General Assembly created the Colorado Bridge Enterprise (CBE) in C.R.S. 43-4-805 as a government-owned business within the Colorado Department of Transportation (CDOT or Department) for the business purpose of financing, repairing, reconstructing, and replacing Designated Bridges, defined in C.R.S. 43-4-803(10) as those bridges identified as structurally deficient or functionally obsolete and rated poor; and

WHEREAS, The Consolidated Appropriations Act of 2018 made available \$225 million for highway bridge replacement and rehabilitation projects on public roads through the Competitive Highway Bridge Program, (Pub. L. 115-141, March 23, 2018); and

WHEREAS, a Notice of Funding Opportunity (NOFO) was issued by U.S. Department of Transportation (USDOT) on September 5, 2018 for the FY 2018 Competitive Highway Bridge Program; and

WHEREAS, applications for the Competitive Highway Bridge Program; are due to the U.S. Secretary of Transportation on December 4, 2018; and

WHEREAS, the USDOT's consideration of Competitive Highway Bridge Program discretionary grant applications will be based on four key program objectives: innovation, supporting economic vitality, life cycle cost and state of good repair and project readiness; and

WHEREAS, projects that are eligible for the Competitive Highway Bridge Program discretionary grant funding must be considered major structures, demonstrate cost savings through bundling and be located on a public road; and

WHEREAS, both CBE and CDOT Staff Bridge have analyzed potential bridge structures for the Department to submit under a unified grant application and identified three project bundles that will be submitted for consideration; and

WHEREAS, all project bundles include CBE eligible structures and project bundles #1 and #3 include non-CBE eligible structures, both the CBE Board and the Transportation Commission are being asked to commit matching funds to increase the competitiveness of the Departments application.

NOW THEREFORE BE IT RESOLVED, the Department is instructed to submit the maximum allowed three applications for the following three different bridge project bundles as part of the Competitive Highway Bridge Program:

- 1. I-70 between Colfax Ave. and Harlan St. Region 1
- 2. Concrete Box Culvert and Corrugated Metal Pipe Culvert Program Region 2
- 3. Eastern Plains Timber Bridge Replacement Program Regions 1 and 4

NOW THEREFORE BE IT FURTHER RESOLVED, the CBE Board commits to providing up to \$41.7 million of state match for CBE eligible structures under grant application #1: I-70 between Colfax Ave. and Harlan St. in Region 1 if this grant application is successful.

NOW THEREFORE BE IT FURTHER RESOLVED, the CBE Board commits to providing up to \$17 million of state match for CBE eligible structures under grant application #2: Concrete Box Culvert and Corrugated Metal Pipe Culvert Program in Region 2 if this grant application is successful.

NOW THEREFORE BE IT FURTHER RESOLVED, the CBE Board commits to providing up to \$11 million of state match for BE eligible structures under grant application #3: Eastern Plains Timber Bridge Replacement Program in Regions 1 and 4 if this grant application is successful.

NOW THEREFORE BE IT FURTHER RESOLVED, in order to show the Department's financial commitment to project bundles and because a state match is required and enhances the viability of the application, the CBE commits to providing up to a combined maximum of \$69.7 million of Bridge Safety Surcharge revenue to be used on CBE eligible structures if all three of the Department's grant applications are awarded by the USDOT.

Herman Stockinger, Secretary

Bridge Enterprise Board of Directors

<u>11-15-18</u> Date



	FHWA GRANT PROPOSAL REGION 2	- PRIC	ORITY GROU	2 1 QUANTIT	Y ESTIMATE		
			3 x 6' RCP	3 x 20'x 8' CBC	3 x 14'x6' CBC	2 x 18'x6' CBC	1x5' RCP
			L=60' (45skew)	L= 50'(0skew)	L=100'(20skew)	L=45'(0skew)	L=36'(0skew)
			J-15-G	J-14-C	N-21-C	M-21-J	M-22-Y
Pay Item	Description	Unit			Quantity	ı	1
202-00001	Removal of Structure	EA	1	1	1	1	1
206-00000	Structure Excavation	CY	105	0	0	0	0
206-00100	Structure Backfill (Class 1)	CY	-	185	280	115	-
206-00200	Structure Backfill (Class 2)	CY	20	-	-	-	5
403-33841	Hot Mix Asphalt (Grading SX) (100)(PG 64-22)	Ton	18.5	30.2	26.5	19.8	3.1
601-03030	Concrete Class D (Box Culvert)	CY	42.3	46.2	21.7	20.5	16.4
602-00020	Reinforcing Steel (Epoxy Coated)	LB	2750	5950	3375	3415	1045
603-01600	60 Inch Reinforced Concrete Pipe	LF	-	-	-	-	36
603-01720	72 Inch Reinforced Concrete Pipe	LF	180	-	-	-	-
603-71406	14x6 Foot Concrete Box Culvert (Precast)	LF	-	-	300	-	-
603-71806	18x6 Foot Concrete Box Culvert (Precast)	LF	-	-	-	90	-
603-72008	20x8 Foot Concrete Box Culvert (Precast)	LF	-	150	-	-	-
606-00301	Guardrail Type 3 (6-3 Post Spacing)	LF	628	678	648	628	562
621-00400	1 Lane Detour Bridge	EA	1	1	1	1	1
Notes:							
1. \$300k for 1	lane detour bridge; \$500k for 2 lane detour bridg	ge					
2. For precast	CBC, the bedding and excavation for bedding is in	ncluded	in the work (per	M-603-3, Note	3)		
	dding material assumed to be 3 in thick Backfill C						
	adwall concrete and steel quantities per M-601-1						
5. Assumption	of 3in HMA on all structures.						
6. Concrete Cla	ass D to include headwalls, wingwalls, toewalls w	ith qua	ntities per M-60	1-2 Sheet 2			
7. Concrete an	d steel quantities for wingwalls per M-601-20						
8. See M-206-2	1 for excavation and backfill quantities.						

	FHWA GRANT PROPOSAL REGION 2	- PRIORI	TY GROUP 2	QUANTITY ES	TIMATE		
			3 x 14'x6' CBC L=70'(0skew)	3 x 14'x6' CBC L=62'(0skew)	2 x 12'x10' CBC L=40'(0skew)	4 x 20' x 8' CBC L=70'(0skew)	2 x 14'x10' CBC L=75'(45skew)
			G-12-C	I-13-G	H-13-N	M-21-B	M-22-U
Pay Item	Description	Unit			Quantity	l	
202-00001	Removal of Structure	EA	1	1	1	1	1
206-00000	Structure Excavation	CY	920	0	0	0	0
206-00100	Structure Backfill (Class 1)	CY	195	170	100	315	195
403-33841	Hot Mix Asphalt (Grading SX) (100)(PG 64-22)	Ton	28.3	26.6	15.5	46.8	28.5
601-03030	Concrete Class D (Box Culvert)	CY	28.3	26.6	15.5	46.8	28.5
602-00020	Reinforcing Steel (Epoxy Coated)	LB	3375	3375	3920	6950	5155
603-71210	12x10 Foot Concrete Box Culvert (Precast)	LF	-	-	80	-	-
603-71406	14x6 Foot Concrete Box Culvert (Precast)	LF	210	186	-	-	-
603-714xx	14x10 Foot Concrete Box Culvert (Precast)*	LF	-	-	-	-	150
603-71806	18x6 Foot Concrete Box Culvert (Precast)	LF	-	-	-	-	-
603-72008	20x8 Foot Concrete Box Culvert (Precast)	LF	-	-	-	280	-
606-00301	Guardrail Type 3 (6-3 Post Spacing)	LF	642	642	604	722	638
621-00400	1 Lane Detour Bridge	EA	-	-	-	1	1
621-00400	2 Lane Detour Bridge	EA	1	1	1	-	-
Notes:							
1. \$300k for	r 1 lane detour bridge; \$500k for 2 lane detour k	oridge					
2. For preca	ast CBC, the bedding and excavation for bedding	; is included	in the work (per	M-603-3, Note 3	3)		
3. Assumpti	on of 3in HMA on all structures.						
4. Concrete	Class D to include headwalls, wingwalls, toewal	lls with qua	ntities per M-601	L-2 Sheet 2			
5. Concrete	and steel quantities for wingwalls per M-601-20	0					
6. See M-20	06-1 for excavation and backfill quantities.						

	FHWA GRANT PROPOSAL REGION 2	- PRIOR	ITY GROUP 3	QUANTITY I	ESTIMATE		
			2 x 10'x8' CBC	2 x 10'x8' CBC	3 x 20'x6' CBC	3 x 20'x8' CBC	3 x 20' x 8' CBC
			L=50'(0skew)	L=60'(0skew)	L=60'(0skew)	L=90'(45skew)	L=80'(30skew)
			I-15-T	I-15-AO	O-19-D	N-21-F	M-21-C
Pay Item	Description	Unit			Quantity		
202-00001	Removal of Structure	EA	1	1		1	1
206-00000	Structure Excavation	CY	500	610	0	0	C
206-00100	Structure Backfill (Class 1)	CY	105	125	210	335	295
403-33841	Hot Mix Asphalt (Grading SX) (100)(PG 64-22)	Ton	12.4	12.4	34.9	55.0	44.9
601-03030	Concrete Class D (Box Culvert)	CY	28.3	28.3	24.8	53.7	44.1
602-00020	Reinforcing Steel (Epoxy Coated)	LB	2300	2300	5015	6290	5855
603-71008	10x8 Foot Concrete Box Culvert (Precast)	LF	100	120	-	-	-
603-720xx	20x6 Foot Concrete Box Culvert (Precast)	LF	-	-	180	-	-
603-72008	20x8 Foot Concrete Box Culvert (Precast)	LF	-	-	-	270	240
606-00301	Guardrail Type 3 (6-3 Post Spacing)	LF	596	596	678	730	698
621-00400	1 Lane Detour Bridge	EA	-	-	1	1	1
621-00400	2 Lane Detour Bridge	EA	1	1	-	-	-
Notes:							
1. \$300k for 1	lane detour bridge; \$500k for 2 lane detour bridge	ge					
2. For precast	CBC, the bedding and excavation for bedding is i	ncluded in	the $\overline{\text{work (per M)}}$	-603-3, Note 3)			
3. Assumption	of 3in HMA on all structures.						
4. Concrete Cla	ass D to include headwalls, wingwalls, toewalls w	ith quantit	ies per M-601-2	Sheet 2. Same f	or reinforcing qu	uantities.	
5. Concrete an	nd steel quantities for wingwalls per M-601-20						
6. See M-206-	1 for excavation and backfill quantities.						

	OFILE	1				Model Version 3 Rev	
	Project Name	R2 BUNDLE			1	Last Update	: 22-Oct-18
	Project Number	J-15-G XXXXX			•		
	Sub-Account Number Project Description	J-15-G					
	Project Work Type	BRIDGE REPLACEM	ENT				
	Estimator:	E.A.	Date: 11/6/2018				
CT LOC	CATION & CHARACTERIST	TICS					
<i>7</i> . 200	ATTON & STIPLE (STEEL)						
	Route:	009B	Begin MP: 53.9	End MP:	71.4	Length	: 17.5
	CDOT Region:	2	FIPS City: NONE FIPS City: 00000	FIPS County: FIPS County:			
	Commont Mid maint	DofD4 60.650		•			SOCIE MAD LINK
	Segment Mid-point	RefPt 62.650		Longitude:	-105.9730	_	GOOGLE MAP LINK
	Functional Classification:	4 Minor Arterial	Urban-Rural Class: 1 Rural	Terrain:	2	Rolling	ı
	AADT:	1,900	Truck ADT: 60	Tier Class:	Tier 4	Primary Surface	: 1 Asphalt
	Design Maturity:	0 - Conceptual	NEPA Action: Cat/Ex		NEPA Status:	In Progress	<u>.</u>
	Project Delivery Method:	: Design-Bid-Build	Construction Start (MMM-YY) Sep-22	Cons	truction Duration (mo)	24.0	
0 = -	NATE CONTRACTOR					REGION'S E	STIMATE
	ONSTRUCTION COSTS:						
	MAJOR CONSTRUCTION	ON ITEMS				DEDCE:	
11	ITEM DESCRIPTION Earthwork			QTY 0	UNIT CY	PERCENTAGE 0.0%	COST \$0
2 AT300	Pavement & Bases Itemized Structure			N/A N/A	SY N/A	0.0% 86.2%	\$0 \$449,000
repl	Bridge Replacement			0	DECK AREA (SF)	0.0%	\$0
wall	Bridge Repair Walls			0	DECK AREA (SF) SF	0.0% 0.0%	\$0 \$0
	Major Culverts Miscellaneous Structures			0 180	LF LS	0.0% 13.8%	\$0 \$72,000
14	Traffic / ITS			N/A	N/A	0.0%	\$0
15	Other Major Items			N/A SUBTOTAL (A)	N/A	0.0%	\$0 \$521,000
	MINOR CONSTRUCTIO	ON ITEMS		SOBTOTAL (A)	1	100.070	ψ32 1,000
	ITEM DESCRIPTION			EFFORT	UNIT	PERCENTAGE	COST
	Removals / Resets Environmental			3 - Average 3 - Average	% OF A % OF A	2.4% 6.0%	\$12,608 \$31,000
13	Structural Drainage / Utilities			5 - Extensive 3 - Average	% OF A % OF A	5.0% 4.3%	\$26,050 \$22,403
15	Roadway Appurtenances			3 - Average	% OF A	3.1%	\$16,047
7	Mobilization Construction Traffic Contro	ol / Detour		3 - Average 3 - Average	% OF A % OF A	16.6% 20.0%	\$86,278 \$104,200
18	Lighting & Electrical			3 - Average	% OF A	0.0%	\$0
9	Permanent Signing 9 Ctrini	ina					
9	Permanent Signing & Stripi Traffic Signalization & ITS	ing		3 - Average 3 - Average	% OF A % OF A	0.8% 0.0%	\$4,012 \$0
9	Permanent Signing & Stripi	ing		3 - Average 3 - Average 3 - Average	% OF A % OF A % OF A	0.8% 0.0% 0.3%	\$4,012 \$0 \$1,719
9 0	Permanent Signing & Stripi Traffic Signalization & ITS	ing		3 - Average 3 - Average	% OF A % OF A	0.8% 0.0%	\$4,012 \$0
9	Permanent Signing & Stripi Traffic Signalization & ITS	ing	CONTRUCTION BID ITEMS (A + B)	3 - Average 3 - Average 3 - Average	% OF A % OF A % OF A	0.8% 0.0% 0.3%	\$4,012 \$0 \$1,719
9 0 1	Permanent Signing & Stripi Traffic Signalization & ITS		CONTRUCTION BID ITEMS (A + B)	3 - Average 3 - Average 3 - Average SUBTOTAL (B)	% OF A % OF A % OF A	0.8% 0.0% 0.3% 58.4%	\$4,012 \$0 \$1,719 \$304,000
9 0 1	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TITEM DESCRIPTION		CONTRUCTION BID ITEMS (A + B)	3 - Average 3 - Average 3 - Average SUBTOTAL (B)	% OF A % OF A % OF A % OF A UNIT	0.8% 0.0% 0.3% 58.4% 158.3%	\$4,012 \$0 \$1,719 \$304,000 \$825,000
0 0 1	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TEM DESCRIPTION F/A - General F/A - Minor Contract Revisi	TSM&O	CONTRUCTION BID ITEMS (A + B)	3 - Average 3 - Average 3 - Average SUBTOTAL (B)	% OF A % OF A % OF A % OF A WOF A UNIT % OF CBI % OF CBI	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0%	\$4,012 \$0 \$1,719 \$304,000 \$825,000
CAT 11 12 13	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication	TSM&O ions (MCR's)	CONTRUCTION BID ITEMS (A + B)	3 - Average 3 - Average 3 - Average SUBTOTAL (B)	% OF A % OF A % OF A % OF A WOF A WOF A UNIT % OF CBI % OF CBI % OF CBI	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0% 0.1%	\$4,012 \$0 \$1,719 \$304,000 \$825,000 \$24,750 \$883
CAT 11 12 13	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TEM DESCRIPTION F/A - General F/A - Minor Contract Revisi	TSM&O ions (MCR's)	CONTRUCTION BID ITEMS (A + B)	3 - Average 3 - Average 3 - Average SUBTOTAL (B)	% OF A % OF A % OF A % OF A WOF A UNIT % OF CBI % OF CBI	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0%	\$4,012 \$0 \$1,719 \$304,000 \$825,000 \$000 \$49,500 \$24,750
CAT 11 12 13	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication	TSM&O ions (MCR's)		3 - Average 3 - Average 3 - Average SUBTOTAL (B) CBI SUBTOTAL (C)	% OF A % OF A % OF A % OF A WOF A WOF A WINIT % OF CBI	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0% 0.1% 0.0%	\$4,012 \$0 \$1,719 \$304,000 \$825,000 \$24,750 \$883 \$0 \$75,000
CAT 11 12 2 3 3 4 4	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation	TSM&O ions (MCR's) ons ns	CONSTRUCTION ITEMS (A + B + C)	3 - Average 3 - Average 3 - Average SUBTOTAL (B)	% OF A % OF A % OF A % OF A WOF A WINIT % OF CBI	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0% 0.1% 0.0%	\$4,012 \$0 \$1,719 \$304,000 \$825,000 \$24,750 \$883 \$0
CAT 11 12 2 33 44	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI	TSM&O ions (MCR's) ons ns	CONSTRUCTION ITEMS (A + B + C)	3 - Average 3 - Average 3 - Average SUBTOTAL (B) CBI SUBTOTAL (C)	% OF A % OF A % OF A % OF A % OF A WOF A WINIT % OF CBI	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.7%	\$4,012 \$0 \$1,719 \$304,000 \$825,000 \$24,750 \$883 \$0 \$75,000
CAT 11 12 2 3 3 14 4	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & * ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI	TSM&O ions (MCR's) ons ns	CONSTRUCTION ITEMS (A + B + C)	3 - Average 3 - Average 3 - Average SUBTOTAL (B) CBI SUBTOTAL (C)	% OF A % OF A % OF A % OF A % OF A WINIT % OF CBI UNIT % OF CBI UNIT	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.7%	\$4,012 \$0 \$1,719 \$304,000 \$825,000 \$24,750 \$883 \$0 \$75,000 \$900,000
CAT 11 12 23 34 4	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI	TSM&O ions (MCR's) ons ns	CONSTRUCTION ITEMS (A + B + C)	3 - Average 3 - Average 3 - Average SUBTOTAL (B) CBI SUBTOTAL (C)	% OF A % OF A % OF A % OF A % OF A WOF A WINIT % OF CBI	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.7%	\$4,012 \$0 \$1,719 \$304,000 \$825,000 \$24,750 \$883 \$0 \$75,000
CAT 11 12 23 34 4	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI	TSM&O ions (MCR's) ons ns	CONSTRUCTION ITEMS (A + B + C)	3 - Average 3 - Average 3 - Average SUBTOTAL (B) CBI SUBTOTAL (C)	% OF A WINIT % OF CBI	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.7% PERCENTAGE 11.0%	\$4,012 \$0 \$1,719 \$304,000 \$825,000 \$49,500 \$24,750 \$883 \$0 \$75,000 \$900,000
CAT 11 12 23 34 4	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI	TSM&O ions (MCR's) ons ns	CONSTRUCTION ITEMS (A + B + C)	3 - Average 3 - Average 3 - Average SUBTOTAL (B) CBI SUBTOTAL (C) CI	% OF A WINIT % OF CBI % OF CI % OF CI	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.7% PERCENTAGE 11.0% 9.5%	\$4,012 \$0 \$1,719 \$304,000 \$825,000 \$24,750 \$883 \$0 \$75,000 \$900,000 \$0 \$184,000
CAT 11 12 23 34 4	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI	TSM&O ions (MCR's) ons ns	CONSTRUCTION ITEMS (A + B + C)	3 - Average 3 - Average 3 - Average SUBTOTAL (B) CBI SUBTOTAL (C) CI	% OF A WINIT % OF CBI % OF CI % OF CI	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.7% PERCENTAGE 11.0% 9.5%	\$4,012 \$0 \$1,719 \$304,000 \$825,000 \$49,500 \$24,750 \$883 \$0 \$75,000 \$900,000
CAT 11 12 2 13 14 14 15 12 2 13 14 15 15 15 15 15 15 15 15 15 15 15 15 15	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI	TSM&O ions (MCR's) ons ons ons	CONSTRUCTION ITEMS (A + B + C)	3 - Average 3 - Average 3 - Average SUBTOTAL (B) CBI SUBTOTAL (C) CI	% OF A WINIT % OF CBI % OF CI % OF CI	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.7% PERCENTAGE 11.0% 9.5%	\$4,012 \$0 \$1,719 \$304,000 \$825,000 \$24,750 \$883 \$0 \$75,000 \$900,000 \$0 \$184,000
CAT 11 12 13 14 15 15 15 15 15 15 15	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI	TSM&O ions (MCR's) ons ns NEERING & INDIRECT:	CONSTRUCTION ITEMS (A + B + C)	3 - Average 3 - Average 3 - Average SUBTOTAL (B) CBI SUBTOTAL (C) CI	% OF A WINIT % OF CBI % OF CI % OF CI	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.7% PERCENTAGE 11.0% 9.5% 20.4%	\$4,012 \$0 \$1,719 \$304,000 \$825,000 \$24,750 \$883 \$0 \$75,000 \$900,000 \$0 \$184,000
CAT 11 12 12 13 14 14 17 17 17 17 17 17 17 17 17 17 17 17 17	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI	TSM&O ions (MCR's) ons ns NEERING & INDIRECT:	CONSTRUCTION ITEMS (A + B + C)	3 - Average 3 - Average 3 - Average SUBTOTAL (B) CBI SUBTOTAL (C) CI	W OF A W OF CBI W OF CBI W OF CBI W OF CBI W OF C CBI W OF C CI W OF	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.7% PERCENTAGE 11.0% 9.5% 20.4%	\$4,012 \$0 \$1,719 \$304,000 \$825,000 \$49,500 \$24,750 \$883 \$0 \$75,000 \$900,000 \$900,000 \$1,084,000
CAT 11 12 2 13 14 14 17 17 17 17 17 17 17 17 17 17 17 17 17	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION COS PRECONSTRUCTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [P	TSM&O ions (MCR's) ons ons NEERING & INDIRECT: TEMS	CONSTRUCTION ITEMS (A + B + C)	3 - Average 3 - Average 3 - Average SUBTOTAL (B) CBI SUBTOTAL (C) CI	WOF A WOF CBI WOF CBI WOF CBI WOF CBI WOF CI WOF	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0%	\$4,012 \$0 \$1,719 \$304,000 \$825,000 \$24,750 \$883 \$0 \$75,000 \$900,000 \$184,000 \$1,084,000
CAT 11 12 2 13 14 14 17 17 17 17 17 17 17 17 17 17 17 17 17	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION COS PRECONSTRUCTION ITEM DESCRIPTION Right-of-Way [Phase R]	TSM&O ions (MCR's) ons ons NEERING & INDIRECT: TEMS ihase U] ise D]	CONSTRUCTION ITEMS (A + B + C)	3 - Average 3 - Average 3 - Average SUBTOTAL (B) CBI SUBTOTAL (C) CI	W OF A W OF CBI W OF CBI W OF CBI W OF CBI W OF C CBI W OF C CI W OF C I W OF C I	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 2.0%	\$4,012 \$0 \$1,719 \$304,000 \$825,000 \$49,500 \$24,750 \$883 \$0 \$75,000 \$900,000 \$1,084,000 \$1,084,000
CAT 11 12 13 13 13 13 13 13	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TEMPORE TO TRAIN TRAIN TO TRAIN TRAIN TO TRAIN TRAI	TSM&O ions (MCR's) ons ons ons NEERING & INDIRECT STS: TEMS Phase U] ase D] sering (SUE) Budget Management & Operation (CONSTRUCTION ITEMS (A + B + C) S PROJECT CONSTRUCTION BUDG	3 - Average 3 - Average 3 - Average SUBTOTAL (B) CBI SUBTOTAL (C) CI	WOF A WOF CBI WOF CBI WOF CBI WOF CI WOF CI	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 11.0% 9.5% 20.4%	\$4,012 \$0 \$1,719 \$304,000 \$825,000 \$825,000 \$49,500 \$24,750 \$883 \$0 \$75,000 \$900,000 \$900,000 \$1,084,000 \$1,084,000 \$1,084,000
CAT 11 12 13 14 14 15 12 13 13 14 15 15 15 15 15 15 15 15 15 15 15 15 15	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & * ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phasing & Engineering [Phase National Phasing National Phasi	TSM&O ions (MCR's) ons ons ons NEERING & INDIRECT STS: TEMS Phase U] ase D] sering (SUE) Budget Management & Operation (CONSTRUCTION ITEMS (A + B + C) S PROJECT CONSTRUCTION BUDG	3 - Average 3 - Average 3 - Average SUBTOTAL (B) CBI SUBTOTAL (C) CI	WOF A WOF CBI WOF CBI WOF CBI WOF CBI WOF CI WOF	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 11.0% 9.5% 20.4%	\$4,012 \$0 \$1,719 \$304,000 \$825,000 \$825,000 \$49,500 \$24,750 \$883 \$0 \$75,000 \$900,000 \$900,000 \$1,084,000 \$1,084,000 \$1,084,000 \$118,260 \$7,391
CAT 11 12 13 14 14 15 12 13 13 14 15 15 15 15 15 15 15 15 15 15 15 15 15	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase R] Utilities + Railroad Work [Phase R] Utilities + Railroad Work [Phase R] Transportation Systems N Environmental (NEPA) [Phase R]	TSM&O ions (MCR's) ons ons ons NEERING & INDIRECT STS: TEMS Phase U] ase D] sering (SUE) Budget Management & Operation (CONSTRUCTION ITEMS (A + B + C) S PROJECT CONSTRUCTION BUDG	3 - Average 3 - Average 3 - Average SUBTOTAL (B) CBI SUBTOTAL (C) CI	W OF A W OF CBI W OF CBI W OF CBI W OF CI W OF CI	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	\$4,012 \$0 \$1,719 \$304,000 \$825,000 \$49,500 \$24,750 \$883 \$0 \$75,000 \$900,000 \$900,000 \$1,084,000 \$1,084,000 \$1,084,000
CAT 11 12 13 14 14 15 12 13 13 14 15 15 15 15 15 15 15 15 15 15 15 15 15	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase R] Utilities + Railroad Work [Phase R] Utilities + Railroad Work [Phase R] Transportation Systems N Environmental (NEPA) [Phase R]	TSM&O ions (MCR's) ons ons ons NEERING & INDIRECT STS: TEMS Phase U] ase D] sering (SUE) Budget Management & Operation (CONSTRUCTION ITEMS (A + B + C) S PROJECT CONSTRUCTION BUDG TSM&O) Budget	3 - Average 3 - Average 3 - Average SUBTOTAL (B) CBI SUBTOTAL (C) CI SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E)	W OF A W OF CBI W OF CBI W OF CBI W OF CI W OF CI	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 11.0% 9.5% 20.4%	\$4,012 \$0 \$1,719 \$304,000 \$825,000 \$825,000 \$49,500 \$24,750 \$883 \$0 \$75,000 \$900,000 \$900,000 \$1,084,000 \$1,084,000 \$1,084,000 \$118,260 \$7,391 \$0 \$0 \$0 \$145,000
CAT 11 12 13 14 14 15 12 13 13 14 15 15 15 15 15 15 15 15 15 15 15 15 15	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase R] Utilities + Railroad Work [Phase R] Utilities + Railroad Work [Phase R] Transportation Systems N Environmental (NEPA) [Phase R]	TSM&O ions (MCR's) ons ons ons NEERING & INDIRECT STS: TEMS Phase U] ase D] sering (SUE) Budget Management & Operation (CONSTRUCTION ITEMS (A + B + C) S PROJECT CONSTRUCTION BUDG	3 - Average 3 - Average 3 - Average SUBTOTAL (B) CBI SUBTOTAL (C) CI SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E)	W OF A W OF CBI W OF CBI W OF CBI W OF CI W OF CI	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 11.0% 9.5% 20.4%	\$4,012 \$0 \$1,719 \$304,000 \$825,000 \$825,000 \$49,500 \$24,750 \$883 \$0 \$75,000 \$900,000 \$900,000 \$1,084,000 \$1,084,000 \$1,084,000 \$1,084,000 \$1,084,000 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0
CAT 11 12 13 14 14 15 12 13 13 14 15 15 15 15 15 15 15 15 15 15 15 15 15	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase R] Utilities + Railroad Work [Phase R] Utilities + Railroad Work [Phase R] Transportation Systems N Environmental (NEPA) [Phase R]	TSM&O ions (MCR's) ons ons ons NEERING & INDIRECT STS: TEMS Phase U] ase D] sering (SUE) Budget Management & Operation (CONSTRUCTION ITEMS (A + B + C) S PROJECT CONSTRUCTION BUDG TSM&O) Budget	3 - Average 3 - Average 3 - Average SUBTOTAL (B) CBI SUBTOTAL (C) CI SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E)	W OF A W OF CBI W OF CBI W OF CBI W OF CI W OF CI	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 11.0% 9.5% 20.4%	\$4,012 \$0 \$1,719 \$304,000 \$825,000 \$825,000 \$49,500 \$24,750 \$883 \$0 \$75,000 \$900,000 \$900,000 \$1,084,000 \$1,084,000 \$1,084,000 \$118,260 \$7,391 \$0 \$0 \$0 \$145,000
CAT 11 12 13 14 14 15 12 13 13 14 15 15 15 15 15 15 15 15 15 15 15 15 15	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION COS PRECONSTRUCTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [P) Design & Engineering [Pha Subsurface Utility Engine Transportation Systems N Environmental (NEPA) [Phase M] Miscellaneous [Phase M]	TSM&O ions (MCR's) ons ons ons NEERING & INDIRECT STS: TEMS Phase U] ase D] sering (SUE) Budget Management & Operation (CONSTRUCTION ITEMS (A + B + C) S PROJECT CONSTRUCTION BUDG TSM&O) Budget	3 - Average 3 - Average 3 - Average SUBTOTAL (B) CBI SUBTOTAL (C) CI SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E)	W OF A W OF CBI W OF CBI W OF CBI W OF CI W OF CI	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 11.0% 9.5% 20.4%	\$4,012 \$0 \$1,719 \$304,000 \$825,000 \$825,000 \$49,500 \$24,750 \$883 \$0 \$75,000 \$900,000 \$900,000 \$1,084,000 \$1,084,000 \$1,084,000 \$118,260 \$7,391 \$0 \$0 \$0 \$145,000
CAT 11 12 13 14 15 15 15 15 15 15 15	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION COS PRECONSTRUCTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [P) Design & Engineering [Pha Subsurface Utility Engine Transportation Systems N Environmental (NEPA) [Phase M] Miscellaneous [Phase M]	TSM&O ions (MCR's) ons ns NEERING & INDIRECT: TEMS 'hase U] sering (SUE) Budget Management & Operation (ase E)	CONSTRUCTION ITEMS (A + B + C) S PROJECT CONSTRUCTION BUDG TSM&O) Budget PROJECT BASE COST ESTIMATE	3 - Average 3 - Average 3 - Average SUBTOTAL (B) CBI SUBTOTAL (C) CI SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E)	W OF A W OF CBI W OF CBI W OF CBI W OF CI W OF CI	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 11.0% 9.5% 20.4%	\$4,012 \$0 \$1,719 \$304,000 \$825,000 \$825,000 \$49,500 \$24,750 \$883 \$0 \$75,000 \$900,000 \$900,000 \$1,084,000 \$1,084,000 \$1,084,000 \$118,260 \$7,391 \$0 \$0 \$0 \$145,000
CAT 11 12 13 14 15 15 15 15 15 15 15	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TEMPORE TO THE MISCELLAND TO THE	TSM&O ions (MCR's) ons ns NEERING & INDIRECT: TEMS 'hase U] sering (SUE) Budget Management & Operation (ase E)	CONSTRUCTION ITEMS (A + B + C) S PROJECT CONSTRUCTION BUDG TSM&O) Budget PROJECT BASE COST ESTIMATE	3 - Average 3 - Average 3 - Average SUBTOTAL (B) CBI SUBTOTAL (C) CI SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E) (CONSTRUCTION	WOF A WOF CBI WOF CBI WOF CBI WOF CI WOF CI	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 0.0% 0.0% 0.0% 12.0% 0.0% 0.0% 0.0% 16.1% DN)	\$4,012 \$0 \$1,719 \$304,000 \$825,000 \$49,500 \$24,750 \$883 \$0 \$75,000 \$900,000 \$900,000 \$1,084,000 \$1,084,000 \$1,084,000 \$1,391 \$0 \$1,391 \$0 \$1,391 \$0 \$1,229,000
CAT 11 12 13 14 15 15 15 15 15 15 15	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TEMPORE TO THE MISCELLAND TO THE	TSM&O ions (MCR's) ons ns NEERING & INDIRECT: TEMS 'hase U] sering (SUE) Budget Management & Operation (ase E)	CONSTRUCTION ITEMS (A + B + C) S PROJECT CONSTRUCTION BUDG TSM&O) Budget PROJECT BASE COST ESTIMATE	3 - Average 3 - Average 3 - Average SUBTOTAL (B) CBI SUBTOTAL (C) CI SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E) (CONSTRUCTION	W OF A W OF CBI W OF CBI W OF CBI W OF CI	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 11.0% 9.5% 20.4% O.0% 0.0% 12.0% 0.0% 0.0% 16.1% DN)	\$4,012 \$0 \$1,719 \$304,000 \$825,000 \$825,000 \$49,500 \$24,750 \$883 \$0 \$75,000 \$900,000 \$900,000 \$1,084,000 \$1,084,000 \$1,084,000 \$1,084,000 \$1,18260 \$7,391 \$0 \$0 \$145,000
CAT	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TEMPORE TO THE MISCELLAND TO THE	TSM&O ions (MCR's) ons ns NEERING & INDIRECT: TEMS 'hase U] sering (SUE) Budget Management & Operation (ase E)	CONSTRUCTION ITEMS (A + B + C) S PROJECT CONSTRUCTION BUDG TSM&O) Budget PROJECT BASE COST ESTIMATE	3 - Average 3 - Average 3 - Average SUBTOTAL (B) CBI SUBTOTAL (C) CI SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E) (CONSTRUCTION	WOF A WOF CBI WOF CBI WOF CBI WOF CI WOF CI	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 11.0% 9.5% 20.4% O.0% 0.0% 12.0% 0.0% 0.0% 16.1% DN)	\$4,012 \$0 \$1,719 \$304,000 \$825,000 \$49,500 \$24,750 \$883 \$0 \$75,000 \$900,000 \$900,000 \$1,084,000 \$1,084,000 \$1,084,000 \$1,391 \$0 \$1,391 \$0 \$1,391 \$0 \$1,229,000
AT T PR	Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TEMPORE TO THE MISCELLAND TO THE	TSM&O ions (MCR's) ons ns NEERING & INDIRECT: TEMS 'hase U] sering (SUE) Budget Management & Operation (ase E)	CONSTRUCTION ITEMS (A + B + C) S PROJECT CONSTRUCTION BUDG TSM&O) Budget PROJECT BASE COST ESTIMATE	3 - Average 3 - Average 3 - Average SUBTOTAL (B) CBI SUBTOTAL (C) CI SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E) (CONSTRUCTION	WOF A WOF CBI WOF CBI WOF CBI WOF CI WOF CI	0.8% 0.0% 0.3% 58.4% 158.3% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 11.0% 9.5% 20.4% O.0% 0.0% 12.0% 0.0% 0.0% 16.1% DN)	\$4,012 \$0 \$1,719 \$304,000 \$825,000 \$49,500 \$24,750 \$883 \$0 \$75,000 \$900,000 \$900,000 \$1,084,000 \$1,084,000 \$1,084,000 \$1,391 \$0 \$1,391 \$0 \$1,391 \$0 \$1,229,000

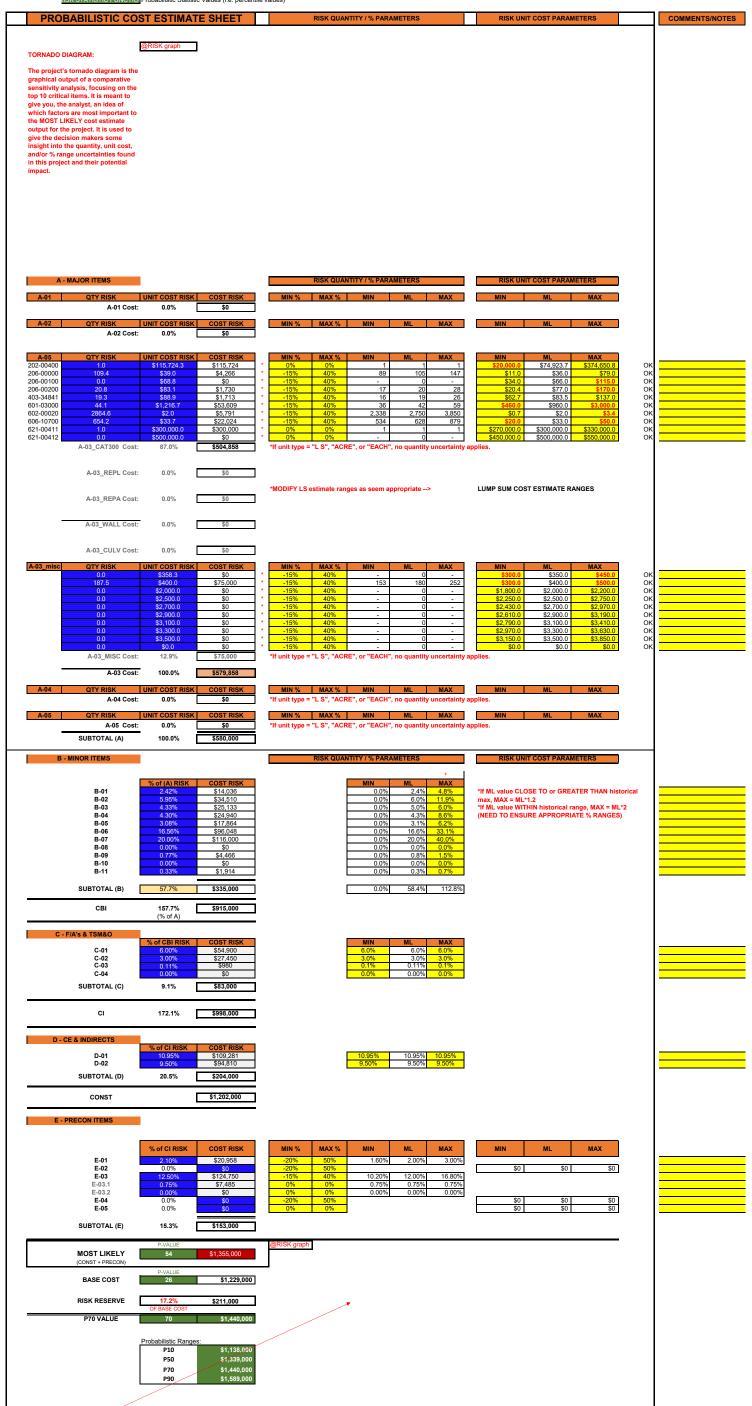
Model Version 3 Rev 04 Last Update: 22-Oct-18

Region Estimate

PROJECT P	PROFII F									
PROJECT	Project Name	R2 BUNDLE			1					
	Sub-Account Number	I-15-G (XXXX I-15-G								
	Project Work Type Estimator:	BRIDGE REPLACEME E.A.	Date: 11/6/2018							
PROJECT L	OCATION & CHARACTERIST		Bute. 1110/2010							
	Route: CDOT Region:	009B	Begin MP: 53.9 City: NONE	End MP: County:	71.4 Park Co		Length:	17.5		
	_		FIPS City: 00000	FIPS County:	093					
	Segment Mid-point Functional Classification: 4	RefPt 62.650	Latitude: 39.1880	Longitude:	-105.9730		G(Terrain:	OOGLE MAP LIN	K ■	
	AADT:	1,900	Truck ADT: 60	Tier Class:	Tier 4		Primary Surface:			
-	Design Maturity:	0 - Conceptual	NEPA Action:	Cat/Ex		NEPA Statu	is: In Progress			
	Project Delivery Method:		Construction Start (MMM-YY)		Construct	ion Duration (m				
A - MAJOR	CONSTRUCTION ITEMS				Γ	Mod	lel Estimate	Regio	on Estimate	
A-01	EARTHWORK			Unit	Qty	Unit Cost	Cost	Unit Cost	Cost	
					A-01 Cost:	0.0%	\$0	0.0%	\$0	
A-02 A-03	PAVEMENT & BASES MAJOR STRUCTURES (CA	AT 300 ITEMS)		Unit	Qty A-02 Cost:	Unit Cost 0.0%	Cost \$0	Unit Cost 0.0%	Cost \$0	
A-03_CAT30	00 PAYITEM GROUP CATEGO	ORY CA	T 300 STRUCTURAL PAYITEM	Unit	Qty	Unit Cost	Cost	Unit Cost	Cost	
A-03 CAT30	00 202 - Removal of Structures 00 206 - Structure Excavation & 00 206 - Structure Excavation &	& Backfill, Cofferdam an 206	2-00400 - Removal of Bridge 6-00000 - Structure Excavation 6-00100 - Structure Backfill (Class 1)	EACH CY CY	1 105 0	\$74,923.7 \$21.6 \$45.3	\$74,924 \$2,263 \$0	\$74,923.7 \$36.0 \$66.0	\$74,924 \$3,780 \$0	
A-03 CAT30 A-03 CAT30	200 206 - Structure Excavation & 403 - Hot Bituminous Paven	& Backfill, Cofferdam an 200 nent 403	6-00200 - Structure Backfill (Class 2) 3-34841 - Hot Mix Asphalt (Grading S.	CY X) (100) (PG TON	20 19	\$48.2 \$83.5	\$964 \$1,544	\$77.0 \$83.5	\$1,540 \$1,544	1
A-03_CAT30	00 601 - Structural Concrete 00 602 - Reinforcing Steel 00 606 - Guardrail and Bridge F	602	1-03000 - Concrete Class D 2-00020 - Reinforcing Steel (Epoxy Co 6-10700 - Bridge Rail Type 7	CY Dated) LB	42 2,750 628	\$960.0 \$1.0 \$95.5	\$40,608 \$2,767 \$59,961	\$960.0 \$2.0 \$33.0	\$40,608 \$5,500 \$20,724	
A-03_CAT30	00 606 - Guardraii and Bridge F 00 621 - Detour 00 621 - Detour	62	b-10700 - Bridge Rail Type 7 1-00411 - Structure Temporary Access 1-00412 - Structure Temporary Access	s Road (Loca LS	1 0	\$95.5 \$65,000.0 \$50,000.0	\$59,961 \$65,000 \$0	\$300,000.0 \$500,000.0	\$20,724 \$300,000 \$0	1
					03_CAT300 Cost:	77.5%	\$248,000	86.2%	\$449,000	
A-03_repl	BRIDGE REPLACEMENT				A-03_REPL Cost:	0.0%	\$0	0.0%	\$0	
A-03_repa	BRIDGE REPAIR				A-03_REPA Cost:	0.0%	\$0	0.0%	\$0	1
A-03_wall	WALLS									
A-03 culv	MAJOR CULVERTS				A-03_WALL Cost:	0.0% R2	\$0	0.0%	\$0	
					A-03_CULV Cost:	0.0%	\$0	0.0%	\$0	
A-03 misc		e Pipe		Unit LF	Qty 0	Unit Cost \$350.0	Cost \$0	Unit Cost \$350.0	Cost \$0	
A-03 misc A-03 misc A-03 misc	10x8 Foot Concrete Box Cu	lvert (Precast)		LF LF	180 0 0	\$400.0 \$2,000.0 \$2,500.0	\$72,000 \$0 \$0	\$400.0 \$2,000.0 \$2,500.0	\$72,000 \$0 \$0	
A-03_misc	14x6 Foot Concrete Box Cu 14x10 Foot Concrete Box Cu 14x10 Foot Concrete Box C	Ivert (Precast)		LF LF	0	\$2,700.0 \$2,700.0 \$2,900.0	\$0 \$0 \$0	\$2,700.0 \$2,700.0 \$2,900.0	\$0 \$0 \$0	
A-03 misc	20x6 Foot Concrete Box Cu	lvert (Precast)		LF LF	0	\$3,100.0 \$3,300.0	\$0 \$0	\$3,100.0 \$3,300.0	\$0 \$0	
A-03 misc A-03 misc		Ivert (Precast)		LF LF	0 0 A-03_MISC Cost:	\$3,500.0 \$0.0 22.5%	\$0 \$0 \$72,000	\$3,500.0 \$0.0 13.8%	\$0 \$0 \$72,000	
					A-03 Cost:	100.0%	\$320,000	100.0%	\$521,000	
A-04	TRAFFIC/ITS			Unit	Qty	Unit Cost	Cost	Unit Cost	Cost	
A-05	OTHER CATEGORY	Іот	HER MAJOR ITEMS	Unit	A-04 Cost:	0.0% Unit Cost	\$0 Cost	0.0% Unit Cost	\$0 Cost	
Α	MA IOD CONSTRUCTION	ITEMO			A-05 Cost:	0.0%	\$0	0.0%	\$0	42.49/
B - MINOR (MAJOR CONSTRUCTION I	ITEMS		SUBTOTAL (A)		0.0% 100.0%	\$320,000	0.0%	\$0 \$521,000	42.4% of Base Cos
B - MINOR (MAJOR CONSTRUCTION		Type: BRIDGE REPLACEN	IENT		100.0%		100.0%	\$521,000	
B-01	CONSTRUCTION ITEMS Removals / Resets		MIN % MEAN % 0.0% 2.4%	MAX % EFFORT 6.0% 3 - Average	(% of A) Adjusted—>	% of (A)	\$320,000 Cost \$7,744	100.0% % of (A) 2.42%	\$521,000 Cost \$12,608	
	CONSTRUCTION ITEMS		MIN % MEAN %	IENT EFFORT	(% of A) Adjusted—> Adjusted—>	100.0% % of (A)	\$320,000 Cost	100.0%	\$521,000 Cost \$12,608 \$31,000 \$28,050 \$22,403	
B-01 B-02 B-03 B-04 B-05 B-06	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization	Work	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 0.3% 0.0% 4.3% 0.0% 3.1% 0.0% 16.6%	IENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 5.5% 3 - Average 3.5 - Average 3.5 - Average	(% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—>	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 3.08% 16.56%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992	% of (A) 2.42% 5.95% 5.00% 4.30% 3.08% 16.56%	\$521,000 Cost \$12,608 \$31,000 \$28,050 \$22,403 \$16,047 \$86,278	
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Cont Lighting & Electrical	Work	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 3.3% 0.0% 4.3% 0.0% 3.1% 0.0% 16.6% 0.0% 20.0% 0.0% 0.0%	MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 23.5% 3 - Average 25.1% 3 - Average 25.1% 3 - Average 3.2% 5 - Average 3.2	Adjusted—>	% of (A) 2.42% 5.95% 1.64% 4.30% 3.08% 16.56% 20.00%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992 \$64,000 \$0	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 3.08% 16.56% 20.00%	\$521,000 Cost \$12,608 \$31,000 \$26,050 \$22,403 \$16,047 \$86,278 \$104,200 \$0	
B-01 B-02 B-03 B-04 B-05 B-06 B-07	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contr	Work rol / Detour ping	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 3.3% 0.0% 3.3% 0.0% 3.1% 0.0% 20.0%	IENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 5.5% 3 - Average 23.5% 3 - Average 24.5% 3 - Average 25.5% 3 - Average	(% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—>	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 3.08% 16.56% 20.00%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992 \$64,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 3.08% 20.00%	\$521,000 Cost \$12,608 \$31,000 \$28,050 \$12,647 \$86,278 \$10,47	
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contr Lighting & Electrical Permanent Signing & Strig Traffic Signalization & ITS	Work	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 3.3% 0.0% 3.1% 0.0% 3.1% 0.0% 16.6% 0.0% 20.0% 0.0% 0.0%	IENT MAX % EFFORT 6.0% 3-Average 13.4% 3-Average 2.3% 5-Extensive 14.9% 3-Average 23.5% 3-Average 23.5% 3-Average 3.2% 3-Average 3.2% 3-Average 1.8% 3-Average 3.2% 3-Average 3.2% 3-Average 3.3 3-Average 3.3 3-Average 3.4% 3-Average	Adjusted—>	% of (A) 2.42% 5.95% 1.64% 4.30% 3.08% 16.56% 0.00% 0.07% 0.00%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992 \$64,000 \$0 \$2,464 \$0	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 16.56% 0.00% 0.00% 0.77% 0.00%	\$521,000 Cost \$12,608 \$31,000 \$26,050 \$22,403 \$16,047 \$88,278 \$104,200 \$0 \$4,012 \$0 \$4,012 \$0	
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contr Lighting & Electrical Permanent Signing & Strig Traffic Signalization & ITS Miscellaneous	Work rol / Detour ping	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 3.3% 0.0% 3.1% 0.0% 3.1% 0.0% 16.6% 0.0% 20.0% 0.0% 0.0%	IENT MAX %	Adjusted—> (% of A)	% of (A) 2.42% 5.95% 1.64% 4.30% 3.08% 20.00% 0.00% 0.00% 0.33%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992 \$64,000 \$0 \$0 \$2,464 \$0 \$1,056	100.0% % of (A) 2.42% 5.95% 6.00% 4.30% 3.08% 20.00% 0.00% 0.00% 0.33%	\$521,000 Cost \$12,608 \$31,000 \$26,050 \$22,403 \$16,047 \$88,278 \$104,200 \$0 \$4,012 \$0 \$1,719	of Base Cost
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-10 B-11 B	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Conte Lighting & Electrical Permanent Signing & Strig Traffic Signalization & ITS Miscellaneous	Work rol / Detour ping	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 3.3% 0.0% 3.1% 0.0% 3.1% 0.0% 16.6% 0.0% 20.0% 0.0% 0.0%	IENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 5.5% 3 - Average 25.5% 3 - Average 26.1% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 3.4% 3 - Average 1.2% SUBTOTAL (B)	Adjusted—> (% of A)	% of (A) 2.42% 5.95% 1.64% 4.30% 3.08% 6.56% 20.00% 0.77% 0.77% 5.50%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992 \$64,000 \$0 \$2,464 \$0 \$1,056	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 16.56% 20.00% 0.00% 0.77% 0.00% 58.41%	\$521,000 Cost \$12,608 \$31,000 \$26,050 \$22,403 \$16,047 \$86,278 \$104,200 \$0 \$4,012 \$0 \$1,719 \$304,000	of Base Cost
B-01 B-02 B-03 B-04 B-05 B-05 B-07 B-08 B-09 B-10 B-11 B	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Cont Lighting & Electrical Permanent Signing & Strig Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION I CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General	Work rol / Detour ping TEMS	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 3.3% 0.0% 3.1% 0.0% 3.1% 0.0% 16.6% 0.0% 20.0% 0.0% 0.0%	IENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 5.5% 3 - Average 25.5% 3 - Average 26.1% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 3.4% 3 - Average 1.2% SUBTOTAL (B)	Adjusted—> (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 3.08% 6.56% 20.00% 0.77% 0.00% 0.33% 55.05% 155.05%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992 \$64,000 \$0 \$1,056 \$1,056 \$176,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 3.08% 20.00% 0.00% 0.33% 58.41% 158.41%	\$521,000 Cost \$12,608 \$31,000 \$28,050 \$22,403 \$16,047 \$86,278 \$104,200 \$0 \$1,719 \$304,000 \$825,000	of Base Cost
B-01 B-02 B-03 B-04 B-05 B-07 B-09 B-10 B-11 B CBI	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Cont Lighting & Electrical Permanent Signing & Strig Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION IT CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Froject Communicati	Work rol / Detour ping TEMS S	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 0.3% 0.0% 4.3% 0.0% 3.1% 0.0% 16.6% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	IENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 5.5% 3 - Average 25.5% 3 - Average 26.1% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 3.4% 3 - Average 1.2% SUBTOTAL (B)	Adjusted—> (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 3.08% 3.08% 20.00% 0.77% 0.00% 0.33% 55.05% 155.05%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992 \$64,000 \$0 \$1,056 \$176,000 Cost \$29,760 \$14,880 \$531	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 3.08% 16.56% 20.00% 0.77% 0.00% 5.33% 58.41% 158.41% % of CBI 6.00% 3.00% 0.11%	\$521,000 Cost \$12,608 \$31,000 \$28,050 \$22,403 \$16,047 \$88,278 \$104,200 \$0 \$1,719 \$304,000 Cost \$49,500 \$24,950 \$24,950 \$883	of Base Cost
B-01 B-02 B-03 B-045 B-05 B-07 B-08 B-09 B-10 B-111 B	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Cont Lighting & Electrical Permanent Signing & Strip Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION I' CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revis	Work rol / Detour ping TEMS S	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 0.3% 0.0% 4.3% 0.0% 3.1% 0.0% 16.6% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	IENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 26.1% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 3 - Average SUBTOTAL (8)	Adjusted—> (% of A) (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 20.00% 0.77% 0.00% 0.33% 55.05% 155.05%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992 \$64,000 \$0 \$1,056 \$176,000 \$496,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 20.00% 0.77% 0.00% 0.33% 58.41% 158.41%	\$521,000 Cost \$12,608 \$31,000 \$26,050 \$22,403 \$16,047 \$86,278 \$104,200 \$0 \$4,012 \$0 \$1,719 \$304,000 \$2304,000 \$24,012 \$250 \$30 \$31,719	of Base Cos
B-01 B-02 B-03 B-04 B-05 B-05 B-07 B-09 B-10 B-11 B CBI	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Cont Lighting & Electrical Permanent Signing & Strip Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION I CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revis F/A - Project Communicati TSM&O Traffic & Operatio	Work rol / Detour ping TEMS S	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 0.3% 0.0% 4.3% 0.0% 3.1% 0.0% 16.6% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	NAX % EFFORT S. Property Property Property S. Property P	(% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 3.08% 16.56% 20.00% 0.77% 0.00% 55.05% 155.05% % of CBI 6.00% 3.00% 0.11% 0.00%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992 \$64,000 \$0 \$1,056 \$1,056 \$146,000 \$496,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 3.08% 20.00% 0.77% 0.00% 58.41% 158.41% % of CBI 6.00% 3.00% 0.11% 0.00%	\$521,000 Cost \$12,608 \$31,000 \$28,050 \$22,403 \$16,047 \$86,278 \$104,200 \$0 \$4,012 \$0 \$1,719 \$304,000 Cost \$49,500 \$24,750 \$24,750 \$3883 \$90	of Base Cos
B-01 B-02 B-03 B-04 B-05 B-05 B-07 B-08 B-10 B-11 B CBI C-FORCE / C-02 C-03 C-04 C	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Cont Lighting & Electrical Permanent Signing & Strip Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION I CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revis F/A - Project Communicat TSM&O Traffic & Operatio F/A's & TSM&O CONSTRUCTION ITEMS	Work rol / Detour ping TEMS S Silons (MCR's) lons (for Reconstruction/R)	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 0.3% 0.0% 4.3% 0.0% 3.1% 0.0% 16.6% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	NAX % EFFORT S. S. S. S. S. S. S. S	(% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 3.08% 20.00% 0.77% 0.00% 5.5.05% 155.05% % of CBI 6.00% 3.00% 0.11% 0.00% 9.11%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992 \$64,000 \$0 \$1,056 \$1,056 \$11,056 \$496,000 Cost \$29,760 \$14,880 \$531 \$0 \$45,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 3.08% 16.56% 20.00% 0.77% 0.00% 58.41% 158.41% % of CBI 6.00% 3.00% 0.11% 0.00% 9.11%	\$521,000 Cost \$12,608 \$31,000 \$28,050 \$22,403 \$16,047 \$88,278 \$104,200 \$0 \$4,012 \$0 \$1,719 \$304,000 Cost \$49,500 \$24,750 \$883 \$90 \$75,000	67.1% of Base Cos
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-10 B-11 B CBI C-FORCE C-01 C-02 C-03 C-04 C	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Conte Lighting & Electrical Permanent Signing & Strig Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION IT CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revis F/A - Project Communicati TSM&O Traffic & Operatio F/A's & TSM&O CONSTRUCTION ITEMS	TEMS S Sions (MCR's) Ions (for Reconstruction/R	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 0.3% 0.0% 4.3% 0.0% 3.1% 0.0% 16.6% 0.0% 0.0% 0.0% 10.8% 0.0% 0.0% 0.0% 10.3% 0.0% 10.3% 0.0% 10.8% 0.0% 10.9% 0.0% 1	MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 25.5% 3 - Average 25.5% 3 - Average 25.5% 3 - Average 25.4% 3 - Average 26.1% 3 - Average 1.8% 3 - Average 1.2% 3 - Average 3	(% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 3.08% 6.55% 20.00% 0.77% 0.00% 0.33% 55.05% 155.05% % of CBI 6.00% 3.00% 9.11% 169.06%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992 \$64,000 \$0 \$1,056 \$1,056 \$1,056 \$148,800 \$531 \$0 \$445,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 16.55% 20.00% 0.77% 0.00% 58.41% 158.41% % of CBI 6.00% 3.00% 0.11% 0.00% 9.11%	\$521,000 Cost \$12,608 \$31,000 \$26,050 \$22,403 \$16,047 \$86,278 \$104,200 \$0 \$0 \$4,012 \$0 \$1,719 \$304,000 Cost \$49,500 \$24,750 \$883 \$0 \$75,000	67.1% of Base Cos
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-01 C-02 C-03 C-04 C CI D-CONSTE	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Cont Lighting & Electrical Permanent Signing & Strip Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION I CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revis F/A - Project Communicat TSM&O Traffic & Operatio F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & IN Construction Engineering Construction Engineering Construction Indirects	Work rol / Detour ping TEMS S sions (MCR's) ions for Reconstruction/R ADIRECTS	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 0.3% 0.0% 4.3% 0.0% 3.1% 0.0% 16.6% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 1.8% SUBTOTAL (A + B) SUBTOTAL (A + B)	Adjusted—> (% of A) (% of A) (% of A) (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 20.00% 0.77% 0.00% 0.33% 55.05% 155.05% % of CBI 6.00% 3.00% 0.11% 9.11%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992 \$64,000 \$0 \$1,056 \$176,000 \$496,000 Cost \$29,760 \$14,880 \$531 \$0 \$445,000 \$541,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 20.00% 0.77% 0.00% 0.33% 58.41% 158.41% ** of CBI 6.00% 3.00% 0.11% 9.11% 172.74%	\$521,000 Cost \$12,608 \$31,000 \$28,050 \$22,403 \$16,047 \$86,278 \$104,200 \$0 \$4,012 \$0 \$1,719 \$304,000 \$25,000 Cost \$49,500 \$24,750 \$3883 \$0 \$75,000	67.1% of Base Cos
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-01 C-02 C-03 C-04 C C D-CONSTF	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Conte Lighting & Electrical Permanent Signing & Strig Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION IT CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revis F/A - Project Communicati TSM&O Traffic & Operatio F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & IN Construction Engineering Construction Engineering Construction Indirects CONSTRUCTION ENGINEE	Work rol / Detour pling TEMS S sions (MCR's) lons (for Reconstruction/R IDIRECTS	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 0.3% 0.0% 4.3% 0.0% 3.1% 0.0% 16.6% 0.0% 0.0% 0.0% 10.8% 0.0% 0.0% 0.0% 10.3% 0.0% 10.3% 0.0% 10.5% 0.0% 1	MAX % EFFORT 5.0% 3 - Average 13.4% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 3.2% 3 - Average 3.2% 3 - Average 1.2% 3 - Average 3.4% 3 - Average 1.2% 3 - Average 1.2% SUBTOTAL (A+B) X 0.11% SUBTOTAL (A+B) SUBTOTAL (A+B+C)	(% of A) Adjusted—> (% of A) (% of A) (% of A) (% of CBI)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 2.000% 0.00% 0.77% 0.00% 0.33% 55.05% 155.05% % of CBI 6.00% 3.00% 0.11% 169.06%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992 \$64,000 \$0 \$1,056 \$1,056 \$1,056 \$1,050 \$1,480 \$531 \$50 \$44,000 Cost \$29,760 \$14,880 \$531 \$50 \$45,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 20.00% 0.00% 0.77% 0.00% 58.41% 158.41% % of CBI 6.00% 3.00% 0.11% 172.74%	\$521,000 Cost \$12,608 \$31,000 \$26,050 \$22,403 \$16,047 \$86,278 \$104,200 \$0 \$0 \$4,012 \$0 \$1,719 \$304,000 Cost \$49,500 \$24,750 \$883 \$0 \$75,000 \$390,000	67.1% of Base Cos
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-01 C-02 C-03 C-04 C CI D-CONSTF	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contr Lighting & Electrical Permanent Signing & Stry Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revis F/A - Project Communicati TSM&O Traffic & Operatio F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & IN Construction Engineering Construction Engineering Construction Indirects CONSTRUCTION ENGINEI	Work rol / Detour pling TEMS S sions (MCR's) lons (for Reconstruction/R IDIRECTS	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 0.3% 0.0% 4.3% 0.0% 3.1% 0.0% 16.6% 0.0% 0.0% 0.0% 10.8% 0.0% 0.0% 0.0% 10.3% 0.0% 10.3% 0.0% 10.5% 0.0% 1	MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 1.8% SUBTOTAL (A + B) SUBTOTAL (A + B)	(% of A) Adjusted—> (% of A) (% of A) (% of A) (% of CBI)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 20.00% 0.77% 0.00% 0.33% 55.05% 155.05% % of CBI 6.00% 3.00% 0.11% 9.11%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992 \$64,000 \$0 \$1,056 \$176,000 \$496,000 Cost \$29,760 \$14,880 \$531 \$0 \$445,000 \$541,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 20.00% 0.77% 0.00% 0.33% 58.41% 158.41% ** of CBI 6.00% 3.00% 0.11% 9.11% 172.74%	\$521,000 Cost \$12,608 \$31,000 \$28,050 \$22,403 \$16,047 \$86,278 \$104,200 \$0 \$4,012 \$0 \$1,719 \$304,000 \$25,000 Cost \$49,500 \$24,750 \$3883 \$0 \$75,000	of Base Cost 67.1% of Base Cost
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-01 C-02 C-03 C-04 C CI D-CONSTF	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Conte Lighting & Electrical Permanent Signing & Strig Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION IT CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revis F/A - Project Communicati TSM&O Traffic & Operatio F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & IN Construction Engineering Construction Engineering Construction Indirects CONSTRUCTION ENGINEE	Work rol / Detour pling TEMS S sions (MCR's) lons (for Reconstruction/R IDIRECTS	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 0.3% 0.0% 4.3% 0.0% 3.1% 0.0% 16.6% 0.0% 0.0% 0.0% 10.8% 0.0% 0.0% 0.0% 10.3% 0.0% 10.3% 0.0% 10.5% 0.0% 1	MAX % EFFORT 5.0% 3 - Average 13.4% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 3.2% 3 - Average 3.2% 3 - Average 1.2% 3 - Average 3.4% 3 - Average 1.2% 3 - Average 1.2% SUBTOTAL (A+B) X 0.11% SUBTOTAL (A+B) SUBTOTAL (A+B+C)	(% of A) Adjusted—> (% of A) (% of A) (% of A) (% of CBI)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 20.00% 0.77% 0.00% 0.33% 55.05% 155.05% % of CBI 6.00% 3.00% 0.11% 9.11%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992 \$64,000 \$0 \$1,056 \$176,000 Cost \$29,760 \$14,800 \$53,464 \$0 \$552,992 \$64,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 20.00% 0.77% 0.00% 0.33% 58.41% 158.41% ** of CBI 6.00% 3.00% 0.11% 9.11% 172.74%	\$521,000 Cost \$12,608 \$31,000 \$26,055 \$22,403 \$10,200 \$0 \$4,012 \$0 \$1,719 \$304,000 Cost \$49,500 \$76,000 \$900,000 \$11,084,000 \$11,084,000	67.1% of Base Cos
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-01 C-02 C-03 C-04 C CI D-CONSTF D-01 D-02 D	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Cont Lighting & Electrical Permanent Signing & Strip Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION ITEMS ACCOUNTS & TSM&O F/A - General F/A - Hinor Contract Revis F/A - Project Communicati TSM&O Traffic & Operatio F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & IN Construction Engineering Construction Indirects CONSTRUCTION ENGINEERING PROJECT CONSTRUCTION NSTRUCTION ENGINEERING PROJECT CONSTRUCTION STRUCTION ENGINEERING NSTRUCTION ENGINEERING RUCTION ENGINEERING RUCTION	Work rol / Detour pling TEMS S sions (MCR's) lons (for Reconstruction/R IDIRECTS	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 0.3% 0.0% 4.3% 0.0% 3.1% 0.0% 16.6% 0.0% 0.0% 0.0% 10.8% 0.0% 0.0% 0.0% 10.3% 0.0% 10.3% 0.0% 10.5% 0.0% 1	MAX % EFFORT 6.0% 3-Average 13.4% 3-Average 2.3% 5-Extensive 14.9% 3-Average 23.5% 3-Average 23.5% 3-Average 23.5% 3-Average 23.1% 3-Average 1.8% 3-Average 1.8% 3-Average SUBTOTAL (B) SUBTOTAL (A + B) X 0.11% SUBTOTAL (C) SUBTOTAL (A + B + C + D) AVG % EFFORT	(% of A) Adjusted—> (% of A) (% of A) (% of A) (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 3.08% 10.55% 20.00% 0.77% 0.00% 0.33% 55.05% 155.05% % of CBI 6.00% 3.00% 0.11% 0.00% 9.11% 169.06%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992 \$64,000 \$0 \$1,056 \$176,000 \$496,000 Cost \$29,760 \$14,880 \$531 \$0 \$445,000 \$541,056 \$141,000 \$541,056 Cost \$176,000 \$17	100.0% % of (A) 2.42% 5.95% 4.30% 4.30% 16.56% 20.00% 0.77% 0.00% 58.41% 158.41% 158.41% 172.74% 172.74%	\$521,000 Cost \$12,608 \$31,000 \$26,050 \$22,403 \$16,047 \$86,278 \$104,200 \$0 \$4,012 \$0 \$1,719 \$304,000 \$24,750 \$883 \$0 \$75,000 \$1,084,000 \$1,084,000 \$1,084,000 \$1,084,000	67.1% of Base Cos
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-07 B-08 B-10 B-11 B CBI C-FORCE / C-02 C-03 C-04 C CI D-CONSTF D-01 D-02 D E-PRECON	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contr Lighting & Electrical Permanent Signing & Stry Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revis F/A - Project Communicati TSM&O Traffic & Operatio F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & IN Construction Engineering Construction Indirects CONSTRUCTION ENGINEERING PROJECT CONSTRUCTION INSTRUCTION ITEMS	Work rol / Detour ping TEMS S sions (MCR's) ions (for Reconstruction/R IDIRECTS R BUDGET	MIN % MEAN % 0.0%	MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 25.5% 3 - Average 25.5% 3 - Average 26.1% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 5 - Average 1.2% 1 - Average SUBTOTAL (A + B) X 0.11% SUBTOTAL (C) SUBTOTAL (A + B + C + D) TRUCTION (A + B + C + D) AVG % EFFORT 5.2% 3 - Average	(% of A) Adjusted—> (% of A) (% of A) (% of A) (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 2.00% 0.00% 0.33% 55.05% 155.05% % of CBI 6.00% 3.00% 9.11% 169.06% % of CI 10.95% 9.50% 20.45%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992 \$64,000 \$0 \$1,056 \$176,000 \$496,000 \$496,000 \$496,000 Cost \$2,9760 \$14,880 \$531 \$0 \$45,000 \$541,000 \$541,000 \$541,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 16.56% 0.00% 0.77% 0.00% 0.33% 58.41% 158.41% % of CBI 6.00% 3.00% 0.11% 172.74% 172.74% Indirect \$\frac{1}{2}\$ w of CI 10.95% 9.50% 20.45%	\$521,000 Cost \$12,608 \$31,000 \$28,050 \$22,403 \$16,047 \$86,278 \$104,200 \$9 \$4,012 \$0 \$1,719 \$304,000 \$825,000 Cost \$49,500 \$24,750 \$883 \$0 \$75,000 \$1,084,000 \$1,084,000 \$1,084,000	67.1% of Base Cos
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-01 C-02 C-03 C-04 C CI D-CONSTF D-01 D-02 D E-PRECOM	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Cont Lighting & Electrical Permanent Signing & Strip Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION I CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revis F/A - Project Communicat TSM&O Traffic & Operatio F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & IN Construction Engineering Construction Indirects CONSTRUCTION ENGINEERING PROJECT CONSTRUCTIO NSTRUCTION ITEMS Right-of-Way [Phase R] Utilities + Railroad Work [I Design & Engineering [Ph Subsurface Utility En Transportation Syste Transportation Syste	Work rol / Detour rol / Detour ping TEMS S Sions (MCR's) Ions Ions (for Reconstruction/R) ADIRECTS RERING & INDIRECTS N BUDGET Phase U] ase D) gineering (SUE) Budget ms Management & Oper	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0%	MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 25.5% 3 - Average 25.5% 3 - Average 26.1% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 5 - Average 1.2% 1 - Average SUBTOTAL (A + B) X 0.11% SUBTOTAL (C) SUBTOTAL (A + B + C + D) TRUCTION (A + B + C + D) AVG % EFFORT 5.2% 3 - Average	(% of A) Adjusted—> (% of A) (% of A) (% of A) (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 3.08% 10.55% 20.00% 0.77% 0.00% 0.33% 55.05% 155.05% % of CBI 6.00% 3.00% 9.11% 169.06% % of CI 10.95% 9.50% 20.45%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992 \$64,000 \$0 \$1,056 \$176,000 \$496,000 Cost \$29,760 \$14,880 \$531 \$0 \$445,000 \$541,000 \$541,000 \$541,000 \$541,000 \$541,000 \$551,056 \$176,000 \$176,000 \$176,000 \$176,000 \$176,000 \$176,000 \$176,000 \$176,000 \$176,000 \$176,000 \$177,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 20.00% 0.77% 0.00% 0.33% 58.41% 158.41% **of CBI 6.00% 3.00% 0.11% 172.74% 172.74% **of CI 10.95% 9.50% 20.45% Indirect 9 % of CI 2.00% 0.00% 12.00% 12.00% 12.00% 175% 0.00%	\$521,000 Cost \$12,608 \$31,000 \$28,050 \$22,403 \$16,047 \$86,278 \$104,200 \$0 \$4,012 \$0 \$1,719 \$304,000 \$25,000	67.1% of Base Cos
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-01 C-02 C-03 C-04 C C D-CONSTE D-01 D-02 D E-PRECON	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contr Lighting & Electrical Permanent Signing & Strig Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION I CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revis F/A - Project Communicati TSM&O Traffic & Operatio F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & IN Construction Engineering Construction Engineering Construction Indirects CONSTRUCTION ENGINEERING PROJECT CONSTRUCTION INSTRUCTION ITEMS Right-of-Way [Phase R] Utilities + Railroad Work [I Design & Engineering [Ph Subsurface Utility Er	Work rol / Detour rol / Detour ping TEMS S Sions (MCR's) Ions Ions (for Reconstruction/R) ADIRECTS RERING & INDIRECTS N BUDGET Phase U] ase D) gineering (SUE) Budget ms Management & Oper	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0%	MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 25.5% 3 - Average 25.5% 3 - Average 26.1% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 5 - Average 1.2% 1 - Average SUBTOTAL (A + B) X 0.11% SUBTOTAL (C) SUBTOTAL (A + B + C + D) TRUCTION (A + B + C + D) AVG % EFFORT 5.2% 3 - Average	(% of A) Adjusted—> (% of A) (% of A) (% of A) (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 20.00% 0.00% 0.77% 0.00% 0.33% 55.05% 155.05% % of CBI 6.00% 3.00% 0.11% 0.00% 9.11% 169.06% % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 12.00%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992 \$64,000 \$0 \$1,056 \$176,000 \$496,000 Cost \$2,464 \$0 \$0 \$1,056 \$176,000 \$496,000 Cost \$29,760 \$14,880 \$531 \$0 \$45,000 \$45,000 \$45,000 \$45,000 Cost \$59,240 \$51,395 \$111,000 \$652,000 \$652,000 \$71,087 \$30,568 \$0 \$71,087	100.0% % of (A) 2.42% 5.95% 4.30% 4.30% 16.56% 0.00% 0.33% 58.41% 158.41% * of CBI 6.00% 3.00% 9.11% 172.74% * of CI 19.95% 9.50% 20.45% Indirect 9 % of CI 2.00% 0.00% 12.00%	\$521,000 Cost \$12,608 \$31,000 \$28,050 \$22,403 \$16,047 \$88,278 \$104,200 \$0 \$4,012 \$0 \$1,719 \$304,000 Cost \$49,500 \$24,750 \$883 \$0 \$75,000 \$184,000 \$1,084,000 \$1,084,000 \$1,084,000 \$1,084,000 \$1,084,000	67.1% of Base Cos
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-01 C-02 C-03 C-04 C CI D-CONSTF D-01 D-02 D E-PRECON	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Conte Lighting & Electrical Permanent Signing & Strig Traffic Signalization & ITS Miscellanaeous MINOR CONSTRUCTION IT CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - General F/A - Minor Contract Revis F/A - Project Communicat TSM&O Traffic & Operatio F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & IN Construction Engineering Construction Indirects CONSTRUCTION ITEMS RIGHT-Of-Way [Phase R] Utilities + Railroad Work [I) Design & Engineering [Ph Subsurface Utility En Transportation Syste Environmental (NEPA) [Ph	Work rol / Detour poing TEMS S Sions (MCR's) IONS ION	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0%	MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 25.5% 3 - Average 25.5% 3 - Average 26.1% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 5 - Average 1.2% 1 - Average SUBTOTAL (A + B) X 0.11% SUBTOTAL (C) SUBTOTAL (A + B + C + D) TRUCTION (A + B + C + D) AVG % EFFORT 5.2% 3 - Average	(% of A) Adjusted—> (% of A) (% of A) (% of A) (% of CBI)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 3.08% 10.56% 20.00% 0.77% 0.77% 155.05% **of CBI 6.00% 3.00% 0.11% 0.00% 9.11% 169.06% % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 0.75% 0.00% 0.75% 0.00%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992 \$64,000 \$0 \$2,464 \$0 \$1,056 \$176,000 \$496,000 Cost \$29,760 \$14,880 \$5331 \$50 \$45,000 \$541,000 \$559,240 \$51,395 \$111,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 2.00% 0.00% 0.77% 0.00% 0.33% 58.41% 158.41% **of CBI 6.00% 3.00% 9.11% 172.74% **of CI 10.95% 9.50% 20.45% Indirect 9 **of CI 2.00% 0.00% 0.00% 12.00% 0.00% 12.00% 0.00% 12.00% 0.00% 0.00%	\$521,000 Cost \$12,608 \$31,000 \$28,050 \$22,403 \$16,047 \$88,278 \$40,120 \$0 \$1,719 \$304,000 Cost \$49,500 \$24,750 \$24,750 \$24,750 \$383 \$0 \$75,000 \$1,044,000 \$1,084,000 \$1,084,000 \$1,084,000 \$1,084,000	67.1% of Base Cos 73.2% of Base Cos
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-01 C-03 C-04 C CI D-CONSTE D-01 D-02 D E-01 E-02 E-03 E-03.2 E-03.2 E-04 E-05	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Cont Lighting & Electrical Permanent Signing & Strip Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION I CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revis F/A - Project Communicat TSM&O Traffic & Operatio F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & IN Construction Engineering Construction Indirects CONSTRUCTION ENGINEERING PROJECT CONSTRUCTIO NSTRUCTION ITEMS RIght-of-Way [Phase R] Utilities + Railroad Work [I Design & Engineering [Ph Subsurface Utility En Transportation Syste Environmental (NEPA) [Ph Miscellaneous [Phase M] PRECONSTRUCTION ITEMS	Work rol / Detour ping TEMS S Sions (MCR's) IONS IONS	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 0.3% 0.0% 3.1% 0.0% 16.6% 0.0% 10.0% 0.0% 10.0% 0.0% 10.0% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0%	MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 23.5% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.2% 3 - Average 1.2% 3 - Average 1.2% 5 - Average 1.2% 5 - Average 5 - SUBTOTAL (A + B) SUBTOTAL (A + B) SUBTOTAL (A + B + C) SUBTOTAL (B + C + D) SUBTOTAL (C)	(% of A) Adjusted—> (% of A)	% of (A) 2.42% 5.95% 1.64% 4.30% 2.00% 0.00% 0.77% 0.00% 0.33% 55.05% 155.05% % of CBI 6.00% 3.00% 0.11% 0.00% 9.11% 169.06% % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 0.75% 0.00% 0.00% 0.00% 0.00%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992 \$64,000 \$0 \$1,056 \$176,000 \$496,000 Cost \$29,760 \$14,880 \$531 \$0 \$445,000 \$541,000 \$541,000 \$541,000 \$541,000 \$541,000 \$541,000 \$551,395 \$111,000 \$652,000 \$106,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 16.56% 20.00% 0.77% 0.00% 58.41% 158.41% **of CBI 6.00% 3.00% 0.11% 172.74% 172.74% **of CI 10.95% 9.50% 20.45% Indirect 9 w of CI 2.00% 0.00% 0.75% 0.00% 0.00% 0.00% 0.00%	\$521,000 Cost \$12,608 \$31,000 \$28,050 \$22,403 \$16,047 \$86,278 \$104,200 \$0 \$1,719 \$304,000 Cost \$49,500 \$24,750 \$3883 \$0 \$75,000 \$10,800 \$1	67.1% of Base Cos 73.2% of Base Cos 11.8% of Base Cos
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-01 C-03 C-04 C CI D-CONSTE D-01 D-02 D E-01 E-02 E-03 E-03.2 E-03.2 E-04 E-05	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Cont Lighting & Electrical Permanent Signing & Strip Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION I CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revis F/A - Project Communicat TSM&O Traffic & Operatio F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & IN Construction Engineering Construction Indirects CONSTRUCTION ENGINEERING NSTRUCTION ENGINEERING VICTION ENGINEERING & IN Construction Indirects CONSTRUCTION ENGINEERING VICTION ENGINEERING WORK IT Design & Engineering Ph Subsurface Utility En Transportation System Environmental (NEPA) [Ph Miscellaneous [Phase M]	Work rol / Detour ping TEMS S Sions (MCR's) IONS IONS	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 0.3% 0.0% 3.1% 0.0% 16.6% 0.0% 10.0% 0.0% 10.0% 0.0% 10.0% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0%	MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 23.5% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.2% 3 - Average 1.2% 3 - Average 1.2% 5 - Average 1.2% 5 - Average 5 - SUBTOTAL (A + B) SUBTOTAL (A + B) SUBTOTAL (A + B + C) SUBTOTAL (A + B + C) SUBTOTAL (B + C + D) SUBTOTAL (B + C + D) SUBTOTAL (B + C + D) AVG % EFFORT 5.2% 3 - Average D - Conceptual	(% of A) Adjusted—> (% of A)	% of (A) 2.42% 5.95% 1.64% 4.30% 2.00% 0.00% 0.77% 0.00% 0.33% 55.05% 155.05% % of CBI 6.00% 3.00% 0.11% 0.00% 9.11% 169.06% % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 0.75% 0.00% 0.00% 0.00% 0.00%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992 \$64,000 \$0 \$1,056 \$176,000 \$496,000 Cost \$29,760 \$14,880 \$531 \$0 \$445,000 \$541,000 \$541,000 \$541,000 \$541,000 \$541,000 \$541,000 \$541,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 16.56% 20.00% 0.77% 0.00% 58.41% 158.41% **of CBI 6.00% 3.00% 0.11% 172.74% 172.74% **of CI 10.95% 9.50% 20.45% Indirect 9 w of CI 2.00% 0.00% 0.75% 0.00% 0.00% 0.00% 0.00%	\$521,000 Cost \$12,608 \$31,000 \$26,050 \$22,403 \$16,047 \$86,278 \$104,200 \$0 \$1,719 \$304,012 \$0 \$31,719 \$304,000 \$825,000 Cost \$49,500 \$75,000 \$900,000 Cost \$98,550 \$883 \$0 \$75,000 \$1,844,000 \$1,084,000	67.1% of Base Cos 73.2% of Base Cos 11.8% of Base Cos
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-01 C-03 C-04 C CI D-CONSTE D-01 D-02 D E-01 E-02 E-03 E-03.2 E-03.2 E-04 E-05	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contr Lighting & Electrical Permanent Signing & Stry Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revis F/A - Project Communicat TSM&O Traffic & Operatio F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & IN Construction Engineering Construction Indirects CONSTRUCTION ITEMS RUCTION ENGINEERING & IN CONSTRUCTION ENGINEERING PROJECT CONSTRUCTION INSTRUCTION ITEMS Right-of-Way [Phase R] Utilities + Railroad Work [I Design & Engineering [Ph Subsurface Utility En Transportation Syste Environmental (NEPA) [Ph Miscellaneous [Phase M] PRECONSTRUCTION ITEMS	Work rol / Detour ping TEMS S Sions (MCR's) IONS IONS	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 0.3% 0.0% 3.1% 0.0% 16.6% 0.0% 10.0% 0.0% 10.0% 0.0% 10.0% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0%	MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 23.5% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.2% 3 - Average 1.2% 3 - Average 1.2% 5 - Average 1.2% 5 - Average 5 - SUBTOTAL (A + B) SUBTOTAL (A + B) SUBTOTAL (A + B + C) SUBTOTAL (B + C + D) SUBTOTAL (C)	(% of A) Adjusted—> (% of A)	% of (A) 2.42% 5.95% 1.64% 4.30% 2.00% 0.00% 0.77% 0.00% 0.33% 55.05% 155.05% % of CBI 6.00% 3.00% 0.11% 0.00% 9.11% 169.06% % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 0.75% 0.00% 0.00% 0.00% 0.00%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992 \$64,000 \$0 \$1,056 \$176,000 \$496,000 Cost \$29,760 \$14,880 \$531 \$0 \$445,000 \$541,000 \$541,000 \$541,000 \$541,000 \$541,000 \$541,000 \$551,395 \$111,000 \$652,000 \$106,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 20.00% 0.00% 0.77% 0.00% 58.41% 158.41% * of CBI 6.00% 3.00% 0.11% 172.74% * of CI 10.95% 9.50% 20.45% Indirect \$ % of CI 2.00% 0.00% 0.00% 12.00% 0.00% 0.00% 0.00% 1.11%	\$521,000 Cost \$12,608 \$31,000 \$26,050 \$22,403 \$16,047 \$86,278 \$104,200 \$0 \$1,719 \$304,012 \$0 \$31,719 \$304,000 \$825,000 Cost \$49,500 \$75,000 \$900,000 Cost \$98,550 \$883 \$0 \$75,000 \$1,844,000 \$1,084,000	67.1% of Base Cos 73.2% of Base Cos 11.8% of Base Cos
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-01 C-02 C-03 C-04 C C D-CONSTE D-01 D-02 D E-PRECON E-03.1 E-03.2 E-03.1 E-03.2 E-05 E	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contr Lighting & Electrical Permanent Signing & Stry Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revis F/A - Project Communicat TSM&O Traffic & Operatio F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & IN Construction Engineering Construction Indirects CONSTRUCTION ITEMS RUCTION ENGINEERING & IN CONSTRUCTION ENGINEERING PROJECT CONSTRUCTION INSTRUCTION ITEMS Right-of-Way [Phase R] Utilities + Railroad Work [I Design & Engineering [Ph Subsurface Utility En Transportation Syste Environmental (NEPA) [Ph Miscellaneous [Phase M] PRECONSTRUCTION ITEMS	Work rol / Detour ping TEMS S sions (MCR's) ions ions (for Reconstruction/R IDIRECTS ERING & INDIRECTS N BUDGET Phase U) ase D) ase D) ms Management & Opera ase E) MS ESTIMATE	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 0.3% 0.0% 3.1% 0.0% 16.6% 0.0% 10.0% 0.0% 10.0% 0.0% 10.0% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0% 0.5% 0.0%	MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 23.5% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.2% 3 - Average 1.2% 3 - Average 1.2% 5 - Average 1.2% 5 - Average 5 - SUBTOTAL (A + B) SUBTOTAL (A + B) SUBTOTAL (A + B + C) SUBTOTAL (B + C + D) SUBTOTAL (C)	(% of A) Adjusted—> (% of A)	% of (A) 2.42% 5.95% 1.64% 4.30% 2.00% 0.00% 0.77% 0.00% 0.33% 55.05% 155.05% % of CBI 6.00% 3.00% 0.11% 0.00% 9.11% 169.06% % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 0.75% 0.00% 0.00% 0.00% 0.00%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992 \$64,000 \$0 \$1,056 \$176,000 \$496,000 Cost \$29,760 \$14,880 \$531 \$0 \$445,000 \$541,000 \$541,000 \$541,000 \$541,000 \$541,000 \$541,000 \$551,395 \$111,000 \$652,000 \$106,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 20.00% 0.00% 0.77% 0.00% 58.41% 158.41% * of CBI 6.00% 3.00% 0.11% 172.74% * of CI 10.95% 9.50% 20.45% Indirect \$ % of CI 2.00% 0.00% 0.00% 12.00% 0.00% 0.00% 0.00% 1.11%	\$521,000 Cost \$12,608 \$31,000 \$26,050 \$22,403 \$16,047 \$86,278 \$104,200 \$0 \$1,719 \$304,012 \$0 \$31,719 \$304,000 \$825,000 Cost \$49,500 \$75,000 \$900,000 Cost \$98,550 \$883 \$0 \$75,000 \$1,844,000 \$1,084,000	67.1% of Base Cos 73.2% of Base Cos
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-01 C-02 C-03 C-04 C C D-CONSTE D-01 D-02 D E-PRECON E-03.1 E-03.2 E-03.1 E-03.2 E-05 E	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Conte Lighting & Electrical Permanent Signing & Stry Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revis F/A - Project Communicati TSM&O Traffic & Operatio F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & IN Construction Engineering Construction Indirects CONSTRUCTION ITEMS RUCTION ENGINEERING & IN CONSTRUCTION ENGINEI PROJECT CONSTRUCTIO INSTRUCTION ITEMS Right-of-Way [Phase R] Utilities + Railroad Work [I Design & Engineering [Ph Subsurface Utility Transportation Syste Environmental (NEPA) [Ph Miscellaneous [Phase M] PRECONSTRUCTION ITEMS RYE	Work rol / Detour ping TEMS S sions (MCR's) ions ions (for Reconstruction/R IDIRECTS ERING & INDIRECTS N BUDGET Phase U) ase D) ase D) ms Management & Opera ase E) MS ESTIMATE	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0%	MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 25.5% 3 - Average 25.5% 3 - Average 26.1% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 5 - Average 1.2% SUBTOTAL (A + B) X 0.11% SUBTOTAL (C) SUBTOTAL (A + B + C + D) TRUCTION (A + B + C + D) AVG % EFFORT 5.2% 3 - Average 1 - Conceptual	(% of A) Adjusted—> (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 20.00% 0.00% 0.33% 55.05% 155.05% \$ of CBI 6.00% 3.00% 0.11% 169.06% 9.11% 169.06% Indirect % of CI 10.95% 9.50% 20.45% Indirect % of CI 10.95% 9.50% 20.45%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992 \$64,000 \$0 \$1,056 \$176,000 \$496,000 \$496,000 \$496,000 \$541,056 \$11,056 \$11,056 \$11,056 \$11,056 \$11,056 \$11,056 \$11,056 \$11,056 \$11,056 \$11,056 \$11,056 \$11,000 \$529,760 \$11,880 \$531 \$0 \$445,000 \$541,000 \$541,000 \$541,000 \$541,000 \$551,395 \$111,000 \$652,000 \$652,000 \$10,600 \$106,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 16.56% 20.00% 0.77% 0.00% 0.33% 58.41% 158.41% 172.74% 172.74% 172.74% 172.74% Indirect 9 % of CI 2.00% 0.00% 0.00% 10.00% 10.00% 11.095% 10.00% 10.00% 10.00% 11.095%	\$521,000 Cost \$12,608 \$31,000 \$28,050 \$22,403 \$16,047 \$86,278 \$104,200 \$0 \$4,012 \$0 \$1,719 \$304,000 \$825,000 Cost \$49,500 \$24,750 \$883 \$0 \$75,000 \$1,084,000	67.1% of Base Cos 73.2% of Base Cos 88.2% of Base Cos 110.0% of Base Cos
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-01 C-02 C-03 C-04 C C D-CONSTE D-01 D-02 D E-PRECON E-03.1 E-03.2 E-03.1 E-03.2 E-05 E	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Cont Lighting & Electrical Permanent Signing & Strig Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION ITEMS ACCOUNTS & TSM&O F/A - General F/A - General F/A - Project Communicat TSM&O Traffic & Operatio F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & IN CONSTRUCTION ITEMS RUCTION ENGINEERING & IN CONSTRUCTION ENGINE PROJECT CONSTRUCTIO INSTRUCTION ITEMS RIGHT-Of-Way [Phase R] Utilities + Railroad Work [I] Design & Engineering [Ph Subsurface Utility En Transportation Syste Environmental (NEPA) [Ph Miscellaneous [Phase M] PRECONSTRUCTION ITEMS RVE PROJECT BASE COST IN RVE PROBABILISTIC COST ES	Work rol / Detour ping TEMS S sions (MCR's) ions ions (for Reconstruction/R IDIRECTS ERING & INDIRECTS N BUDGET Phase U) ase D) ase D) ms Management & Opera ase E) MS ESTIMATE	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0%	MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 25.5% 3 - Average 25.5% 3 - Average 26.1% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 5 - Average 1.2% SUBTOTAL (A + B) X 0.11% SUBTOTAL (C) SUBTOTAL (A + B + C + D) TRUCTION (A + B + C + D) AVG % EFFORT 5.2% 3 - Average 1 - Conceptual	(% of A) Adjusted—> (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 20.00% 0.00% 0.33% 55.05% 155.05% \$ of CBI 6.00% 3.00% 0.11% 169.06% 9.11% 169.06% Indirect % of CI 10.95% 9.50% 20.45% Indirect % of CI 10.95% 9.50% 20.45%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992 \$64,000 \$0 \$1,056 \$176,000 \$496,000 Cost \$2,464 \$0 \$0 \$1,056 \$176,000 \$496,000 Cost \$29,760 \$14,880 \$531 \$0 \$445,000 \$45,000 \$541,000 \$541,000 \$541,000 \$541,000 \$541,000 \$541,000 \$541,000 \$541,000 \$541,000 \$541,000 \$541,000 \$541,000 \$541,000 \$541,000 \$541,000	100.0% % of (A) 2.42% 5.95% 4.30% 4.30% 16.569% 0.00% 0.33% 58.41% 158.41% % of CBI 6.00% 3.00% 9.11% 172.74% % of CI 10.95% 9.50% 20.45% Indirect \$ % of CI 2.00% 0.00% 12.00% 1.75% 0.00% 1.75% 1.7	\$521,000 \$521,000 \$12,608 \$31,000 \$28,050 \$22,403 \$16,047 \$86,278 \$104,200 \$0 \$4,012 \$0 \$1,719 \$304,000 \$24,750 \$383 \$0 \$75,000 \$1,84,000 \$1,84,000 \$1,84,000 \$1,84,000 \$1,84,000 \$1,84,000 \$1,84,000 \$1,84,000 \$1,84,000 \$1,84,000 \$1,84,000 \$1,84,000 \$1,84,000 \$1,84,000	67.1% of Base Cos 73.2% of Base Cos 88.2% of Base Cos 1100.0% of Base Cos
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-10 B-11 B CBI C-FORCE C-01 C-02 C-03 C-04 C CI D-CONSTF D-01 D-02 D E-PRECON E-03.1 E-03.2 E-04 E-05 E	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Cont Lighting & Electrical Permanent Signing & Strip Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION I CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revis F/A - Project Communicat TSM&O Traffic & Operatio F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & IN Construction Engineering Construction Indirects CONSTRUCTION ITEMS RUCTION ENGINEERING & IN Construction Indirects CONSTRUCTION ITEMS RIght-of-Way [Phase R] Utilities + Railroad Work [I Design & Engineering [Ph Subsurface Utility En Transportation System Environmental (NEPA) [Ph Miscellaneous [Phase M] PRECONSTRUCTION ITEM PROJECT BASE COST	Work rol / Detour ping TEMS S Sions (MCR's) Ions Ions	MIN % MEAN % 0.0% 2.4% 0.0% 2.4% 0.0% 6.0% 0.0% 0.0% 0.3% 0.0% 0.0% 3.1% 0.0% 0.6% 0.0%	MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 25.1% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.2% 3 - Average 5.0 - Average SUBTOTAL (A + B) X 0.11% SUBTOTAL (A + B + C) SUBTOTAL (A + B + C) AVG % EFFORT 5.2% 3 - Average D - Conceptual	(% of A) Adjusted—> (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 20.00% 0.00% 0.33% 55.05% 155.05% \$ of CBI 6.00% 3.00% 0.11% 169.06% 9.11% 169.06% Indirect % of CI 10.95% 9.50% 20.45% Indirect % of CI 10.95% 9.50% 20.45%	\$320,000 Cost \$7,744 \$19,040 \$5,242 \$13,760 \$9,856 \$52,992 \$64,000 \$0 \$1,056 \$176,000 \$496,000 Cost \$29,760 \$14,880 \$531 \$0 \$445,000 \$541,000 \$541,000 \$541,000 \$541,000 \$541,000 \$541,000 \$541,000 \$541,000 \$541,000 \$551,395 \$111,000 \$652,000 \$106,000 \$106,000 RISK RESERVE ROJECT COST (P70)	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 16.56% 20.00% 0.77% 0.00% 0.33% 158.41% 158.41% 172.74% 172.74% 172.74% Indirect 9 % of CI 2.00% 0.00% 0.11% 172.74% Re/ME Ratic	\$521,000 Cost \$12,608 \$31,000 \$28,050 \$22,403 \$16,047 \$86,278 \$104,200 \$0 \$1,719 \$304,000 Cost \$49,500 \$24,750 \$3883 \$0 \$75,000 \$1,084,000	67.1% of Base Cost 73.2% of Base Cost 11.8% of Base Cost 100.0% of Base Cost

Key:

Model Version 3 Rev 04 Last Update: 22-Oct-18



Project	Name	R2 BUNDLE				Model Version 3 Rev Last Update	
Project	Number count Number	J-14-C XXXXX					
	Description	J-14-C					
Project	Work Type	BRIDGE REPLACEME	NT				
Estimat	tor:	E.A.	Date: 11/6/2018				
LOCATION 8	& CHARACTERIST	TICS					
Route:		009B	Begin MP: 53.9	End MP:	71.4	Length	: 17.5
CDOT F	Region:	2	FIPS City: NONE FIPS City: 00000	FIPS County:	Park Co	Lengun	. 17.3
Segmer	nt Mid-point	RefPt 62.650	Latitude: 39.1880	Longitude		G	SOOGLE MAP LINK
· · · · · · · · · · · · · · · · · · ·	nal Classification	: 4 Minor Arterial U	rban-Rural Class: 1 Rural	Terrain		Rolling	I
AADT:		1,900	Truck ADT: 60	Tier Class	: Tier 4	Primary Surface	: 1 Asphalt
Design	Maturity:	0 - Conceptual	NEPA Action: Cat/Ex		NEPA Status:	In Progress	
_	t Delivery Method		Construction Start (MMM-YY) Sep-22	Cons	struction Duration (mo)	24.0	_
	,				,		
CONCTRI	ICTION COSTS.					REGION'S E	STIMATE
	JCTION COSTS: R CONSTRUCTION						
AT ITEM DI	ESCRIPTION			QTY	UNIT	PERCENTAGE	COST
	ent & Bases			0 N/A	CY SY	0.0%	\$0 \$0
	Replacement			N/A 0	N/A DECK AREA (SF)	47.1% 0.0%	\$468,000 \$0
pa Bridge F all Walls	•			0	DECK AREA (SF) SF	0.0%	\$0 \$0
ulv Major Co isc Miscella Traffic /	neous Structures			0 150 Ν/Δ	LF LS N/A	0.0% 52.9%	\$0 \$525,000 \$0
	lajor Items			N/A N/A	N/A N/A	0.0% 0.0%	\$0 \$0
MINOR	CONSTRUCTIO	ON ITEMS		SUBTOTAL (A))	100.0%	\$993,000
AT ITEM DI				EFFORT	UNIT	PERCENTAGE	COST #24 024
Remova Environr Structura				3 - Average 3 - Average 5 - Extensive	% OF A % OF A % OF A	2.4% 6.0% 5.0%	\$24,031 \$59,084 \$49,650
Drainag	rai le / Utilities ay Appurtenances			3 - Average 3 - Average	% OF A % OF A % OF A	5.0% 4.3% 3.1%	\$49,650 \$42,699 \$30,584
Mobiliza		ol / Detour		3 - Average 3 - Average 3 - Average	% OF A % OF A	16.6% 20.0%	\$30,584 \$164,441 \$198,600
Lighting	& Electrical ent Signing & Strip			3 - Average 3 - Average	% OF A % OF A	0.0%	\$198,800 \$0 \$7,646
	Signalization & ITS			3 - Average 3 - Average 3 - Average	% OF A % OF A	0.8% 0.0% 0.3%	\$7,646 \$0 \$3,277
.viioosiid	20			SUBTOTAL (B)	% OF A	58.4%	\$580,000
			CONTRUCTION BID ITEMS (A + B)	СВІ	% OF A	158.4%	\$1,573,000
FORCE	E ACCOUNTS &	TSM&O					
T ITEM DI	ESCRIPTION eneral				UNIT % OF CBI	PERCENTAGE 6.0%	COST \$94,380
F/A - Mi	inor Contract Revisioject Communication				% OF CBI % OF CBI	3.0% 0.1%	\$47,190 \$1,785
	Traffic & Operation			CLIDTOTAL (C)	% OF CBI	0.0%	\$0
			CONSTRUCTION ITEMS (A + B + C)	SUBTOTAL (C)	% OF CBI	9.1%	\$143,000 \$1,716,000
CONST	TRUCTION ENGI	NEERING & INDIRECTS	CONSTRUCTION HEMS (A + B + C)	U	70 UF A	172.8%	φι, <i>Γ</i> Ίο,UUU
	ESCRIPTION				UNIT	PERCENTAGE	COST
Constru	iction Engineering				% OF CI	11.0% 9.5%	\$187,902 \$163,020
				SUBTOTAL (D)	% OF CI	20.5%	\$351,000
			PROJECT CONSTRUCTION BUDG	ET (A + B + C + D)			\$2,067,000
T PRECONS	STRUCTION COS	STS:					
	ONSTRUCTION I						
	ESCRIPTION f-Way [Phase R]				UNIT % OF CI	PERCENTAGE 2.0%	COST \$37,580
2 Utilities	+ Railroad Work [P & Engineering [Pha				% OF CI % OF CI	0.0% 12.0%	\$0 \$225,482
l Subsu	urface Utility Engine	eering (SUE) Budget Management & Operation (TS	SM&O) Budget		% OF CI % OF CI	0.8%	\$14,093 \$0
Environr	mental (NEPA) [Ph aneous [Phase M]	ase E]	, ,		% OF CI % OF CI	0.0%	\$0 \$0
200114	[acc [vi]			SUBTOTAL (E)	% OF CI	16.1%	\$277,000
			PROJECT BASE COST ESTIMATE	(CONSTRUCTION	+ PRECONSTRUCTIO	ON)	\$2,344,000
SERVE							
DERVE	BILISTIC COST E	STIMATE RISK RESERVE	DATE: 11/6/2018		RISK RESERVE	12.4% OF BASE COST	\$290,000
						- -	\$2,634,000
				TO	TAL PROJECT COST		\$2,634,000
				то	TAL PROJECT COST		\$2,634,000
PROBA	nstruction Start Juration (mo)	Sep-22 24.0	Escalation from Estimate Date: Nov-18 to Construction Mid-Point Date: Sep-23	то	TAL PROJECT COST ESCALATION	14.1% OF BASE COST	\$371,000

Model Version 3 Rev 04 Last Update: 22-Oct-18

PCPT - MODEL & REGION ESTIMATE FORM PROJECT PROFILE Project Name Project Number Sub-Account Number R2 BUNDLE J-14-C XXXXX J-14-C **Project Description** Project Work Type BRIDGE REPLACEMENT E.A. Date: 11/6/2018 PROJECT LOCATION & CHARACTERISTICS Begin MP: 53.9 City: NONE Route: CDOT Region: End MP: 71.4 Length: 17.5 Park Co FIPS City: FIPS County RefPt 62.650 Latitude: 39.1880 Longitude: -105.9730 **GOOGLE MAP LINK** Seament Mid-point Functional Classification: 4 Minor Arterial Urban-Rural Class: 1 Rural Terrain: 2 1.900 Primary Surface: 1 Asphalt Truck ADT: 60 Tier Class: Tier 4 AADT: NEPA Action: Cat/Ex 0 - Conceptual NEPA Status: In Progress Design Maturity: Project Delivery Method: Design-Bid-Build Construction Start (MMM-YY) Sep-22 Construction Duration (mo) 24.0 A - MAJOR CONSTRUCTION ITEMS Unit Cost A-01 Cost: 0.0% 0.0% A-02 PAVEMENT & BASES Unit Cost Unit Cost A-02 Cost A-03 MAJOR STRUCTURES (CAT 300 ITEMS Unit Cost \$266,000 A-03 REPL Cost 0.0% A-03_repa BRIDGE REPAIR A-03_REPA Cost: A-03_WALL Cost 0.0% R2 A-03_CULV Cost A-03 misc 72 Inch Reinforced Concrete Pipe
A-03 misc 10x8 Foot Concrete Box Culvert (Precast) A-03_misc 12x10 Foot Concrete Box Culvert (Precast) A-03_misc 14x6 Foot Concrete Box Culvert (Precast) A-03_misc 18x6 Foot Concrete Box Culvert (Precast) A-03 misc 20x6 Foot Concrete Box Culvert (Precast)
A-03 misc 20x8 Foot Concrete Box Culvert (Precast) A-03 MISC Cost A-03 Cost: 100.0% \$791,000 100.0% \$993,000 Unit Cost A-04 Cost: 0.0% 0.0% A-05 OTHER CATEGORY OTHER MAJOR ITEMS Qty Unit Cost Unit Cost Cost Cost MAJOR CONSTRUCTION ITEMS SUBTOTAL (A) (% of A) \$791,00 \$993,000 Work Type: BRIDGE REPLACEMENT
MIN % MEAN % MAX % EFFORT
3 - Average
3 - Average
5 - Extensive % of (A) MAX % Cost Cost B-01 B-02 B-03 B-04 B-05 B-06 B-07 Removals / Resets Environmental \$24,031 \$59,084 6.0% 13.4% \$47,06 Adjusted--> 13.4% 2.3% 14.9% 5.5% 23.5% 26.1% 3.2% 1.8% 3.4% 1.2% Structural Adjusted-> \$12,958 Drainage / Utilities \$34,013 adway Appurtenances \$24,363 \$164,441 Construction Traffic Control / Detour Lighting & Electrical \$158,200 B-08 B-09 B-10 B-11 Permanent Signing & Striping
Traffic Signalization & ITS \$6,091 \$7,646 \$0 \$2,610 \$0 \$3,277 В MINOR CONSTRUCTION ITEMS SUBTOTAL (B) (% of A) 55.05% \$435,000 58.41% \$580,000 \$1,226,000 158.41% \$1,573,000 CBI CONTRUCTION BID ITEMS SUBTOTAL (A + B) (% of A) 155.05% 67.1% % of CBI F/A - General
F/A - Minor Contract Revisions (MCR's)
F/A - Project Communications FIA - Minor Contract Revisions (MCRS)
FIA - Project Communications

[Level 4 \$1,573,000 X 0.11%]
TSM&O Traffic & Operations (for Reconstruction/Resurfacing projects only) \$143,000 \$112,000 F/A's & TSM&O SUBTOTAL (C) (% of CBI) 9.11% CI CONSTRUCTION ITEMS SUBTOTAL (A + B + C) (% of A) 169.15% \$1,338,000 172.81% \$1,716,000 D - CONSTRUCTION ENGINEERING & INDIRECTS % of CI Cost \$146,511 \$127,110 % of CI Cost \$187,902 \$163,020 (Default: 10.95%) CONSTRUCTION ENGINEERING & INDIRECTS SUBTOTAL (D) (% of CI) \$274,000 20.45% \$351,000 PROJECT CONSTRUCTION BUDGET \$2,067,000 CONSTRUCTION (A + B + C + D) \$1,612,000 88.2% of Base Cost Indirect % Indirect % AVG % EFFORT % of CI % of CI (% CI + Indire (% CI + Indire Right-of-Way [Phase R]

Utilities + Railroad Work [Phase U]

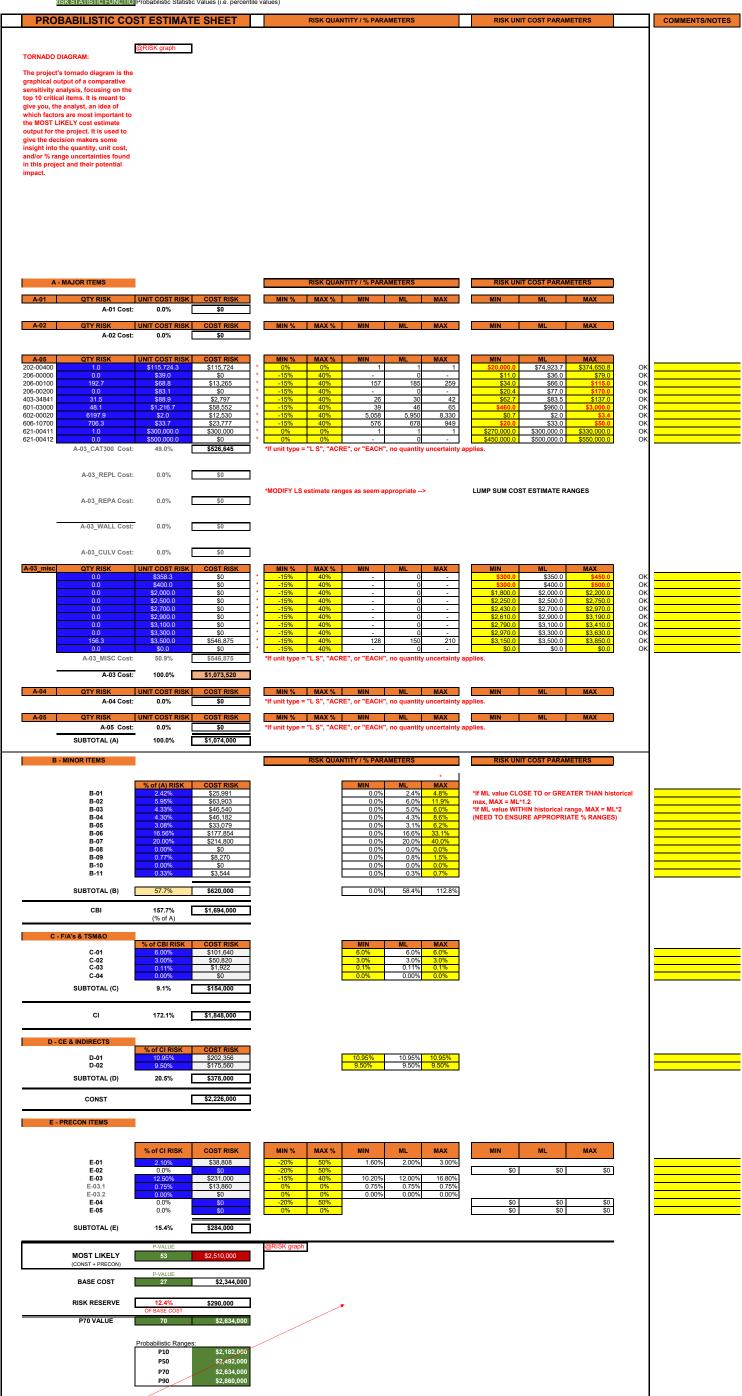
Design & Engineering [Phase D]

Subsurface Utility Engineering (SUE) Budget

Transportation Systems Management & Operation (TSM&O) Budget

Environmental (NEPA) [Phase E] E-01 E-02 E-03 E-03.1 3 - Average Design Maturity: 0 - Conceptual E-03.2 0.00% 0.00% 0.00% Е SUBTOTAL (E) (% of CI) 19.58% \$262,000 16.14% PRECONSTRUCTION ITEMS 11.8% PROJECT BASE COST ESTIMATE (CONSTRUCTION + PRECONSTRUCTION) RE/ME Ratio: RISK RESERVE PROBABILISTIC COST ESTIMATE RISK RESERVE DATE: 11/6/2018 RISK RESERVE 12.4% TOTAL PROJECT COST (P70) \$2,634,000 112.4% ESCALATION Escalation from Estimate Date: Nov-18 Construction Start \$371,000 **ESCALATION** Duration (mo) 24.0 to Construction Mid-Point Date: Sep-23 ESCALATED COST \$3,005,000 128.2%

Key:



T PP	OFILE					Model Version 3 Rev	04
		D2 BUNDLE			1	Last Update	
	Project Name Project Number	R2 BUNDLE N-21-C			ı		
	Sub-Account Number Project Description	XXXXX N-21-C					
	,						
	Project Work Type	BRIDGE REPLACEM	IENT				
	Estimator:	E.A.	Date: 11/6/2018				
07.1.04							
CTLO	CATION & CHARACTERIST	TICS					
	Route:	350A	Begin MP: 47.1	End MP:	69.8	Length	22.7
	CDOT Region:	2	FIPS City: NONE	FIPS County:	Otero Co	zongun	
			FIPS City: 00000	FIPS County:	089		
	Segment Mid-point	RefPt 58.450	Latitude: 37.8382	Longitude:	-103.7489	<u>G</u>	GOOGLE MAP LINK
	Functional Classification:	4 Minor Arterial	Urban-Rural Class: 1 Rural	Terrain:	2	Rolling	1
	AADT:	340	Truck ADT: 10	Tier Class:	Tier 4	Primary Surface	1 Asphalt
	Design Maturity:	0 - Conceptual	NEPA Action: Cat/Ex		NEPA Status:	In Progress	I
	Project Delivery Method:	: Design-Bid-Build	Construction Start (MMM-YY) Sep-22	Cons	truction Duration (mo)	24.0	I
						REGION'S E	ESTIMATE
CT C	ONSTRUCTION COSTS:						
4	MAJOR CONSTRUCTION	ON ITEMS					
CAT	ITEM DESCRIPTION			QTY	UNIT	PERCENTAGE	COST
)1)2	Earthwork Pavement & Bases			0 N/A	CY SY	0.0% 0.0%	\$0 \$0
AT300 repl	Itemized Structure Bridge Replacement			N/A 0	N/A DECK AREA (SF)	35.5% 0.0%	\$445,000 \$0
repa	Bridge Repair			0	DECK AREA (SF)	0.0%	\$0
wall culv	Walls Major Culverts			0	SF LF	0.0% 0.0%	\$0 \$0
misc)4	Miscellaneous Structures Traffic / ITS			300 N/A	LS N/A	64.5% 0.0%	\$810,000 \$0
05	Other Major Items			N/A	N/A	0.0%	\$0
3	MINOR CONSTRUCTIO	ON ITEMS		SUBTOTAL (A)		100.0%	\$1,255,000
	ITEM DESCRIPTION	JN II LIVIS		EFFORT	UNIT	PERCENTAGE	COST
01 02	Removals / Resets			3 - Average	% OF A	2.4%	\$30,371
3	Environmental Structural			3 - Average 5 - Extensive	% OF A % OF A	6.0% 5.0%	\$74,673 \$62,750
4	Drainage / Utilities Roadway Appurtenances			3 - Average	% OF A	4.3%	\$53,965 \$38,654
				3 - AVERAGE	% OF A	2 1%	\$ 4A no.
	Mobilization	I / Data:		3 - Average 3 - Average	% OF A	3.1% 16.6%	\$207,828
,	Construction Traffic Contro Lighting & Electrical						
3	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi			3 - Average 3 - Average 3 - Average 3 - Average	% OF A % OF A % OF A % OF A	16.6% 20.0% 0.0% 0.8%	\$207,828 \$251,000 \$0 \$9,664
	Construction Traffic Contro Lighting & Electrical			3 - Average 3 - Average 3 - Average	% OF A % OF A % OF A	16.6% 20.0% 0.0%	\$207,828 \$251,000 \$0
7 3 9	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS			3 - Average 3 - Average 3 - Average 3 - Average 3 - Average	% OF A % OF A % OF A % OF A % OF A	16.6% 20.0% 0.0% 0.8% 0.0%	\$207,828 \$251,000 \$0 \$9,664 \$0
7 3 9	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS		CONTRUCTION BID ITEMS (A + B)	3 - Average 3 - Average 3 - Average 3 - Average 3 - Average 3 - Average SUBTOTAL (B)	% OF A % OF A % OF A % OF A % OF A	16.6% 20.0% 0.0% 0.8% 0.0% 0.3%	\$207,828 \$251,000 \$0 \$9,664 \$0 \$4,142
	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS	ing	CONTRUCTION BID ITEMS (A + B)	3 - Average 3 - Average 3 - Average 3 - Average 3 - Average 3 - Average SUBTOTAL (B)	% OF A	16.6% 20.0% 0.0% 0.8% 0.0% 0.3% 58.4%	\$207,828 \$251,000 \$0 \$9,664 \$0 \$4,142
	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous	ing	CONTRUCTION BID ITEMS (A + B)	3 - Average 3 - Average 3 - Average 3 - Average 3 - Average 3 - Average SUBTOTAL (B)	% OF A	16.6% 20.0% 0.0% 0.8% 0.0% 0.3% 58.4%	\$207,828 \$251,000 \$0 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000
AT	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & ITEM DESCRIPTION F/A - General	TSM&O	CONTRUCTION BID ITEMS (A + B)	3 - Average 3 - Average 3 - Average 3 - Average 3 - Average 3 - Average SUBTOTAL (B)	% OF A % OF A UNIT % OF CBI	16.6% 20.0% 0.0% 0.8% 0.0% 0.3% 58.4% 158.4%	\$207,828 \$251,000 \$0 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000
AT	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & ITEM DESCRIPTION F/A - General F/A - Project Communication	TSM&O ions (MCR's)	CONTRUCTION BID ITEMS (A + B)	3 - Average 3 - Average 3 - Average 3 - Average 3 - Average 3 - Average SUBTOTAL (B)	% OF A % OF A WOF A	16.6% 20.0% 0.0% 0.8% 0.0% 0.3% 58.4% PERCENTAGE 6.0% 3.0% 0.1%	\$207,828 \$251,000 \$0 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$119,280 \$59,640 \$2,327
AT	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi	TSM&O ions (MCR's)	CONTRUCTION BID ITEMS (A + B)	3 - Average CBI	% OF A % OF A WOF A WOF A	16.6% 20.0% 0.0% 0.8% 0.0% 0.3% 58.4% 158.4% PERCENTAGE 6.0% 3.0% 0.1% 0.0%	\$207,828 \$251,000 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$119,280 \$59,640 \$2,327 \$0
AT	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & ITEM DESCRIPTION F/A - General F/A - Project Communication	TSM&O ions (MCR's)	CONTRUCTION BID ITEMS (A + B)	3 - Average 3 - Average 3 - Average 3 - Average 3 - Average 3 - Average SUBTOTAL (B)	% OF A % OF A WOF A	16.6% 20.0% 0.0% 0.8% 0.0% 0.3% 58.4% PERCENTAGE 6.0% 3.0% 0.1%	\$207,828 \$251,000 \$0 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$119,280 \$59,640 \$2,327
CAT	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & ITEM DESCRIPTION F/A - General F/A - Project Communication	TSM&O ions (MCR's)	CONTRUCTION BID ITEMS (A + B) CONSTRUCTION ITEMS (A + B + C)	3 - Average CBI CBI	% OF A % OF A WOF A WOF A	16.6% 20.0% 0.0% 0.8% 0.0% 0.3% 58.4% 158.4% PERCENTAGE 6.0% 3.0% 0.1% 0.0%	\$207,828 \$251,000 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$119,280 \$59,640 \$2,327 \$0
CAT 2233	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & ITEM DESCRIPTION F/A - General F/A - Project Communication	TSM&O ions (MCR's) ons ns	CONSTRUCTION ITEMS (A + B + C)	3 - Average CBI CBI	% OF A % OF A WOF A % OF B % OF B % OF CBI	16.6% 20.0% 0.0% 0.8% 0.0% 0.3% 58.4% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1%	\$207,828 \$251,000 \$0 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$119,280 \$59,640 \$2,327 \$0 \$181,000
77 88 99 00 11	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation	TSM&O ions (MCR's) ons ns	CONSTRUCTION ITEMS (A + B + C)	3 - Average CBI CBI	% OF A WOF A WOF A WOF A UNIT % OF CBI WOF CBI	16.6% 20.0% 0.0% 0.8% 0.0% 0.3% 58.4% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1%	\$207,828 \$251,000 \$0 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$119,280 \$59,640 \$2,327 \$0 \$181,000
CAT	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & ITEM DESCRIPTION F/A - General F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering	TSM&O ions (MCR's) ons ns	CONSTRUCTION ITEMS (A + B + C)	3 - Average CBI CBI	% OF A WOF A % OF A WOF A WOF A UNIT % OF CBI	16.6% 20.0% 0.0% 0.8% 0.8% 0.3% 58.4% 158.4% PERCENTAGE 6.0% 3.0% 0.1% 0.19% 9.1% 172.8% PERCENTAGE 11.0%	\$207,828 \$251,000 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$119,280 \$59,640 \$2,327 \$181,000 \$2,169,000
77 33 39 30 30 11 22 33 44	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI	TSM&O ions (MCR's) ons ns	CONSTRUCTION ITEMS (A + B + C)	3 - Average CBI CBI SUBTOTAL (C) CI	% OF A WOF A WOF A WOF A UNIT % OF CBI	16.6% 20.0% 0.0% 0.8% 0.8% 0.3% 58.4% 158.4% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.8% PERCENTAGE 11.0% 9.5%	\$207,828 \$251,000 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$119,280 \$59,640 \$2,327 \$0 \$181,000 \$2,169,000
AT	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & ITEM DESCRIPTION F/A - General F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering	TSM&O ions (MCR's) ons ns	CONSTRUCTION ITEMS (A + B + C)	3 - Average CBI CBI SUBTOTAL (C) CI	% OF A WOF A % OF A WOF A WOF A UNIT % OF CBI	16.6% 20.0% 0.0% 0.8% 0.8% 0.3% 58.4% 158.4% PERCENTAGE 6.0% 3.0% 0.1% 0.19% 9.1% 172.8% PERCENTAGE 11.0%	\$207,828 \$251,000 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$119,280 \$59,640 \$2,327 \$181,000 \$2,169,000
77 88 99 00 11 12 22 33 44	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & ITEM DESCRIPTION F/A - General F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering	TSM&O ions (MCR's) ons ns	CONSTRUCTION ITEMS (A + B + C)	3 - Average CBI CBI SUBTOTAL (C) CI	% OF A WOF A WOF A WOF A UNIT % OF CBI	16.6% 20.0% 0.0% 0.8% 0.8% 0.3% 58.4% 158.4% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.8% PERCENTAGE 11.0% 9.5%	\$207,828 \$251,000 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$1,988,000 \$59,640 \$2,327 \$0 \$181,000 \$2,169,000
077	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & ITEM DESCRIPTION F/A - General F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering	TSM&O ions (MCR's) ons ns	CONSTRUCTION ITEMS (A + B + C)	3 - Average CBI CBI SUBTOTAL (C) CI	% OF A WOF A WOF A WOF A UNIT % OF CBI	16.6% 20.0% 0.0% 0.8% 0.8% 0.3% 58.4% 158.4% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.8% PERCENTAGE 11.0% 9.5%	\$207,828 \$251,000 \$0 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$2,169,000 \$2,169,000 \$237,506 \$2206,055 \$4444,000
07 08 09 09 110 111 11 02 03 04	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects	TSM&O ions (MCR's) ons ns	CONSTRUCTION ITEMS (A + B + C)	3 - Average CBI CBI SUBTOTAL (C) CI	% OF A WOF A WOF A WOF A UNIT % OF CBI	16.6% 20.0% 0.0% 0.8% 0.8% 0.3% 58.4% 158.4% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.8% PERCENTAGE 11.0% 9.5%	\$207,828 \$251,000 \$0 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$2,169,000 \$2,169,000 \$237,506 \$2206,055 \$4444,000
077 08 09 09 11 11 11 12 23 33 04 14 10 12 11 10 11 10 11 11 11 11 11 11 11 11 11	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects	TSM&O ions (MCR's) ons ns	CONSTRUCTION ITEMS (A + B + C)	3 - Average CBI CBI SUBTOTAL (C) CI	% OF A WOF A WOF A WOF A UNIT % OF CBI	16.6% 20.0% 0.0% 0.8% 0.8% 0.3% 58.4% 158.4% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.8% PERCENTAGE 11.0% 9.5%	\$207,828 \$251,000 \$0 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$2,169,000 \$2,169,000 \$237,506 \$2206,055 \$4444,000
077 08 09 10 11 11 11 11 12 13 14 14 17 17 17 18 18 19 10 11 11 11 11 11 11 11 11 11 11 11 11	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION ITEM ITEM DESCRIPTION Right-of-Way [Phase R]	TSM&O ions (MCR's) ons ns INEERING & INDIRECT STS: TEMS	CONSTRUCTION ITEMS (A + B + C)	3 - Average CBI CBI SUBTOTAL (C) CI	W OF A W OF CBI W OF CB	16.6% 20.0% 0.0% 0.8% 0.8% 0.3% 58.4% 158.4% PERCENTAGE 6.0% 3.0% 0.0% 9.1% 172.8% PERCENTAGE 11.0% 9.5% 20.5%	\$207,828 \$251,000 \$0 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$1,988,000 \$2,169,000 \$2,169,000 \$2,613,000 \$2,613,000 \$447,501
07 08 09 10 11 11 11 11 11 11 11 11 11	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION COS PRECONSTRUCTION I ITEM DESCRIPTION ITEM DESCRIPTION Construction Indirects RECONSTRUCTION COS PRECONSTRUCTION I Utilities + Railroad Work [P Design & Engineering [Pha	TSM&O ions (MCR's) ons ns INEERING & INDIRECT STS: TEMS Phase U] ase D]	CONSTRUCTION ITEMS (A + B + C)	3 - Average CBI CBI SUBTOTAL (C) CI	W OF A W OF CBI W OF CI	16.6% 20.0% 0.0% 0.8% 0.3% 58.4% 158.4% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.8% PERCENTAGE 11.0% 9.5% 20.5% PERCENTAGE 2.0% 0.0% 12.0%	\$207,828 \$251,000 \$0 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$1,988,000 \$1,988,000 \$2,169,000 \$2,169,000 \$2,169,000 \$2,169,000 \$2,169,000 \$2,169,000 \$2,169,000
CAT D1 D2 CAT D1 D2 CAT D1 D2 D2 D3	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION COS PRECONSTRUCTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase In Phase	TSM&O ions (MCR's) ons ns INEERING & INDIRECT STS: TEMS Phase U] ase D] eering (SUE) Budget	CONSTRUCTION ITEMS (A + B + C) S PROJECT CONSTRUCTION BUDG	3 - Average CBI CBI SUBTOTAL (C) CI	W OF A W OF CBI W OF CB	16.6% 20.0% 0.0% 0.8% 0.3% 58.4% 158.4% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.8% PERCENTAGE 11.0% 9.5% 20.5%	\$207,828 \$251,000 \$0 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$1,988,000 \$2,169,000 \$2,169,000 \$2,613,000 \$2,613,000 \$2,613,000 \$2,613,000 \$2,613,000 \$2,613,000
77 8 9 9 0 1 1	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION INDIPOSE PRECONSTRUCTION INDIFICE ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phasign & Engineering [Phase] Subsurface Utility Engine Transportation Systems Individual Environmental (NEPA) [Phase]	TSM&O ions (MCR's) ons ns INEERING & INDIRECT STS: TEMS Phase U] ase D] sering (SUE) Budget Management & Operation	CONSTRUCTION ITEMS (A + B + C) S PROJECT CONSTRUCTION BUDG	3 - Average CBI CBI SUBTOTAL (C) CI	W OF A W OF CBI W OF CBI W OF CBI W OF CBI W OF CI W	16.6% 20.0% 0.0% 0.0% 0.8% 0.3% 58.4% 158.4% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.8% PERCENTAGE 11.0% 9.5% 20.5% PERCENTAGE 2.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	\$207,828 \$251,000 \$0 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$1,988,000 \$2,169,000 \$2,169,000 \$2,613,000 \$2,613,000 \$2,613,000 \$2,613,000 \$2,613,000
77 8 9 9 9 1 1 1 1 2 2 3 3 4 4 1 2 2 3 3 . 1	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION COS PRECONSTRUCTION I ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase R] Subsurface Utility Engine Transportation Systems [Page 1]	TSM&O ions (MCR's) ons ns INEERING & INDIRECT STS: TEMS Phase U] ase D] sering (SUE) Budget Management & Operation	CONSTRUCTION ITEMS (A + B + C) S PROJECT CONSTRUCTION BUDG	3 - Average CBI CBI SUBTOTAL (C) CI SUBTOTAL (D) ET (A + B + C + D)	W OF A W OF CBI W OF CBI W OF CBI W OF CBI W OF CI W O	16.6% 20.0% 0.0% 0.8% 0.8% 0.3% 58.4% 158.4% PERCENTAGE 6.0% 3.01% 0.10% 9.1% 172.8% PERCENTAGE 11.0% 9.5% 20.5% PERCENTAGE 11.0% 9.5% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	\$207,828 \$251,000 \$0 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$1,988,000 \$1,988,000 \$2,169,000 \$2,169,000 \$2,613,000 \$2,613,000 \$2,613,000 \$2,613,000 \$2,613,000 \$2,613,000
CAT D1 122 33 31 13.3.2 34	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION INDIPOSE PRECONSTRUCTION INDIFICE ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phasign & Engineering [Phase] Subsurface Utility Engine Transportation Systems Individual Environmental (NEPA) [Phase]	TSM&O ions (MCR's) ons ns INEERING & INDIRECT STS: TEMS Phase U] ase D] sering (SUE) Budget Management & Operation	CONSTRUCTION ITEMS (A + B + C) S PROJECT CONSTRUCTION BUDG	3 - Average CBI CBI SUBTOTAL (C) CI	W OF A W OF CBI W OF CBI W OF CBI W OF CBI W OF CI W	16.6% 20.0% 0.0% 0.0% 0.8% 0.3% 58.4% 158.4% PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 172.8% PERCENTAGE 11.0% 9.5% 20.5% PERCENTAGE 2.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	\$207,828 \$251,000 \$0 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$1,988,000 \$2,169,000 \$2,169,000 \$2,613,000 \$2,613,000 \$2,613,000 \$2,613,000 \$2,613,000
01 02 03 04 04 01 01 02	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION INDIPOSE PRECONSTRUCTION INDIFICE ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phasign & Engineering [Phase] Subsurface Utility Engine Transportation Systems Individual Environmental (NEPA) [Phase]	TSM&O ions (MCR's) ons ns INEERING & INDIRECT STS: TEMS Phase U] ase D] sering (SUE) Budget Management & Operation	CONSTRUCTION ITEMS (A + B + C) S PROJECT CONSTRUCTION BUDG	3 - Average CBI CBI SUBTOTAL (B) CI SUBTOTAL (C) CI SUBTOTAL (D) ET (A + B + C + D)	W OF A W OF CBI W OF CBI W OF CBI W OF CBI W OF CI W O	16.6% 20.0% 0.0% 0.8% 0.8% 0.3% 58.4% 158.4% PERCENTAGE 6.0% 3.01% 0.10% 9.1% 172.8% PERCENTAGE 11.0% 9.5% 20.5% PERCENTAGE 11.0% 9.5% 20.5%	\$207,828 \$251,000 \$0 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$1,988,000 \$1,988,000 \$2,169,000 \$2,169,000 \$2,613,000 \$2,613,000 \$2,613,000 \$2,613,000 \$2,613,000 \$2,613,000
CAT 11 12 2 13 13 14 14 14 15 16 16 16 16 16 16 16 16 16 16 16 16 16	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION INDIRECTION Right-of-Way [Phase R] Utilities + Railroad Work [Phasign & Engineering	TSM&O ions (MCR's) ons ns INEERING & INDIRECT STS: TEMS Phase U] ase D] sering (SUE) Budget Management & Operation	CONSTRUCTION ITEMS (A + B + C) S PROJECT CONSTRUCTION BUDG (TSM&O) Budget	3 - Average CBI CBI SUBTOTAL (B) CI SUBTOTAL (C) CI SUBTOTAL (D) ET (A + B + C + D)	W OF A W OF CBI W OF CBI W OF CBI W OF CBI W OF CI W O	16.6% 20.0% 0.0% 0.8% 0.8% 0.3% 58.4% 158.4% PERCENTAGE 6.0% 3.01% 0.10% 9.1% 172.8% PERCENTAGE 11.0% 9.5% 20.5% PERCENTAGE 11.0% 9.5% 20.5%	\$207,828 \$251,000 \$0 \$9,664 \$0 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$1,988,000 \$2,169,000 \$2,169,000 \$2,613,000 \$2,613,000 \$2,613,000 \$2,613,000 \$359,640 \$2,327 \$0 \$181,000
77 8 9 9 0 1 1	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION INDIRECTION Right-of-Way [Phase R] Utilities + Railroad Work [Phasign & Engineering	TSM&O ions (MCR's) ons ns INEERING & INDIRECT STS: TEMS Phase U] ase D] sering (SUE) Budget Management & Operation	CONSTRUCTION ITEMS (A + B + C) S PROJECT CONSTRUCTION BUDG (TSM&O) Budget	3 - Average CBI CBI SUBTOTAL (B) CI SUBTOTAL (C) CI SUBTOTAL (D) ET (A + B + C + D)	W OF A W OF CBI W OF CBI W OF CBI W OF CBI W OF CI W O	16.6% 20.0% 0.0% 0.8% 0.8% 0.3% 58.4% 158.4% PERCENTAGE 6.0% 3.01% 0.10% 9.1% 172.8% PERCENTAGE 11.0% 9.5% 20.5% PERCENTAGE 11.0% 9.5% 20.5%	\$207,828 \$251,000 \$0 \$9,664 \$0 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$1,988,000 \$2,169,000 \$2,169,000 \$2,613,000 \$2,613,000 \$2,613,000 \$2,613,000 \$359,640 \$2,327 \$0 \$181,000
CAT D1 122 33 31 13.3.2 34	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION INDIRECTION Right-of-Way [Phase R] Utilities + Railroad Work [Phasign & Engineering [Phase M] Subsurface Utility Engine Transportation Systems M Environmental (NEPA) [Phase M] Miscellaneous [Phase M]	TSM&O ions (MCR's) ons ns INEERING & INDIRECT STS: TEMS Phase U] ase D] sering (SUE) Budget Management & Operation	CONSTRUCTION ITEMS (A + B + C) S PROJECT CONSTRUCTION BUDG (TSM&O) Budget	3 - Average CBI CBI SUBTOTAL (B) CI SUBTOTAL (C) CI SUBTOTAL (D) ET (A + B + C + D)	WOF A WOF CBI WOF CBI WOF CBI WOF CBI WOF CBI WOF CI	16.6% 20.0% 0.0% 0.8% 0.8% 0.3% 58.4% 158.4% PERCENTAGE 6.0% 3.01% 0.10% 9.1% 172.8% PERCENTAGE 11.0% 9.5% 20.5% PERCENTAGE 11.0% 9.5% 20.5%	\$207,828 \$251,000 \$0 \$9,664 \$0 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$1,988,000 \$2,169,000 \$2,169,000 \$2,613,000 \$2,613,000 \$2,613,000 \$2,613,000 \$359,640 \$2,327 \$0 \$181,000
7 8 9 0 1 1	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & TITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION INDIRECTION Right-of-Way [Phase R] Utilities + Railroad Work [Phasign & Engineering [Phase M] Subsurface Utility Engine Transportation Systems M Environmental (NEPA) [Phase M] Miscellaneous [Phase M]	TSM&O ions (MCR's) ons ns INEERING & INDIRECT STS: TEMS Phase U] ase D] pering (SUE) Budget Management & Operation (ase E]	CONSTRUCTION ITEMS (A + B + C) S PROJECT CONSTRUCTION BUDG (TSM&O) Budget PROJECT BASE COST ESTIMATE	3 - Average CBI CBI SUBTOTAL (B) CI SUBTOTAL (C) CI SUBTOTAL (D) ET (A + B + C + D)	W OF A W OF CBI W OF CBI W OF CBI W OF CBI W OF CI W O	16.6% 20.0% 0.0% 0.8% 0.8% 0.3% 58.4% 158.4% PERCENTAGE 6.0% 3.0% 0.10% 9.1% 172.8% PERCENTAGE 11.0% 9.5% 20.5% PERCENTAGE 2.0% 0.0% 0.0% 10.0%	\$207,828 \$251,000 \$0 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$1,988,000 \$1,988,000 \$2,169,000 \$2,169,000 \$2,613,000 \$2,613,000 \$2,613,000 \$359,640 \$206,055 \$444,000 \$2,169,000
7889001111223344	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION COS PRECONSTRUCTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase R] Utilities + Railroad Work [Phase M] Subsurface Utility Engine Transportation Systems [Phase M] Miscellaneous [Phase M]	TSM&O ions (MCR's) ons ns INEERING & INDIRECT STS: TEMS Phase U] ase D] pering (SUE) Budget Management & Operation (ase E]	CONSTRUCTION ITEMS (A + B + C) S PROJECT CONSTRUCTION BUDG (TSM&O) Budget PROJECT BASE COST ESTIMATE	3 - Average SUBTOTAL (B) CBI SUBTOTAL (C) CI SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E)	WOF A WOF CBI WOF CBI WOF CBI WOF CBI WOF CI W	16.6% 20.0% 0.0% 0.0% 0.8% 0.8% 0.3% 58.4% 158.4% PERCENTAGE 6.0% 3.01% 0.10% 9.1% 172.8% PERCENTAGE 11.0% 9.5% 20.5% PERCENTAGE 11.0% 9.5% 20.5%	\$207,828 \$251,000 \$0 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$1,988,000 \$1,988,000 \$2,169,000 \$2,169,000 \$2,613,000 \$2,613,000 \$2,613,000 \$2,613,000 \$2,613,000 \$2,613,000 \$2,613,000 \$2,613,000 \$2,613,000
AT PF	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION COS PRECONSTRUCTION II ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase R] Utilities + Railroad Work [Phase R] Subsurface Utility Engine Transportation Systems II Environmental (NEPA) [Phase M] Miscellaneous [Phase M]	TSM&O ions (MCR's) ons ns INEERING & INDIRECT STS: TEMS Phase U] ase D] pering (SUE) Budget Management & Operation (ase E]	CONSTRUCTION ITEMS (A + B + C) S PROJECT CONSTRUCTION BUDG (TSM&O) Budget PROJECT BASE COST ESTIMATE	3 - Average SUBTOTAL (B) CBI SUBTOTAL (C) CI SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E)	W OF A W OF CBI W OF CBI W OF CBI W OF CBI W OF CI W	16.6% 20.0% 0.0% 0.8% 0.8% 0.3% 58.4% 158.4% PERCENTAGE 6.0% 3.0% 0.10% 9.1% 172.8% PERCENTAGE 11.0% 9.5% 20.5% PERCENTAGE 2.0% 0.0% 0.0% 10.0%	\$207,828 \$251,000 \$0 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$1,988,000 \$1,988,000 \$2,169,000 \$2,169,000 \$2,169,000 \$2,613,000 \$2,613,000 \$2,859,640 \$2327,506 \$206,055 \$444,000 \$2,613,000 \$2,613,000 \$326,000 \$326,000
T PF	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION COS PRECONSTRUCTION I ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase Invironmental (NEPA) [Phase Invironmental (NEPA) [Phase M] Miscellaneous [Phase M]	TSM&O ions (MCR's) ons ins INEERING & INDIRECT STS: TEMS Phase U] ase D] sering (SUE) Budget Management & Operation of ase E] STIMATE RISK RESERVE	CONSTRUCTION ITEMS (A + B + C) S PROJECT CONSTRUCTION BUDG (TSM&O) Budget PROJECT BASE COST ESTIMATE E DATE: 11/6/2018	3 - Average SUBTOTAL (B) CBI SUBTOTAL (C) CI SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E)	W OF A W OF CBI W OF CBI W OF CBI W OF CBI W OF CI W O	16.6% 20.0% 0.0% 0.0% 0.8% 0.3% 58.4% 158.4% PERCENTAGE 6.0% 3.0% 0.10% 9.1% 172.8% PERCENTAGE 11.0% 9.5% 20.5% PERCENTAGE 11.0% 9.5% 20.5% One of the percent of th	\$207,828 \$251,000 \$0 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$1,988,000 \$1,988,000 \$2,169,000 \$2,169,000 \$2,613,000 \$2,613,000 \$2,613,000 \$2,613,000 \$2,613,000 \$2,613,000 \$3,289,000 \$3,289,000
CAT PP	Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous FORCE ACCOUNTS & ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION COS PRECONSTRUCTION II ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase R] Utilities + Railroad Work [Phase R] Subsurface Utility Engine Transportation Systems II Environmental (NEPA) [Phase M] Miscellaneous [Phase M]	TSM&O ions (MCR's) ons ns INEERING & INDIRECT STS: TEMS Phase U] ase D] pering (SUE) Budget Management & Operation (ase E]	CONSTRUCTION ITEMS (A + B + C) S PROJECT CONSTRUCTION BUDG (TSM&O) Budget PROJECT BASE COST ESTIMATE	3 - Average SUBTOTAL (B) CBI SUBTOTAL (C) CI SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E)	W OF A W OF CBI W OF CBI W OF CBI W OF CBI W OF CI W	16.6% 20.0% 0.0% 0.8% 0.8% 0.3% 58.4% 158.4% PERCENTAGE 6.0% 3.0% 0.10% 9.1% 172.8% PERCENTAGE 11.0% 9.5% 20.5% PERCENTAGE 2.0% 0.0% 0.0% 10.0%	\$207,828 \$251,000 \$0 \$9,664 \$0 \$4,142 \$733,000 \$1,988,000 \$1,988,000 \$1,988,000 \$2,169,000 \$2,169,000 \$2,169,000 \$2,613,000 \$2,613,000 \$2,859,640 \$2327,506 \$206,055 \$444,000 \$2,613,000 \$2,613,000 \$326,000 \$326,000

Model Version 3 Rev 04 Last Update: 22-Oct-18

PCPT - MODEL & REGION ESTIMATE FORM PROJECT PROFILE Project Name Project Number Sub-Account Number **Project Description** Project Work Type BRIDGE REPLACEMENT E.A. Date: 11/6/2018 PROJECT LOCATION & CHARACTERISTICS Begin MP: 47.1 City: NONE End MP: 69.8 Length: 22.7 CDOT Region: Otero Co FIPS City: FIPS County Latitude: 37.8382 RefPt 58.450 Longitude: -103.7489 **GOOGLE MAP LINK** Seament Mid-point Terrain: 2 Functional Classification: 4 Minor Arterial Urban-Rural Class: 1 Rural 340 Truck ADT: 10 Tier Class: Tier 4 Primary Surface: 1 Asphalt AADT: NEPA Action: Cat/Ex 0 - Conceptual NEPA Status: In Progress Design Maturity: Project Delivery Method: Design-Bid-Build Construction Start (MMM-YY) Sep-22 Construction Duration (mo) 24.0 A - MAJOR CONSTRUCTION ITEMS Unit Cost A-01 Cost: 0.0% 0.0% A-02 PAVEMENT & BASES Unit Cost Unit Cost A-02 Cost A-03 MAJOR STRUCTURES (CAT 300 ITEMS Unit Cost \$0 A-03 REPL Cost A-03_repa BRIDGE REPAIR A-03_REPA Cost: A-03_WALL Cost 0.0% R2 A-03_CULV Cost A-03 misc 72 Inch Reinforced Concrete Pipe
A-03 misc 10x8 Foot Concrete Box Culvert (Precast) A-03_misc 12x10 Foot Concrete Box Culvert (Precast) A-03_misc 14x6 Foot Concrete Box Culvert (Precast) \$810,000 A-03_misc 18x6 Foot Concrete Box Culvert (Precast) A-03 misc 20x6 Foot Concrete Box Culvert (Precast)
A-03 misc 20x8 Foot Concrete Box Culvert (Precast) A-03 MISC Cost A-03 Cost: 100.0% \$1,051,000 100.0% \$1,255,000 Unit Cost A-04 Cost: 0.0% 0.0% OTHER MAJOR ITEMS Qty Unit Cost Unit Cost A-05 OTHER CATEGORY Cost Cost MAJOR CONSTRUCTION ITEMS SUBTOTAL (A) (% of A) \$1,051,0 \$1,255,000 Work Type: BRIDGE REPLACEMENT
MIN % MEAN % MAX % EFFORT
3 - Average
3 - Average
5 - Extensive % of (A) MAX % Cost \$25,434 Cost B-01 B-02 B-03 B-04 B-05 B-06 B-07 Removals / Resets Environmental 6.0% 13.4% \$74,673 Adjusted--> 13.4% 2.3% 14.9% 5.5% 23.5% 26.1% 3.2% 1.8% 3.4% 1.2% Adjusted-> Drainage / Utilities \$45,193 \$32,371 adway Appurtenances \$38,654 \$174,046 Construction Traffic Control / Detour Lighting & Electrical \$251,000 B-08 B-09 B-10 B-11 Permanent Signing & Striping
Traffic Signalization & ITS \$9,664 \$8,093 \$0 \$3,468 \$4,142 В MINOR CONSTRUCTION ITEMS SUBTOTAL (B) (% of A) 55.05% \$579,000 58.41% \$733,000 \$1,630,000 158.41% \$1,988,000 CBI CONTRUCTION BID ITEMS SUBTOTAL (A + B) (% of A) 155.05% 67.1% % of CBI F/A - General
F/A - Minor Contract Revisions (MCR's)
F/A - Project Communications \$181,000 \$149,000 F/A's & TSM&O SUBTOTAL (C) (% of CBI) 9.12% Г CI CONSTRUCTION ITEMS SUBTOTAL (A + B + C) (% of A) 169.27% \$1,779,000 172.83% \$2,169,000 D - CONSTRUCTION ENGINEERING & INDIRECTS % of CI % of CI Cost \$237,506 \$206,055 (Default: 10.95%) CONSTRUCTION ENGINEERING & INDIRECTS SUBTOTAL (D) (% of CI) \$364,000 20.45% \$444,000 PROJECT CONSTRUCTION BUDGET \$2,613,000 CONSTRUCTION (A + B + C + D) \$2,143,000 88.2% of Base Cost Indirect % Indirect % AVG % EFFORT % of CI % of CI (% CI + Indirect % (% CI + Indirect %) Right-of-Way [Phase R]

Utilities + Railroad Work [Phase U]

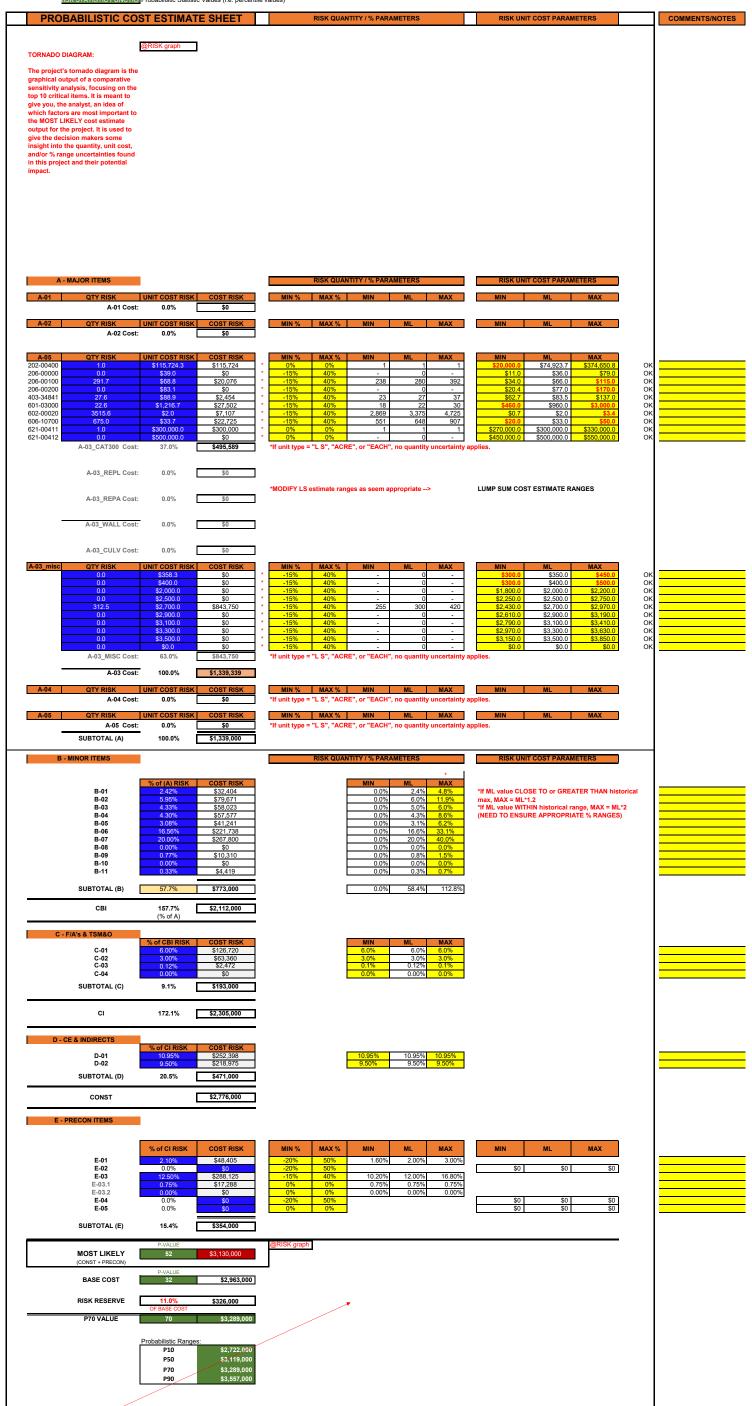
Design & Engineering [Phase D]

Subsurface Utility Engineering (SUE) Budget

Transportation Systems Management & Operation (TSM&O) Budget

Environmental (NEPA) [Phase E] E-01 E-02 E-03 E-03.1 Design Maturity: 0 - Conceptual E-03.2 0.00% 0.00% 0.00% E SUBTOTAL (E) (% of CI) 19.62% \$349,000 16.14% PRECONSTRUCTION ITEMS 11.8% PROJECT BASE COST ESTIMATE (CONSTRUCTION + PRECONSTRUCTION) RE/ME Ratio: RISK RESERVE PROBABILISTIC COST ESTIMATE RISK RESERVE DATE: 11/6/2018 RISK RESERVE 11.0% TOTAL PROJECT COST (P70) 111.0% ESCALATION Escalation from Estimate Date: Nov-18 Construction Start \$464,000 **ESCALATION** Duration (mo) 24.0 to Construction Mid-Point Date: Sep-23 ESCALATED COST \$3,753,000 126.7%

Last Update: 22-Oct-18



	ımber unt Number	R2 BUNDLE M-21-J XXXXX			-		
Project De	escription	M-21-J					
Project W	ork Type	BRIDGE REPLACEMEN	Т				
Estimator		E.A.	Date: 11/6/2018				
LOCATION & (CHARACTERIS	STICS					
Route: CDOT Reg	ilon:	350A 2	Begin MP: 47.1 FIPS City: NONE	End MP: FIPS County:	69.8 Otero Co	Length:	22.7
ODO! NO	,ioii.		FIPS City: 000000	FIPS County			
Segment	<u> Mid-point</u>	RefPt 58.450	Latitude: 37.8382	Longitude			OGLE MAP LINK
	l Classification		pan-Rural Class: 1 Rural	Terrain		Rolling	
AADT:		340	Truck ADT: 10	Tier Class	Tier 4	Primary Surface:	1 Asphalt
Design Ma	aturity:	0 - Conceptual	NEPA Action: Cat/Ex	«	NEPA Status:	In Progress	
Project D	elivery Method	d: Design-Bid-Build	Construction Start (MMM-YY) Sep-2:	2 Cons	truction Duration (mo)	24.0	
						REGION'S ES	TIMATE
CONSTRUC	TION COSTS	:					
	CONSTRUCT	ON ITEMS					
Earthwork Pavement				0 N/A	CY SY	0.0% 0.0%	**************************************
Bridge Rep	tructure			N/A N/A 0	N/A DECK AREA (SF)	60.7% 0.0%	\$0 \$431,000 \$0
a Bridge Rep II Walls				0 0	DECK AREA (SF) SF	0.0% 0.0% 0.0%	\$0 \$0
v Major Culv c Miscellane	ous Structures			0 90	LF LS	0.0% 39.3%	\$0 \$279,000
Traffic / ITS Other Majo				N/A N/A	N/A N/A	0.0% 0.0%	\$0 \$0
MINOR C	ONSTRUCTION	ON ITEMS		SUBTOTAL (A))	100.0%	\$710,000
T ITEM DES	CRIPTION	ON TIEMO		EFFORT	UNIT	PERCENTAGE	COST
Removals Environme				3 - Average 3 - Average	% OF A	2.4% 6.0%	\$17,182 \$42,245
Structural Drainage /				5 - Extensive 3 - Average	% OF A	5.0% 4.3%	\$35,500 \$30,530
Mobilizatio	Appurtenances n on Traffic Contr			3 - Average 3 - Average 3 - Average	% OF A % OF A % OF A	3.1% 16.6% 20.0%	\$21,868 \$117,576 \$142,000
Lighting &				3 - Average 3 - Average 3 - Average	% OF A % OF A % OF A	0.0% 0.8%	\$142,000 \$0 \$5,467
Traffic Sign	nalization & ITS	Sing Sing Sing Sing Sing Sing Sing Sing		3 - Average 3 - Average	% OF A % OF A	0.0% 0.3%	\$0 \$2,343
				SUBTOTAL (B)	% OF A	58.4%	\$415,000
			CONTRUCTION BID ITEMS (A +	В) СВІ	% OF A	158.5%	\$1,125,000
FORCE A	CCOUNTS &	TSM&O					
F/A - Gene	eral				WNIT % OF CBI	PERCENTAGE 6.0%	COST \$67,500
F/A - Proje	r Contract Revi ct Communicat	ions			% OF CBI	3.0% 0.1%	\$33,750 \$1,233
TSM&O Tr	affic & Operation	ons		SUBTOTAL (C)	% OF CBI	9.1%	\$0 \$102,000
			CONSTRUCTION ITEMS (A + B +		% OF A	172.8%	\$1,227,000
CONSTR	UCTION ENG	INEERING & INDIRECTS					
T ITEM DES					UNIT % OF CI	PERCENTAGE	COST \$134,357
	on Engineering on Indirects				% OF CI	11.0% 9.5%	\$134,357 \$116,565
				SUBTOTAL (D)	% OF CI	20.5%	\$251,000
			PROJECT CONSTRUCTION BU	DGET (A + B + C + D)			\$1,478,000
	RUCTION CO						
PRECON	STRUCTION	ITEMS			UNIT	PERCENTAGE	COST
Right-of-W	ay [Phase R] Railroad Work [Phase UI			% OF CI	2.0% 0.0%	\$26,871 \$0
Design & E	ngineering [Ph	ase D] eering (SUE) Budget			% OF CI % OF CI	12.0% 0.8%	\$161,228 \$10,077
Transpoi Environme	tation Systems ntal (NEPA) [P	Management & Operation (TSI	M&O) Budget		% OF CI % OF CI	0.0% 0.0%	\$0 \$0
	ous [Phase M]			SUBTOTAL (E)	% OF CI	0.0% 16.1%	\$0 \$198,000
			PROJECT BASE COST ESTIMA	, ,		- -	\$1,676,000
RVE	I ISTIC COCT	ESTIMATE RISK RESERVE	DATE: 11/6/2018		RISK RESERVE	13.2%	\$221,000
LVODADI	Liu 110 0031 I	LOTHWATE NIGH RESERVE	DATE. 11/0/2018	TO.	TAL PROJECT COST	OF BASE COST	\$1,897,000
				.0			, , ,

PCPT - MODEL & REGION ESTIMATE FORM PROJECT PROFILE Project Name Project Number Sub-Account Number **Project Description** Project Work Type BRIDGE REPLACEMENT E.A. Date: 11/6/2018 PROJECT LOCATION & CHARACTERISTICS Begin MP: 47.1 City: NONE Route: CDOT Region: End MP: 69.8 Length: 22.7 Otero Co FIPS City: FIPS County RefPt 58.450 Latitude: 37.8382 Longitude: -103.7489 **GOOGLE MAP LINK** Seament Mid-point Terrain: 2 Functional Classification: 4 Minor Arterial Urban-Rural Class: 1 Rural 340 Primary Surface: 1 Asphalt Truck ADT: 10 Tier Class: Tier 4 AADT: 0 - Conceptual NEPA Action: Cat/Ex NEPA Status: In Progress Design Maturity: Project Delivery Method: Design-Bid-Build Construction Start (MMM-YY) Sep-22 Construction Duration (mo) 24.0 A - MAJOR CONSTRUCTION ITEMS Unit Cost A-01 Cost: 0.0% 0.0% A-02 PAVEMENT & BASES Unit Cost Unit Cost A-02 Cost A-03 MAJOR STRUCTURES (CAT 300 ITEMS Unit Cost \$230,000 A-03 REPL Cost 0.0% A-03_repa BRIDGE REPAIR A-03_REPA Cost: A-03_WALL Cost 0.0% R2 A-03_CULV Cost A-03 misc 72 Inch Reinforced Concrete Pipe
A-03 misc 10x8 Foot Concrete Box Culvert (Precast) A-03_misc 12x10 Foot Concrete Box Culvert (Precast) A-03_misc 14x6 Foot Concrete Box Culvert (Precast) A-03_misc 18x6 Foot Concrete Box Culvert (Precast) A-03 misc 20x6 Foot Concrete Box Culvert (Precast)
A-03 misc 20x8 Foot Concrete Box Culvert (Precast) A-03 MISC Cost A-03 Cost: 100.0% \$509,000 100.0% \$710,000 Unit Cost A-04 Cost: 0.0% 0.0% A-05 OTHER CATEGORY OTHER MAJOR ITEMS Qty Unit Cost Unit Cost Cost Cost MAJOR CONSTRUCTION ITEMS SUBTOTAL (A) (% of A) \$509,00 Work Type: BRIDGE REPLACEMENT
MIN % MEAN % MAX % EFFORT
3 - Average
3 - Average
5 - Extensive % of (A) MAX % Cost Cost B-01 B-02 B-03 B-04 B-05 B-06 B-07 Removals / Resets Environmental \$17,182 \$42,245 6.0% 13.4% Adjusted--> \$30,286 13.4% 2.3% 14.9% 5.5% 23.5% 26.1% 3.2% 1.8% 3.4% 1.2% Structural Adjusted-> \$8,338 \$21,887 Drainage / Utilities \$30,530 adway Appurtenances \$15,67 \$84,290 Construction Traffic Control / Detour Lighting & Electrical \$101,800 \$142,000 B-08 B-09 B-10 B-11 \$0 \$3,919 Permanent Signing & Striping
Traffic Signalization & ITS \$5,467 \$0 \$1,680 \$0 \$2,343 \$280,000 В MINOR CONSTRUCTION ITEMS SUBTOTAL (B) (% of A) 55.05% 58.41% \$415,000 \$789,000 158.41% \$1,125,000 CBI CONTRUCTION BID ITEMS SUBTOTAL (A + B) (% of A) 155.05% 67.1% % of CBI F/A - General
F/A - Minor Contract Revisions (MCR's)
F/A - Project Communications FIA - Minor Contract Revisions (MCRS)
FIA - Project Communications

[Level 4 \$1,125,000 X 0.11%]
TSM&O Traffic & Operations (for Reconstruction/Resurfacing projects only) \$102,000 F/A's & TSM&O SUBTOTAL (C) (% of CBI) \$72,000 9.11% Е CI CONSTRUCTION ITEMS SUBTOTAL (A + B + C) (% of A) 169.16% \$861,000 172.82% \$1,227,000 D - CONSTRUCTION ENGINEERING & INDIRECTS % of CI **Cost** \$94,280 \$81,795 % of CI Cost \$134,357 \$116,565 (Default: 10.95%) CONSTRUCTION ENGINEERING & INDIRECTS SUBTOTAL (D) (% of CI) \$176,000 20.45% \$251,000 PROJECT CONSTRUCTION BUDGET \$1,478,000 CONSTRUCTION (A + B + C + D) \$1,037,000 88.2% of Base Cost Indirect % Indirect % AVG % EFFORT % of CI % of CI (% CI + Indir (% CI + Indire Right-of-Way [Phase R]

Utilities + Railroad Work [Phase U]

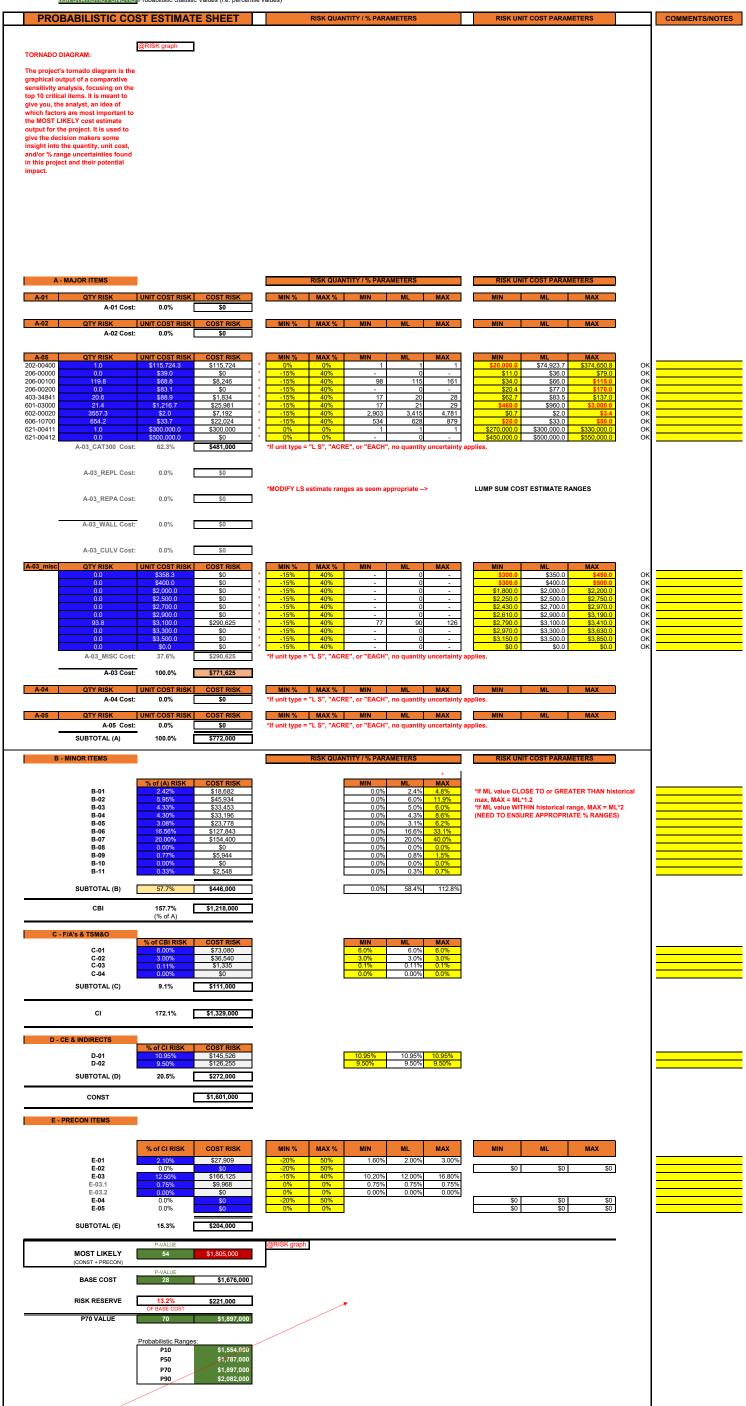
Design & Engineering [Phase D]

Subsurface Utility Engineering (SUE) Budget

Transportation Systems Management & Operation (TSM&O) Budget

Environmental (NEPA) [Phase E] E-01 E-02 E-03 E-03.1 Design Maturity: 0 - Conceptual E-03.2 0.00% 0.00% 0.00% Е SUBTOTAL (E) (% of CI) 19.63% \$169,000 16.14% PRECONSTRUCTION ITEMS 11.8% PROJECT BASE COST ESTIMATE (CONSTRUCTION + PRECONSTRUCTION) RE/ME Ratio: RISK RESERVE PROBABILISTIC COST ESTIMATE RISK RESERVE DATE: 11/6/2018 RISK RESERVE 13.2% TOTAL PROJECT COST (P70) 113.2% ESCALATION Escalation from Estimate Date: Nov-18 Construction Start \$267,000 **ESCALATION** Duration (mo) 24.0 to Construction Mid-Point Date: Sep-23 ESCALATED COST \$2,164,000 129.1%

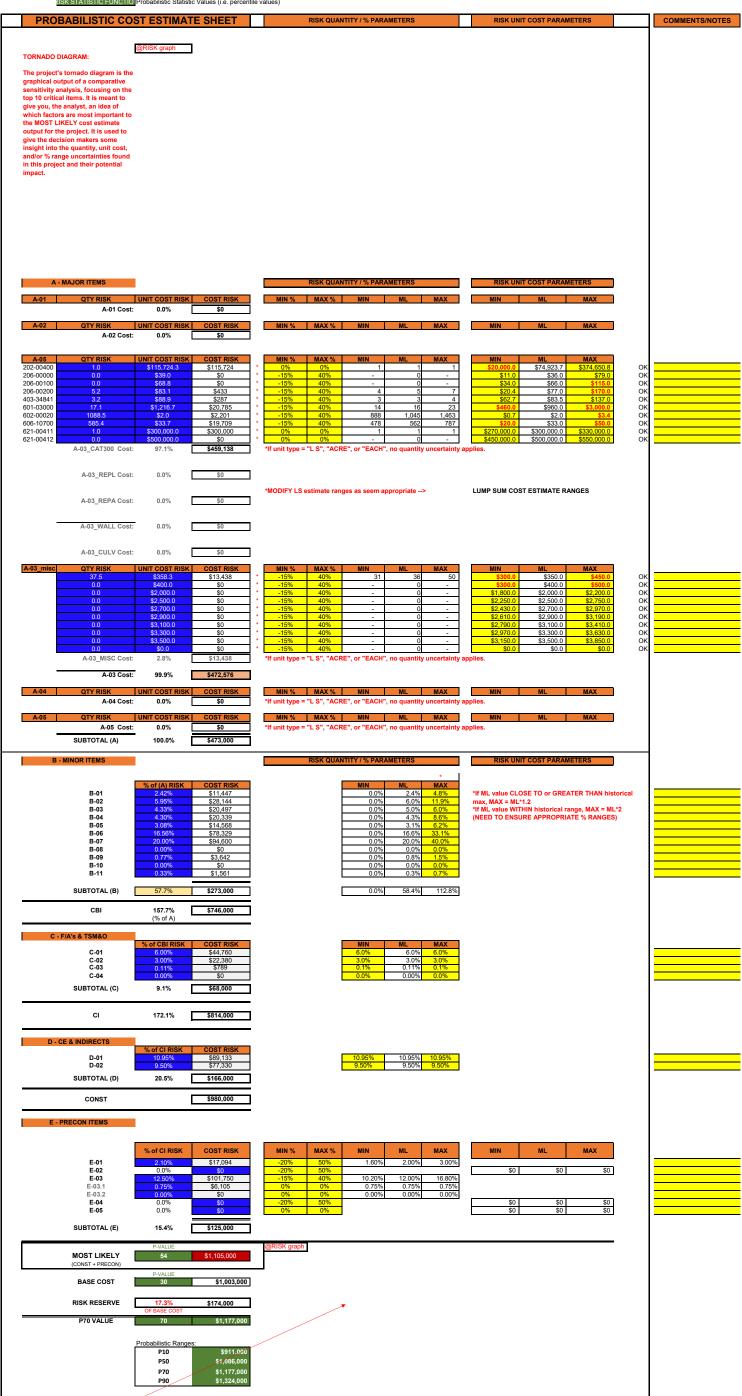
Last Update: 22-Oct-18



PROFILE	SUMMARY SHEET				Model Version 3 Rev	04
D : (N	Do DUNDI S			1	Last Update:	
Project Name Project Numbe				1		
Sub-Account N Project Descrip						
, ,						
Project Work T	/pe BRIDGE REPLACEM	MENT				
Estimator:	E.A.	Date: 11/6/2018				
LOCATION & CHAR	ACTERISTICS					
2007 How & Olivar	NOTE MOTION					
Route:	350A	Begin MP: 47.1	End MP:	69.8	Length:	22.7
CDOT Region:	2	FIPS City: NONE FIPS City: 00000	FIPS County: FIPS County:			
Sogment Mid n	oint RefPt 58.450	Latitude: 37.8382	Longitude:	-103.7489	G	OOGLE MAP LINK
Segment Mid-p						-
Functional Clas	sification: 4 Minor Arterial	Urban-Rural Class: 1 Rural	Terrain:	2	Rolling	1
AADT:	340	Truck ADT: 10	Tier Class:	Tier 4	Primary Surface:	1 Asphalt
- · · · · ·		NEDA A (C. C. C	<u> </u>	NEDA OL I	1.0	T
Design Maturity	0 - Conceptual	NEPA Action: Cat/Ex		NEPA Status:	In Progress	<u> </u>
Project Delive	y Method: Design-Bid-Build	Construction Start (MMM-YY) Sep-22	Cons	truction Duration (mo)	24.0	ı
T CONSTRUCTION	COSTS				REGION'S E	STIMATE
T CONSTRUCTION						
MAJOR CONS	TRUCTION ITEMS		QTY	UNIT	PERCENTAGE	COST
Earthwork			0	CY	0.0%	\$0
Pavement & Bas F300 Itemized Structu	re		N/A N/A	SY N/A	0.0% 96.9%	\$0 \$412,000
epl Bridge Replacer pa Bridge Repair	ient		0	DECK AREA (SF) DECK AREA (SF)	0.0%	\$0 \$0
all Walls IV Major Culverts			0	SF LF	0.0%	\$0 \$0
isc Miscellaneous S	tructures		36	LS	3.1%	\$13,000
Traffic / ITS Other Major Iten	ıs		N/A N/A	N/A N/A	0.0% 0.0%	\$0 \$0
			SUBTOTAL (A)		100.0%	\$425,000
	TRUCTION ITEMS					T
AT ITEM DESCRIP Removals / Res			EFFORT 3 - Average	UNIT % OF A	PERCENTAGE 2.4%	COST \$10,285
Environmental Structural			3 - Average 5 - Extensive	% OF A % OF A	6.0% 5.0%	\$25,288 \$21,250
Drainage / Utiliti			3 - Average	% OF A	4.3%	\$18,275
Roadway Appur Mobilization			3 - Average 3 - Average	% OF A % OF A	3.1% 16.6%	\$13,090 \$70,380
Construction Tra Lighting & Electi	ffic Control / Detour		3 - Average 3 - Average	% OF A % OF A	20.0% 0.0%	\$85,000 \$0
Permanent Sign	ng & Striping		3 - Average	% OF A	0.8%	\$3,273
Traffic Signaliza Miscellaneous	ion & ITS		3 - Average 3 - Average	% OF A % OF A	0.0% 0.3%	\$0 \$1,403
			SUBTOTAL (B)	% OF A	58.4%	\$248,000
		CONTRUCTION BID ITEMS (A + B)	СВІ	% OF A	158.4%	\$673,000
EODOE ACCO	UNTS & TSM&O	CONTROCTION DID TIZING (A + Z)		7, 0, 1	100.470	Ψο. σ,σσσ
AT ITEM DESCRIP				UNIT	PERCENTAGE	COST
F/A - General				% OF CBI	6.0%	\$40,380
F/A - Project Co				% OF CBI % OF CBI	3.0% 0.1%	\$20,190 \$712
TSM&O Traffic &				% OF CBI	0.0%	\$0
			SUBTOTAL (C)	% OF CBI	9.1%	\$61,000
		CONSTRUCTION ITEMS (A + B + C)	CI	% OF A	172.7%	\$734,000
CONSTRUCT	ON ENGINEERING & INDIRECT	s				
	5 2					
AT ITEM DESCRIP	TION			UNIT	PERCENTAGE	COST
AT ITEM DESCRIP Construction En Construction Inc	FION gineering			UNIT % OF CI % OF CI	PERCENTAGE 11.0% 9.5%	COST \$80,373 \$69,730
Construction En	FION gineering		SURTOTAL (D)	% OF CI % OF CI	11.0% 9.5%	\$80,373 \$69,730
Construction En	FION gineering		SUBTOTAL (D)	% OF CI	11.0%	\$80,373 \$69,730 \$150,000
Construction En	FION gineering	PROJECT CONSTRUCTION BUDG		% OF CI % OF CI	11.0% 9.5%	\$80,373 \$69,730
Construction En	FION gineering irects	PROJECT CONSTRUCTION BUDG		% OF CI % OF CI	11.0% 9.5%	\$80,373 \$69,730 \$150,000
Construction En Construction Inc	FION gineering irects	PROJECT CONSTRUCTION BUDG		% OF CI % OF CI	11.0% 9.5%	\$80,373 \$69,730 \$150,000
Construction En Construction Inc T PRECONSTRUC PRECONSTRI AT ITEM DESCRIP	TION gineering irects TION COSTS: JCTION ITEMS TION	PROJECT CONSTRUCTION BUDG		% OF CI % OF CI % OF CI	11.0% 9.5% 20.4% PERCENTAGE	\$80,373 \$69,730 \$150,000 \$884,000
Construction En Construction Inc T PRECONSTRUC PRECONSTRI AT ITEM DESCRIP Right-of-Way [P Utilities + Railro	TION gineering irects TION COSTS: JCTION ITEMS TION asse R] ad Work [Phase U]	PROJECT CONSTRUCTION BUDG		% OF CI % OF CI % OF CI UNIT % OF CI % OF CI	11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0%	\$80,373 \$69,730 \$150,000 \$884,000 COST \$16,075 \$0
Construction En Construction Inc T PRECONSTRUC PRECONSTRIC PRECONSTRIC PRECONSTRIC ITEM DESCRIP Right-of-Way [P Utilities + Railro: Design & Engine	TION gineering lirects TION COSTS: UCTION ITEMS TION hase R] had Work [Phase U] hering [Phase D]	PROJECT CONSTRUCTION BUDG		WOF CI % OF CI % OF CI UNIT % OF CI % OF CI % OF CI % OF CI	11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0%	\$80,373 \$69,730 \$150,000 \$884,000 COST \$16,075 \$0 \$96,448
Construction En Construction Inc T PRECONSTRUC PRECONSTRUC PRECONSTRUC ITEM DESCRIP Right-of-Way [P Utilities + Railro Design & Engine Subsurface Ut Transportation	FION gineering irects FION COSTS: JCTION ITEMS FION nase R] ad Work [Phase U] ering [Phase D] lity Engineering (SUE) Budget Systems Management & Operation			% OF CI	11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0%	\$80,373 \$69,730 \$150,000 \$884,000 \$000 \$000 \$16,075 \$000 \$96,448 \$6,028 \$000 \$000 \$000 \$000 \$000 \$000 \$000 \$
Construction En Construction Inc T PRECONSTRUC PRECONSTRUC PRECONSTRUC PRECONSTRUC ITEM DESCRIP Right-of-Way [P Utilities + Railro Design & Engine Subsurface Ut Transportatior Environmental (i	TION gineering irects TION COSTS: JCTION ITEMS TION nase R] ad Work [Phase U] ering [Phase D] lity Engineering (SUE) Budget Systems Management & Operation (NEPA) [Phase E]			% OF CI % OF CI WOF CI WOF CI WOF CI % OF CI	11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.8%	\$80,373 \$69,730 \$150,000 \$884,000 \$00 \$150,000 \$00 \$00 \$150,000 \$00 \$00 \$00 \$00 \$00 \$00 \$00 \$00 \$0
Construction En Construction Inc T PRECONSTRUC PRECONSTRI AT ITEM DESCRIP Right-of-Way [P Utilities + Railro Design & Engine Subsurface Utility Transportation Environmental (i	TION gineering irects TION COSTS: JCTION ITEMS TION nase R] ad Work [Phase U] ering [Phase D] lity Engineering (SUE) Budget Systems Management & Operation (NEPA) [Phase E]			W OF CI % OF CI	11.0% 9.5% 20.4% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0% 0.0%	\$80,373 \$69,730 \$150,000 \$884,000 \$0 \$16,075 \$16,075 \$0 \$96,448 \$6,028 \$0 \$0
Construction En Construction Inc T PRECONSTRUC PRECONSTRI AT ITEM DESCRIP Right-of-Way [P Utilities + Railro Design & Engine Subsurface Utility Transportation Environmental (i	TION gineering irects TION COSTS: JCTION ITEMS TION nase R] ad Work [Phase U] ering [Phase D] lity Engineering (SUE) Budget Systems Management & Operation (NEPA) [Phase E]		ET (A + B + C + D) SUBTOTAL (E)	% OF CI	11.0% 9.5% 20.4% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0% 0.0% 0.0% 16.2%	\$80,373 \$69,730 \$150,000 \$884,000 \$884,000 \$16,075 \$0 \$96,448 \$6,028 \$0 \$0 \$0
Construction En Construction Inc T PRECONSTRUC PRECONSTRI AT ITEM DESCRIP Right-of-Way [P Utilities + Railro Design & Engine Subsurface Utility Transportation Environmental (i	TION gineering irects TION COSTS: JCTION ITEMS TION nase R] ad Work [Phase U] ering [Phase D] lity Engineering (SUE) Budget Systems Management & Operation (NEPA) [Phase E]	(TSM&O) Budget	ET (A + B + C + D) SUBTOTAL (E)	% OF CI	11.0% 9.5% 20.4% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0% 0.0% 0.0% 16.2%	\$80,373 \$69,730 \$150,000 \$884,000 \$884,000 \$16,075 \$0 \$96,448 \$6,028 \$0 \$0 \$0 \$119,000
Construction En Construction Inc Construction Inc Construction Inc Construction Inc Construction Inc Construction PRECONSTRUCT PRECONSTRUCT Right-of-Way [P Right-of-Way [P Right-of-Way [N Ri	TION gineering irects TION COSTS: JCTION ITEMS TION nase R] ad Work [Phase U] ering [Phase D] lity Engineering (SUE) Budget Systems Management & Operation (NEPA) [Phase E]	(TSM&O) Budget PROJECT BASE COST ESTIMATE	ET (A + B + C + D) SUBTOTAL (E)	% OF CI	11.0% 9.5% 20.4% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0% 0.0% 0.0% 16.2%	\$80,373 \$69,730 \$150,000 \$884,000 \$884,000 \$16,075 \$0 \$96,448 \$6,028 \$0 \$0 \$0 \$119,000
Construction En Construction Inc Construction Inc Construction Inc Construction Inc Construction Inc Construction PRECONSTRUCT PRECONSTRUCT Right-of-Way [P Right-of-Way [P Right-of-Way [N Ri	FION gineering lirects FION COSTS: JCTION ITEMS FION hase R] ad Work [Phase U] hering [Phase D] lity Engineering (SUE) Budget Systems Management & Operation of SEPA) [Phase E] Phase M]	(TSM&O) Budget PROJECT BASE COST ESTIMATE	SUBTOTAL (E) (CONSTRUCTION	% OF CI	11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0% 0.0% 0.0% 16.2%	\$80,373 \$69,730 \$150,000 \$884,000 \$884,000 \$16,075 \$0 \$96,448 \$6,028 \$0 \$0 \$1119,000 \$1119,000
Construction En Construction Inc Construction Inc Construction Inc Construction Inc Construction Inc Construction PRECONSTRUCT PRECONSTRUCT Right-of-Way [P Right-of-Way [P Right-of-Way [N Ri	FION gineering lirects FION COSTS: JCTION ITEMS FION hase R] ad Work [Phase U] hering [Phase D] lity Engineering (SUE) Budget Systems Management & Operation of SEPA) [Phase E] Phase M]	(TSM&O) Budget PROJECT BASE COST ESTIMATE	SUBTOTAL (E) (CONSTRUCTION	% OF CI	11.0% 9.5% 20.4% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0% 0.0% 0.0% 16.2%	\$80,373 \$69,730 \$150,000 \$884,000 \$884,000 \$116,075 \$0 \$96,448 \$6,028 \$0 \$0 \$1119,000
Construction En Construction Inc Construction Inc Construction Inc Construction Inc Construction Inc Construction Inc Construction PRECONSTRUCT PRECONSTRUCT ITEM DESCRIP Right-of-Way [P Utilities + Railro Design & Engine Subsurface Ut Transportation Environmental (i Miscellaneous [i	FION COSTS: JCTION ITEMS FION JCTION ITEMS JCTION ITEMS FION JCTION ITEMS JCT	PROJECT BASE COST ESTIMATE DATE: 11/6/2018	SUBTOTAL (E) (CONSTRUCTION	WOF CI % OF CI	11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.0% 0.0% 0.0% 16.2% DN)	\$80,373 \$69,730 \$150,000 \$884,000 \$884,000 \$116,075 \$0 \$96,448 \$6,028 \$0 \$0 \$1119,000 \$1,103,000 \$1,177,000
Construction En Construction Inc Construction Inc Construction Inc Construction Inc Construction Inc Construction PRECONSTRUCT PRECONSTRUCT Right-of-Way [P Utilities + Railrox Design & Engine Subsurface Ut Transportation Environmental (in Miscellaneous [in Miscell	FION gineering lirects FION COSTS: JCTION ITEMS FION hase R] ad Work [Phase U] hering [Phase D] lity Engineering (SUE) Budget Systems Management & Operation of Systems Management & Operation of Systems Management & COST ESTIMATE RISK RESERVE C COST ESTIMATE RISK RESERVE In Start Sep-22	PROJECT BASE COST ESTIMATE DATE: 11/6/2018 Escalation from Estimate Date: Nov-18	SUBTOTAL (E) (CONSTRUCTION	% OF CI	11.0% 9.5% 20.4% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0% 0.0% 0.0% 16.2%	\$80,373 \$69,730 \$150,000 \$884,000 \$884,000 \$16,075 \$0 \$96,448 \$6,028 \$0 \$0 \$1119,000 \$1119,000
Construction En Construction Inc Construction Inc Construction Inc Construction Inc Construction Inc Construction Inc Construction PRECONSTRUCT PRECONSTRUCT ITEM DESCRIP Right-of-Way [P Utilities + Railron Design & Engine Subsurface Ut Transportation Environmental (i Miscellaneous [i	FION gineering lirects FION COSTS: JCTION ITEMS FION hase R] ad Work [Phase U] hering [Phase D] lity Engineering (SUE) Budget Systems Management & Operation of Systems Management & Operation of Systems Management & COST ESTIMATE RISK RESERVE C COST ESTIMATE RISK RESERVE In Start Sep-22	PROJECT BASE COST ESTIMATE DATE: 11/6/2018	SUBTOTAL (E) (CONSTRUCTION	WOF CI % OF CI	11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.0% 0.0% 0.0% 0.0% 0.0% 16.2% DN)	\$80,373 \$69,730 \$150,000 \$884,000 \$884,000 \$116,075 \$96,448 \$6,028 \$0 \$0 \$119,000 \$11,003,000 \$1,177,000

PROJECT P	PROFILE									
. 11002011	Project Name R2 BU! Project Number M-22-Y)					
	Sub-Account Number XXXXX Project Description M-22-Y									
	Project Work Type BR	RIDGE REPLACEMENT								
	Estimator:	E.A.	Date: 11/6/2018							
PROJECT L	OCATION & CHARACTERISTICS									
	Route: 350/ CDOT Region: 2	A	Begin MP: 47.1 City: NONE	End MP: County:			Length:	22.7		
	Seament Mid-point RefF	Pt 58.450	FIPS City: 00000 Latitude: 37.8382	FIPS County: Longitude:			G	OOGLE MAP LIN	K	
	Functional Classification: 4 Mino			Rural			Terrain:	1		
	AADT:	340	Truck ADT: 10	Tier Class:	Tier 4		Primary Surface:	1 Asphalt		
	Design Maturity: 0 -	- Conceptual	NEPA Action:	Cat/Ex		NEPA Statu	is: In Progress			
	Project Delivery Method: Des	sign-Bid-Build	Construction Start (MMM-YY)	Sep-22	Constructi	ion Duration (m	24.0			
A - MAJOR	CONSTRUCTION ITEMS					Mod	lel Estimate	Regio	on Estimate	
A-01	EARTHWORK			Unit	Qty A-01 Cost:	Unit Cost 0.0%	Cost \$0	Unit Cost 0.0%	Cost \$0	
A-02	PAVEMENT & BASES			Unit	Qty	Unit Cost	Cost	Unit Cost	Cost	
A-03	MAJOR STRUCTURES (CAT 300) ITEMS)			A-02 Cost:	0.0%	\$0	0.0%	\$0	
A-03_CAT30	00 PAYITEM GROUP CATEGORY 00 202 - Removal of Structures and C	Obstructions 202-004	O STRUCTURAL PAYITEM O0 - Removal of Bridge	Unit EACH	Qty 1	Unit Cost \$74,923.7	Cost \$74,924	Unit Cost \$74,923.7	Cost \$74,924	
A-03_CAT30	00 206 - Structure Excavation & Back 00 206 - Structure Excavation & Back 00 206 - Structure Excavation & Back	fill, Cofferdam an 206-001	00 - Structure Excavation 00 - Structure Backfill (Class 1) 00 - Structure Backfill (Class 2)	CY CY CY	0 0 5	\$21.6 \$45.3 \$48.2	\$0 \$0 \$241	\$36.0 \$66.0 \$77.0	\$0 \$0 \$385	
A-03 CAT30 A-03 CAT30	00 403 - Hot Bituminous Pavement 00 601 - Structural Concrete	403-348- 601-030	41 - Hot Mix Asphalt (Grading SX 00 - Concrete Class D	() (100) (PG TON CY	3 16	\$83.5 \$960.0	\$259 \$15,744	\$83.5 \$960.0	\$259 \$15,744	
A-03_CAT30	00 602 - Reinforcing Steel 00 606 - Guardrail and Bridge Rail 00 621 - Detour	606-1070	20 - Reinforcing Steel (Epoxy Co 00 - Bridge Rail Type 7 11 - Structure Temporary Access	LF	1,045 562 1	\$1.0 \$95.5 \$65,000.0	\$1,051 \$53,659 \$65,000	\$2.0 \$33.0 \$300,000.0	\$2,090 \$18,546 \$300,000	
	00 621 - Detour		12 - Structure Temporary Access	Road (Loca LS	0 03_CAT300 Cost:	\$50,000.0 94.2%	\$0 \$211,000	\$500,000.0 96.9%	\$0 \$412,000	
A-03_repl	BRIDGE REPLACEMENT				A-03_REPL Cost:	0.0%	\$0	0.0%	\$0	
A-03_repa	BRIDGE REPAIR									
					A-03_REPA Cost:	0.0%	\$0	0.0%	\$0	
A-03_wall	WALLS				A-03_WALL Cost:	0.0%	\$0	0.0%	\$0	
A-03_culv	MAJOR CULVERTS				A-03_CULV Cost:	R2 0.0%	\$0	0.0%	\$0	
	MISCELLANEOUS STRUCTURE 60 Inch Reinforced Concrete Pipe			Unit LF	Qty	Unit Cost \$350.0	Cost	Unit Cost	Cost	
A-03 misc A-03 misc A-03 misc	72 Inch Reinforced Concrete Pipe			LF LF	36 0 0	\$350.0 \$400.0 \$2,000.0	\$12,600 \$0 \$0	\$350.0 \$400.0 \$2,000.0	\$12,600 \$0 \$0	
A-03 misc	12x10 Foot Concrete Box Culvert 14x6 Foot Concrete Box Culvert (F	(Precast)		LF LF	0	\$2,500.0 \$2,700.0	\$0 \$0	\$2,500.0 \$2,700.0	\$0 \$0	
A-03 misc A-03 misc		Precast)		LF LF	0 0	\$2,900.0 \$3,100.0 \$3,300.0	\$0 \$0 \$0	\$2,900.0 \$3,100.0 \$3,300.0	\$0 \$0 \$0	
A-03 misc A-03 misc	20x8 Foot Concrete Box Culvert (F			LF LF	0	\$3,500.0 \$0.0	\$0 \$0	\$3,500.0 \$0.0	\$0 \$0	
					A-03_MISC Cost:	5.8% 100.0%	\$13,000 \$224,000	3.1%	\$13,000 \$425,000	
A-04	TRAFFIC/ITS			Unit	Qty	Unit Cost	Cost	Unit Cost	Cost	
A 05	OTHER CATECORY	IOTHER	MAJOR ITEMS	l IInit	A-04 Cost:	0.0% Unit Cost	\$0 Cost	0.0% Unit Cost	\$0 Cost	
A-05	OTHER CATEGORY	JOTHER	WIAJOR ITEMS	Unit	Qty	Unit Cost	Cost	Unit Cost	Cost	
					A-05 Cost:	0.0%	\$0	0.0%	\$0	
A MINOR (MAJOR CONSTRUCTION ITEMS	3		SUBTOTAL (A)		0.0%	\$0	0.0%	\$0 \$425,000	42.4% of Base Cos
	MAJOR CONSTRUCTION ITEMS	S Work Type	e: BRIDGE REPLACEM							
B - MINOR O	CONSTRUCTION ITEMS Removals / Resets		MIN % MEAN % 0.0% 2.4%	ENT	(% of A) Adjusted—>	% of (A)	\$224,000 Cost \$5,421	100.0% % of (A) 2.42%	\$425,000 Cost \$10,285	
B - MINOR (Removals / Resets Environmental Structural Drainage / Utilities		MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 0.3% 0.0% 4.3%	ENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average	(% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—>	% of (A) 2.42% 5.95% 1.64% 4.30%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632	100.0% % of (A) 2.42% 5.95% 5.00% 4.30%	\$425,000 Cost \$10,285 \$25,288 \$21,250 \$18,275	
B-01 B-02 B-03 B-04 B-05 B-06	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization	Work Type	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 0.3% 0.0% 4.3% 0.0% 3.1% 0.0% 16.6%	ENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 5.5% 3 - Average 23.5% 3 - Average	(% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—>	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 3.08% 16.56%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632 \$6,899 \$37,094	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 3.08% 16.56%	\$425,000 Cost \$10,285 \$25,288 \$21,250 \$18,275 \$13,090 \$70,380	
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Control / Dr Lighting & Electrical Permanent Signing & Striping	Work Type	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 0.3% 0.0% 3.1% 0.0% 3.1% 0.0% 20.0% 0.0% 20.0% 0.0% 20.0%	ENT MAX %	Adjusted—>	% of (A) 2.42% 5.95% 1.64% 4.30% 3.08% 20.00% 0.07%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632 \$6,899 \$37,094 \$44,800 \$0 \$1,725	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 3.08% 20.00% 0.00%	\$425,000 Cost \$10,285 \$25,288 \$21,250 \$18,275 \$13,090 \$70,380 \$85,000 \$0 \$3,273	
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Control / Dr. Lighting & Electrical	Work Type	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 1.3% 0.0% 4.3% 0.0% 16.6% 0.0% 10.6% 0.0% 10.6% 0.0% 10.6%	ENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 26.1% 3 - Average 3.2% 3 - Average	Adjusted—>	% of (A) 2.42% 5.95% 1.64% 4.30% 3.08% 16.56% 20.00%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632 \$6,899 \$37,094 \$44,800 \$0	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 3.08% 16.56% 20.00%	\$425,000 Cost \$10,285 \$25,288 \$21,250 \$18,275 \$13,090 \$70,380 \$85,000 \$0	
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Control / Dr. Lighting & Electrical Permanent Signing & Striping Traffic Signalization & ITS	Work Type	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 1.3% 0.0% 1.56% 0.0% 1.56% 0.0% 1.56% 0.0% 1.66% 0.0% 1.66% 0.0% 0.0% 0.0% 0.0%	ENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 26.1% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 3.2% 3 - Average 3.2% 3 - Average 3.2% 3 - Average 3.3 - Average 3.3 - Average 3.3 - Average 3.4% 3 - Average	Adjusted—>	% of (A) 2.42% 5.95% 1.64% 4.30% 3.08% 16.56% 0.00% 0.07% 0.00%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632 \$6,899 \$37,094 \$44,800 \$0 \$1,725	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 16.56% 0.00% 0.00% 0.77% 0.00%	\$425,000 Cost \$10,285 \$25,288 \$21,250 \$18,275 \$13,090 \$70,380 \$85,000 \$0 \$3,273 \$0	
B-MINOR (6) B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Control / Dr Lighting & Electrical Permanent Signing & Striping Traffic Signalization & ITS Miscellaneous	Work Type	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 1.3% 0.0% 1.56% 0.0% 1.56% 0.0% 1.56% 0.0% 1.66% 0.0% 1.66% 0.0% 0.0% 0.0% 0.0%	ENT MAX % 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 5.5% 3 - Average 26.1% 3 - Average 26.1% 3 - Average 3.2% 3 - Average 3.2% 3 - Average 3.4% 3 - Average 3.4% 3 - Average 1.2% 3 - Average	Adjusted—> (% of A)	% of (A) 2.42% 5.95% 1.64% 4.30% 3.08% 20.00% 0.00% 0.00% 0.33%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632 \$6,899 \$37,094 \$44,800 \$0 \$1,725 \$0 \$739	100.0% % of (A) 2.42% 5.95% 6.00% 4.30% 3.08% 20.00% 0.00% 0.00% 0.33%	\$425,000 Cost \$10,285 \$25,288 \$21,250 \$18,275 \$13,090 \$70,380 \$85,000 \$0 \$0 \$1,403	of Base Cost
B-MINOR (S B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Control / D. Lighting & Electrical Permanent Signing & Striping Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION ITEMS	Work Type	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 1.3% 0.0% 1.56% 0.0% 1.56% 0.0% 1.56% 0.0% 1.66% 0.0% 1.66% 0.0% 0.0% 0.0% 0.0%	ENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 5.5% 3 - Average 25.1% 3 - Average 26.1% 3 - Average 1.8% S - Average 1.2% S - Average 1.2% S - Average 1.2% S - Average 1.2% S - Average	Adjusted—> (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 20.00% 0.00% 0.77% 0.00% 0.33% 55.05%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632 \$6,899 \$37,094 \$44,800 \$0 \$1,725 \$0 \$739 \$123,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 0.00% 0.00% 0.77% 0.00% 0.33% 58.41%	\$425,000 Cost \$10,285 \$25,288 \$21,250 \$18,275 \$13,090 \$70,380 \$85,000 \$0 \$3,273 \$0 \$1,403 \$248,000	of Base Cost
B-MINOR (S B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-10 B-11 B CBI	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Control / Dr. Lighting & Electrical Permanent Signing & Striping Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION ITEMS CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisions (Work Type	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 0.3% 0.0% 16.6% 0.0% 3.1% 0.0% 16.6% 0.0% 20.0% 0.0% 20.0% 0.0% 0.3% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	ENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 25.1% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% S - Average 1.2% S - Average	Adjusted—> (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 20.00% 0.77% 0.00% 0.33% 55.05% 155.05%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632 \$6,899 \$37,094 \$44,800 \$0 \$1,725 \$0 \$739 \$123,000 \$347,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 20.00% 0.77% 0.00% 0.33% 58.41% 158.41%	\$425,000 Cost \$10,285 \$25,288 \$21,250 \$18,275 \$13,090 \$70,380 \$85,000 \$0 \$3,273 \$0 \$1,403 \$673,000	of Base Cos
B-MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-10 B-11 B CBI C-FORCE C-01 C-02 C-03 C-04	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Control / Dr. Lighting & Electrical Permanent Signing & Striping Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION ITEMS CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisions F/A - Project Communications TSM&O Traffic & Operations (fo	Work Type	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 0.3% 0.0% 4.3% 0.0% 3.1% 0.0% 3.6% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	ENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 25.5% 3 - Average 25.5% 3 - Average 26.1% 3 - Average 1.8% 3 - Average 1.8% 3 - Average SUBTOTAL (B) SUBTOTAL (A + B)	Adjusted—> (% of A) (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 3.08% 16.56% 20.00% 0.77% 0.00% 55.05% 155.05% % of CBI 6.00% 3.00% 0.11% 0.00%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632 \$6,899 \$37,094 \$44,800 \$0 \$1,725 \$0 \$739 \$123,000 \$20,820 \$10,410 \$3367 \$0 \$0	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 3.08% 20.00% 0.77% 0.00% 58.41% 158.41% % of CBI 6.00% 3.00% 0.11% 0.00%	\$425,000 Cost \$10,285 \$25,288 \$21,250 \$18,275 \$13,090 \$85,000 \$90 \$3,273 \$0 \$1,403 \$448,000 Cost \$40,380 \$20,190 \$712 \$90	of Base Cos
B-MINOR (S B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-09 B-10 B-11 B CBI	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Control / Dr. Lighting & Electrical Permanent Signing & Striping Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION ITEMS CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisions F/A - Friect Communications	Work Type	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 0.3% 0.0% 4.3% 0.0% 3.1% 0.0% 3.6% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	ENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 25.1% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% S - Average 1.2% S - Average	Adjusted—> (% of A) (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 3.08% 3.08% 20.00% 0.77% 0.00% 0.33% 55.05% 155.05%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632 \$6,899 \$37,094 \$44,800 \$0 \$1,725 \$0 \$739 \$123,000 \$20,820 \$10,410 \$387	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 3.08% 16.56% 20.00% 0.77% 0.00% 5.33% 58.41% 158.41% % of CBI 6.00% 3.00% 0.11%	\$425,000 Cost \$10,285 \$25,288 \$21,250 \$18,275 \$13,090 \$80,000 \$0 \$0 \$1,403 \$248,000 \$673,000 Cost \$40,380 \$20,190 \$712	of Base Cos
B-MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-10 B-11 B CBI C-FORCE C-01 C-02 C-03 C-04	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Control / Dr. Lighting & Electrical Permanent Signing & Striping Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION ITEMS CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisions F/A - Project Communications TSM&O Traffic & Operations (fo	Work Type	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 0.3% 0.0% 4.3% 0.0% 3.1% 0.0% 3.6% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	ENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 25.5% 3 - Average 25.5% 3 - Average 26.1% 3 - Average 1.8% 3 - Average 1.8% 3 - Average SUBTOTAL (B) SUBTOTAL (A + B)	Adjusted—> (% of A) (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 3.08% 16.56% 20.00% 0.77% 0.00% 55.05% 155.05% % of CBI 6.00% 3.00% 0.11% 0.00%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632 \$6,899 \$37,094 \$44,800 \$0 \$1,725 \$0 \$739 \$123,000 \$20,820 \$10,410 \$3367 \$0 \$0	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 3.08% 20.00% 0.77% 0.00% 58.41% 158.41% % of CBI 6.00% 3.00% 0.11% 0.00%	\$425,000 Cost \$10,285 \$25,288 \$21,250 \$18,275 \$13,090 \$85,000 \$90 \$3,273 \$0 \$1,403 \$448,000 Cost \$40,380 \$20,190 \$712 \$90	of Base Cos
B-MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-10 B-11 B CBI C-FORCE C-01 C-03 C-04 C	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Control / Dr. Lighting & Electrical Permanent Signing & Striping Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION ITEMS CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisions F/A - Project Communications TSM&O Traffic & Operations (fo	Work Type etour (MCR's)	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 0.3% 0.0% 4.3% 0.0% 3.1% 0.0% 3.16% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	ENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 25.5% 3 - Average 25.5% 3 - Average 26.1% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 3.4% 3 - Average SUBTOTAL (B) SUBTOTAL (A + B)	Adjusted—> (% of A) (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 20.00% 0.77% 0.00% 0.77% 5.55% 155.05% % of CBI 6.00% 3.00% 0.11% 0.00% 9.11%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632 \$6,899 \$37,094 \$44,800 \$0 \$1,725 \$0 \$739 \$123,000 \$347,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 20.00% 0.77% 0.00% 5.8.41% 158.41% % of CBI 6.00% 0.11% 9.11%	\$425,000 Cost \$10,285 \$25,288 \$21,250 \$18,275 \$13,090 \$70,380 \$85,000 \$0 \$3,273 \$0 \$1,403 \$673,000 Cost \$40,380 \$248,000 \$712 \$0 \$712 \$0 \$734,000	67.1% of Base Cos
B-MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-10 B-11 B CBI C-FORCE C-01 C-03 C-04 C	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Control / Dr. Lighting & Electrical Permanent Signing & Striping Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION ITEMS CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisions (FA - Project Communications TSM&O Traffic & Operations (fo F/A's & TSM&O CONSTRUCTION ITEMS	Work Type etour (MCR's)	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 0.3% 0.0% 4.3% 0.0% 3.1% 0.0% 3.16% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	ENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 5.5% 3 - Average 25.5% 3 - Average 25.1% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 3 - Average SUBTOTAL (B) SUBTOTAL (A + B) X 0.11% SUBTOTAL (C)	Adjusted—> (% of A) (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 3.08% 9.00% 0.00% 0.77% 0.00% 0.33% 55.05% 155.05% % of CBI 6.00% 3.00% 0.11% 0.00% 9.11%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632 \$6,899 \$37,094 \$44,800 \$0 \$1,725 \$0 \$739 \$123,000 Cost \$20,820 \$10,410 \$337 \$0 \$32,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 3.08% 16.56% 20.00% 0.77% 0.00% 58.41% 158.41% % of CBI 6.00% 3.00% 0.11% 0.00% 9.11%	\$425,000 Cost \$10,285 \$25,288 \$21,250 \$18,275 \$13,090 \$85,000 \$90 \$3,273 \$0 \$1,403 \$448,000 Cost \$40,380 \$20,190 \$712 \$90 \$61,000	67.1% of Base Cos
B-MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-10 B-10 C-FORCE C-01 C-02 C-03 C-04 C CI D-CONSTF	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Control / Dr. Lighting & Electrical Permanent Signing & Striping Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION ITEMS CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisions (F/A - Project Communications TSM&O Traffic & Operations (fo F/A's & TSM&O CONSTRUCTION ITEMS	Work Type etour (MCR's) r Reconstruction/Resurfa	MIN % MEAN % 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.3% 0.0% 0.0% 0.1% 0.0%	ENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 5.5% 3 - Average 25.5% 3 - Average 25.1% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 3 - Average SUBTOTAL (B) SUBTOTAL (A + B) X 0.11% SUBTOTAL (C)	(% of A) Adjusted—> (% of A) (% of A) (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 2.000% 0.00% 0.77% 0.00% 0.33% 55.05% 155.05% % of CBI 6.00% 3.00% 0.11% 169.20%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632 \$6,899 \$37,094 \$44,800 \$0 \$1,725 \$0 \$1,725 \$0 \$739 \$123,000 \$347,000 Cost \$20,820 \$10,410 \$367 \$0 \$32,000 \$379,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 20.00% 0.00% 0.77% 0.00% 58.41% 158.41% % of CBI 6.00% 3.00% 0.11% 172.71%	\$425,000 Cost \$10,285 \$25,285 \$21,250 \$18,275 \$13,090 \$70,380 \$85,000 \$0 \$3,273 \$0 \$1,403 \$248,000 Cost \$40,380 \$20,190 \$712 \$0 \$61,000	67.1% of Base Cos
B-MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-10 B-11 B CBI C-FORCE C-02 C-03 C-04 C CI D-CONSTE	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Control / Dr. Lighting & Electrical Permanent Signing & Striping Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION ITEMS CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisions (F/A - Project Communications TSM&O Traffic & Operations (fo F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INDIRE Construction Engineering Construction Indirects	Work Type etour (MCR's) r Reconstruction/Resurf	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 0.3% 0.0% 3.1% 0.0% 3.1% 0.0% 3.6% 0.0% 20.0% 0.0% 0.8% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	ENT MAX.% EFFORT 6.0% 3. Average 13.4% 3. Average 13.4% 3. Average 2.3% 5. Extensive 14.9% 3. Average 23.5% 3. Average 23.5% 3. Average 1.8% 3. Average 1.2% 3. Average 1.2% 3. Average 1.8% 3. Average 1.8% 3. Average 1.8% SUBTOTAL (B) SUBTOTAL (A + B)	(% of A) Adjusted—> (% of A) (% of A) (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 20.00% 0.77% 0.00% 0.33% 55.05% 155.05% % of CBI 6.00% 3.00% 0.11% 9.11%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632 \$6,899 \$37,094 \$44,800 \$0 \$1,725 \$0 \$739 \$123,000 \$347,000 Cost \$20,820 \$10,410 \$367 \$0 \$32,000 \$379,000	100.0% % of (A) 2.42% 5.95% 4.30% 4.30% 20.00% 0.77% 0.00% 0.33% 58.41% 158.41% **of CBI 6.00% 3.00% 0.11% 9.11% 172.71%	\$425,000 Cost \$10,285 \$25,288 \$21,250 \$18,275 \$13,090 \$70,380 \$85,000 \$0 \$3,273 \$0 \$1,403 \$673,000 Cost \$40,380 \$21,250 \$1,403 \$673,000 Cost \$40,380 \$20,190 \$712 \$0 \$712 \$0 \$61,000	67.1% of Base Cost
B-MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-10 B-10 B-10 C-FORCE C-01 C-02 C-03 C-04 C C D-CONSTF	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Control / Di Lighting & Electrical Permanent Signing & Striping Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION ITEMS CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisions F/A - Project Communications TSM&O Traffic & Operations (fo F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INDIRECT Construction Engineering	Work Type etour (MCR's) r Reconstruction/Resurf	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 0.3% 0.0% 3.1% 0.0% 3.1% 0.0% 3.6% 0.0% 20.0% 0.0% 0.8% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	ENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 3.2% 3 - Average 3.2% 3 - Average 1.8% 3 - Average 1.2% 3 - Average SUBTOTAL (A+B) X 0.11% SUBTOTAL (A+B)	(% of A) Adjusted—> (% of A) (% of A) (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 2.0.00% 0.77% 0.00% 0.77% 5.55% 155.05% **of CBI 6.00% 3.00% 0.11% 0.00% 9.11% 169.20% % of CI 10.95% 9.50%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632 \$6,899 \$37,094 \$44,800 \$0 \$1,725 \$0 \$739 \$123,000 Cost \$20,820 \$10,410 \$367 \$0 \$32,000 \$379,000 \$379,000	100.0% % of (A) 2.42% 5.95% 4.30% 4.30% 16.56% 20.00% 0.77% 0.00% 58.41% 158.41% 158.41% 172.71% 172.71%	\$425,000 Cost \$10,285 \$25,288 \$21,250 \$18,275 \$13,090 \$70,380 \$85,000 \$0 \$3,273 \$0 \$1,403 \$248,000 Cost \$40,380 \$20,190 \$712 \$0 \$61,000 \$734,000 \$734,000 \$734,000 \$888,073	67.1% of Base Cost
B-MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-10 B-10 B-10 C-FORCE C-01 C-02 C-03 C-04 C C D-CONSTF	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Control / Dr. Lighting & Electrical Permanent Signing & Striping Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION ITEMS CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisions (F/A - Project Communications TSM&O Traffic & Operations (fo F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INDIRE Construction Engineering Construction Indirects CONSTRUCTION BUILDERING PROJECT CONSTRUCTION BUILDERING	Work Type etour (MCR's) r Reconstruction/Resurf	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 0.3% 0.0% 3.1% 0.0% 3.1% 0.0% 3.6% 0.0% 20.0% 0.0% 0.8% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	ENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 1.8% SUBTOTAL (B) SUBTOTAL (A + B) X 0.11% SUBTOTAL (C) SUBTOTAL (C)	(% of A) Adjusted—> (% of A) (% of A) (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 20.00% 0.00% 0.33% 55.05% 155.05% % of CBI 6.00% 3.00% 9.11% 169.20% % of CI 10.95% 9.50% 20.45%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632 \$6,899 \$37,094 \$44,800 \$0 \$1,725 \$0 \$739 \$123,000 \$347,000 Cost \$20,820 \$11,410 \$387 \$0 \$32,000 \$379,000 \$379,000 \$379,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 16.56% 0.00% 0.77% 0.00% 0.33% 58.41% 158.41% % of CBI 6.00% 3.00% 9.11% 172.71% % of CI 10.95% 9.50% 20.45%	\$425,000 Cost \$10,285 \$25,288 \$21,250 \$18,275 \$13,090 \$70,380 \$85,000 \$0 \$1,403 \$248,000 Cost \$40,380 \$21,90 \$712 \$0 \$61,000 \$734,000 \$734,000 \$150,000 \$150,000 \$150,000 \$150,000	67.1% of Base Cos
B-MINOR (B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 C-10 C-10 C-02 C-03 C-04 C C CI D-CONSTF D-01 D-02 D	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Control / Di Lighting & Electrical Permanent Signing & Striping Traffic Signalization & ITS Miscellaneous Minor Construction ITEMS CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisions (F/A - Project Communications TSM&O Traffic & Operations (fo F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INDIRECT Construction Engineering RUCTION ENGINEERING PROJECT CONSTRUCTION BUILDINGS RIGHT-Of-Way [Phase R]	Work Type etour (MCR's) r Reconstruction/Resurf	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 0.3% 0.0% 3.1% 0.0% 3.1% 0.0% 3.6% 0.0% 20.0% 0.0% 0.8% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	ENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 3.2% 3 - Average 3.2% 3 - Average 1.8% 3 - Average 1.2% 3 - Average SUBTOTAL (A+B) X 0.11% SUBTOTAL (A+B)	(% of A) Adjusted—> (% of A) (% of A) (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 3.08% 10.55% 20.00% 0.77% 0.00% 0.33% 55.05% 155.05% % of CBI 6.00% 3.00% 9.11% 169.20% % of CI 10.95% 9.50% 20.45%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632 \$6,899 \$37,094 \$44,800 \$0 \$1,725 \$0 \$739 \$123,000 \$347,000 Cost \$20,820 \$10,410 \$387 \$0 \$32,000 \$379,000 \$457,000 \$457,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 16.56% 20.00% 0.77% 0.00% 0.33% 58.41% 158.41% 172.71% % of CBI 10.95% 9.50% 20.45%	\$425,000 Cost \$10,285 \$25,288 \$21,250 \$18,275 \$13,090 \$70,380 \$85,000 \$0 \$1,403 \$248,000 Cost \$40,380 \$20,390 \$71,2 \$0 \$61,000 \$734,000 \$734,000 \$734,000 \$880,373 \$69,730 \$150,000 \$884,000	67.1% of Base Cos
B-MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-10 B-11 B CBI C-FORCE C-01 C-02 C-03 C-04 C C E-PRECON E-01 E-02 E-03 E-03 E-03 E-03 E-03 E-03 E-03 E-03	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Control / Dr Lighting & Electrical Permanent Signing & Striping Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION ITEMS CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisions (F/A - Project Communications TSM&O Traffic & Operations (fo F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INDIRECTION ENGINEERING CONSTRUCTION ENGINEERING CONSTRUCTION ENGINEERING PROJECT CONSTRUCTION BUIL NSTRUCTION ITEMS Right-of-Way [Phase R] Utilities + Railroad Work [Phase Design & Engineering [Phase D] Subsurface Utility Enginee Design & Engineering [Phase R] Utilities + Railroad Work [Phase R] Subsurface Utility Enginee Design & Engineering [Phase R] Utilities + Railroad Work [Phase R] Utilities - Railroad Work [Phase R]	Work Type efour (MCR's) r Reconstruction/Resurf.	MIN % MEAN %	ENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 5 - Average 1.8% 5 - Average 1.8% 5 - Average 1.8% 5 - Average 1.8% Care Subtotal (A + B) SUBTOTAL (B) SUBTOTAL (C) SUBTOTAL (C) SUBTOTAL (C) SUBTOTAL (D) FRUCTION (A + B + C + D) AVG % EFFORT 5.2% 3 - Average	(% of A) Adjusted—> (% of A) (% of A) (% of A) (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 20.00% 0.00% 0.77% 0.00% 0.33% 55.05% 155.05% % of CBI 6.00% 3.00% 0.11% 0.00% 9.11% 169.20% % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 12.00%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632 \$6,899 \$37,094 \$44,800 \$0 \$1,725 \$0 \$739 \$123,000 \$347,000 Cost \$20,820 \$10,410 \$367 \$0 \$32,000 \$379,000 \$379,000 \$457,000 \$457,000 \$457,000	100.0% % of (A) 2.42% 5.95% 4.30% 4.30% 16.56% 0.00% 0.33% 58.41% 158.41% * of CBI 6.00% 3.00% 9.11% 172.71% * of CI 19.95% 9.50% 20.45% Indirect 9 % of CI 2.00% 0.00% 12.00%	\$425,000 Cost \$10,285 \$25,285 \$21,250 \$18,275 \$13,090 \$70,380 \$85,000 \$0 \$3,273 \$0 \$1,403 \$248,000 \$673,000 \$712 \$0 \$712 \$0 \$714,000 \$712 \$0 \$884,000 \$884,000 \$884,000	67.1% of Base Cos
B - MINOR (S B - M	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Control / D. Lighting & Electrical Permanent Signing & Striping Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION ITEMS CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisions (F/A - Project Communications TSM&O Traffic & Operations (fo F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INDIRECT Construction Engineering Construction Indirects CONSTRUCTION ENGINEERING PROJECT CONSTRUCTION BUILDING STRUCTION ITEMS RIGHT-Of-Way [Phase R] Utilities + Railroad Work [Phase Design & Engineering [Phase D] Subsurface Utility Enginee Transportation Systems M Environmental (NEPA) (Phase Enviro	Work Type etour (MCR's) or Reconstruction/Resurfa CTS OBET U) Irring (SUE) Budget anagement & Operation	MIN % MEAN %	ENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 5 - Average 1.8% 5 - Average 1.8% 5 - Average 1.8% 5 - Average 1.8% Care Subtotal (A + B) SUBTOTAL (B) SUBTOTAL (C) SUBTOTAL (C) SUBTOTAL (C) SUBTOTAL (D) FRUCTION (A + B + C + D) AVG % EFFORT 5.2% 3 - Average	(% of A) Adjusted—> (% of A) (% of A) (% of A) (% of A)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 2.00% 0.00% 0.77% 0.00% 0.33% 55.05% 155.05% % of CBI 6.00% 3.00% 9.11% 169.20% % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 12.00%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632 \$6,899 \$37,094 \$44,800 \$0 \$1,725 \$0 \$739 \$123,000 \$347,000 Cost \$20,820 \$10,410 \$367 \$0 \$32,000 \$379,000 \$457,000 \$457,000 \$457,000 \$457,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 16.56% 20.00% 0.77% 0.00% 58.41% 158.41% **of CBI 6.00% 3.00% 0.11% 172.71% **of CI 10.95% 9.50% 20.45% Indirect \$ **of CI 2.00% 0.00% 11.095% 9.1095%	\$425,000 Cost \$10,285 \$25,288 \$21,250 \$18,275 \$13,090 \$70,380 \$85,000 \$0 \$3,273 \$0 \$1,403 \$673,000 Cost \$40,380 \$21,250 \$1,403 \$673,000 Cost \$40,380 \$20,190 \$712 \$0 \$61,000 \$734,000 \$734,000 \$734,000 \$684,000 \$734,000	67.1% of Base Cos
B-MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-11 C-02 C-03 C-04 C CI D-CONSTF D-01 D-02 D E-01 E-02 E-03 E-03.1 E-03.2 E-03.2 E-04.	Removals / Resets Environmental Structural Drainage / Utilitities Roadway Appurtenances Mobilization Construction Traffic Control / Dr. Lighting & Electrical Permanent Signing & Striping Traffic Signalization & ITS Minscellaneous MINOR CONSTRUCTION ITEMS CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisions (F/A - Project Communications TSM&O Traffic & Operations (fo F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INDIRECTION ENGINEERING CONSTRUCTION ENGINEERING PROJECT CONSTRUCTION BUT NSTRUCTION ITEMS Right-of-Way [Phase R] Utilities + Railroad Work (Phase Design & Engineering [Phase D) Subsurface Utility Enginee Transportation Systems M.	Work Type etour (MCR's) or Reconstruction/Resurfa CTS OBET U) Irring (SUE) Budget anagement & Operation	MIN % MEAN %	ENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 5 - Average 1.8% 5 - Average 1.8% 5 - Average 1.8% 5 - Average 1.8% Care Subtotal (A + B) SUBTOTAL (B) SUBTOTAL (C) SUBTOTAL (C) SUBTOTAL (C) SUBTOTAL (D) FRUCTION (A + B + C + D) AVG % EFFORT 5.2% 3 - Average	(% of A) Adjusted—>	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 3.08% 10.55% 20.00% 0.77% 0.77% 155.05% **of CBI 6.00% 3.00% 0.11% 0.00% 9.11% 169.20% % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 0.75% 0.00% 0.75% 0.00%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632 \$6,899 \$37,094 \$44,800 \$0 \$1,725 \$0 \$739 \$123,000 \$347,000 \$347,000 Cost \$20,820 \$10,410 \$387 \$50 \$32,000 \$379,000 \$457,000 \$457,000 \$457,000 \$457,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 2.00% 0.00% 0.77% 0.00% 0.33% 58.41% 158.41% **of CBI 6.00% 3.00% 9.11% 172.71% **of CI 10.95% 9.50% 20.45% Indirect 9 **of CI 2.00% 0.00% 0.00% 12.00% 0.00% 12.00% 0.00% 12.00% 0.00% 0.00%	\$425,000 Cost \$10,285 \$25,288 \$21,250 \$18,275 \$13,090 \$70,380 \$85,000 \$0 \$3,273 \$0 \$1,403 \$248,000 \$673,000 \$673,000 \$712 \$0 \$61,000 \$712 \$10 \$61,000 \$884,000 \$884,000 \$884,000 \$884,000	67.1% of Base Cos 73.2% of Base Cos
B - MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 C-11 B CBI C-FORCE C-02 C-03 C-04 C C CI D - CONSTE D-01 E-02 D E-01 E-02 E-03 E-03 E-03 E-03 E-03 E-04 E-05	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Control / Dr. Lighting & Electrical Permanent Signing & Striping Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION ITEMS CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisions (F/A - Project Communications TSM&O Traffic & Operations (for F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INDIRECTION ENGINEERING CONSTRUCTION ENGINEERING CONSTRUCTION ENGINEERING PROJECT CONSTRUCTION BUT NSTRUCTION ITEMS Right-of-Way [Phase R] Utilities + Railroad Work [Phase Design & Engineering [Phase D) Subsurface Utility Engineer Transportation Systems M. Environmental (NEPA) [Phase E] Miscellaneous [Phase M] PRECONSTRUCTION ITEMS	Work Type etour (MCR's) r Reconstruction/Resurfi 6 & INDIRECTS DGET U) 1 1 1 1 1 1 1 1 1 1 1 1 1	MIN % MEAN % 0.0% 0.0% 0.4% 0.0% 0.0% 0.3% 0.0% 0.3% 0.0% 0.3% 0.0% 0.1% 0.0%	ENT MAX % EFFORT 6.0% 3. Average 13.4% 3. Average 13.4% 3. Average 2.3% 5. Extensive 14.9% 3. Average 22.5% 3. Average 22.5% 3. Average 22.5% 3. Average 22.1% 3. Average 1.2% 3. Average 1.2% 3. Average 1.2% 3. Average 1.2% SUBTOTAL (A + B) SUBTOTAL (A + B) X 0.11% SUBTOTAL (C) SUBTOTAL (A + B + C + D) FRUCTION (A + B + C + D) AVG % EFFORT 5.2% 3. Average P-Conceptual	(% of A) Adjusted—> (% of A) (% of CBI)	% of (A) 2.42% 5.95% 1.64% 4.30% 2.00% 0.00% 0.77% 0.00% 0.33% 55.05% 155.05% % of CBI 6.00% 3.00% 0.11% 0.00% 9.11% 169.20% % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 0.75% 0.00% 0.00% 0.00% 0.00%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632 \$6,899 \$37,094 \$44,800 \$0 \$1,725 \$0 \$739 \$123,000 \$347,000 Cost \$20,820 \$10,410 \$367 \$0 \$32,000 \$379,000 \$457,000 \$457,000 \$457,000 \$457,000 \$74,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 16.56% 20.00% 0.77% 0.00% 58.41% 158.41% **of CBI 6.00% 3.00% 0.11% 172.71% **of CI 10.95% 9.50% 20.45% Indirect 9 indirect 9 // of CI 2.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00%	\$425,000 Cost \$10,285 \$25,288 \$21,250 \$18,275 \$13,309 \$70,380 \$85,000 \$0 \$3,273 \$0 \$1,403 \$673,000 Cost \$40,380 \$2248,000 \$71,200	67.1% of Base Cos 73.2% of Base Cos 11.9% of Base Cos
B - MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 C-11 B CBI C-FORCE C-02 C-03 C-04 C C CI D - CONSTE D-01 E-02 D E-01 E-02 E-03 E-03 E-03 E-03 E-03 E-04 E-05	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Control / Dr. Lighting & Electrical Permanent Signing & Striping Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION ITEMS CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisions (F/A - Project Communications TSM&O Traffic & Operations (for F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INDIRECTION ENGINEERING CONSTRUCTION ENGINEERING CONSTRUCTION ENGINEERING PROJECT CONSTRUCTION BUILDING SUBSURFACE Utility Engineer Transportation Systems M Environmental (NEPA) [Phase E] Miscellaneous [Phase M]	Work Type etour (MCR's) r Reconstruction/Resurfi 6 & INDIRECTS DGET U) 1 1 1 1 1 1 1 1 1 1 1 1 1	MIN % MEAN % 0.0% 0.0% 0.4% 0.0% 0.0% 0.3% 0.0% 0.3% 0.0% 0.3% 0.0% 0.1% 0.0%	ENT MAX % EFFORT 6.0% 3. Average 13.4% 3. Average 13.4% 3. Average 2.3% 5. Extensive 14.9% 3. Average 22.5% 3. Average 22.5% 3. Average 23.5% 3. Average 1.8% 3. Average 1.2% 3. Average 1.8% 3. Average 1.8% SUBTOTAL (A + B) SUBTOTAL (A + B) X 0.11% SUBTOTAL (C) SUBTOTAL (A + B + C + D) FRUCTION (A + B + C + D) AVG % EFFORT 5.2% 3. Average	(% of A) Adjusted—> (% of A) (% of CBI)	% of (A) 2.42% 5.95% 1.64% 4.30% 2.00% 0.00% 0.77% 0.00% 0.33% 55.05% 155.05% % of CBI 6.00% 3.00% 0.11% 0.00% 9.11% 169.20% % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 0.75% 0.00% 0.00% 0.00% 0.00%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632 \$6,899 \$37,094 \$44,800 \$0 \$1,725 \$0 \$739 \$123,000 \$347,000 Cost \$20,820 \$10,410 \$367 \$0 \$32,000 \$379,000 \$457,000 \$457,000 \$457,000 \$457,000 \$457,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 20.00% 0.00% 0.77% 0.00% 58.41% 158.41% **of CBI 6.00% 3.00% 0.11% 172.71% **of CI 10.95% 9.50% 20.45% Indirect \$ **of CI 2.00% 0.00% 0.00% 12.00% 0.00% 0.00% 0.00% 12.00% 0.00% 0.00% 0.00% 16.21%	\$425,000 Cost \$10,285 \$25,285 \$21,250 \$18,275 \$13,090 \$70,380 \$50 \$3,273 \$0 \$1,403 \$673,000 Cost \$40,380 \$248,000 \$673,000 \$734,000 \$734,000 \$734,000 \$673,000 \$673,000 \$740 \$740 \$750 \$750 \$750 \$750 \$750 \$750 \$750 \$75	67.1% of Base Cor 73.2% of Base Cor 11.9% of Base Cor
B - MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 C-11 B CBI C-FORCE C-02 C-03 C-04 C C CI D - CONSTE D-01 E-02 D E-01 E-02 E-03 E-03 E-03 E-03 E-03 E-04 E-05	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Control / Dr. Lighting & Electrical Permanent Signing & Striping Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION ITEMS CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisions (F/A - Project Communications TSM&O Traffic & Operations (fo F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INDIRECTION ENGINEERING CONSTRUCTION ENGINEERING PROJECT CONSTRUCTION BUIL INSTRUCTION ITEMS Right-of-Way [Phase R] Utilities + Railroad Work [Phase E] Utilities + Railroad Work [Phase E] Usus Light-of-Way [Phase R] Utilities + Railroad Work [Phase E] Miscelianeous [Phase M] PRECONSTRUCTION ITEMS	Work Type etour (MCR's) r Reconstruction/Resurfi 6 & INDIRECTS DGET U) 1 1 1 1 1 1 1 1 1 1 1 1 1	MIN % MEAN % 0.0% 0.0% 0.4% 0.0% 0.0% 0.3% 0.0% 0.3% 0.0% 0.3% 0.0% 0.1% 0.0%	ENT MAX % EFFORT 6.0% 3. Average 13.4% 3. Average 13.4% 3. Average 2.3% 5. Extensive 14.9% 3. Average 22.5% 3. Average 22.5% 3. Average 22.5% 3. Average 22.1% 3. Average 1.2% 3. Average 1.2% 3. Average 1.2% 3. Average 1.2% SUBTOTAL (A + B) SUBTOTAL (A + B) X 0.11% SUBTOTAL (C) SUBTOTAL (A + B + C + D) FRUCTION (A + B + C + D) AVG % EFFORT 5.2% 3. Average P-Conceptual	(% of A) Adjusted—> (% of A) (% of CBI)	% of (A) 2.42% 5.95% 1.64% 4.30% 2.00% 0.00% 0.77% 0.00% 0.33% 55.05% 155.05% % of CBI 6.00% 3.00% 0.11% 0.00% 9.11% 169.20% % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 0.75% 0.00% 0.00% 0.00% 0.00%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632 \$6,899 \$37,094 \$44,800 \$0 \$1,725 \$0 \$739 \$123,000 \$347,000 Cost \$20,820 \$10,410 \$367 \$0 \$32,000 \$379,000 \$457,000 \$457,000 \$457,000 \$457,000 \$74,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 16.56% 20.00% 0.77% 0.00% 58.41% 158.41% **of CBI 6.00% 3.00% 0.11% 172.71% **of CI 10.95% 9.50% 20.45% Indirect 9 indirect 9 // of CI 2.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00%	\$425,000 Cost \$10,285 \$25,285 \$21,250 \$18,275 \$13,090 \$70,380 \$50 \$3,273 \$0 \$1,403 \$673,000 Cost \$40,380 \$248,000 \$673,000 \$734,000 \$734,000 \$734,000 \$673,000 \$673,000 \$740 \$740 \$750 \$750 \$750 \$750 \$750 \$750 \$750 \$75	67.1% of Base Cos 73.2% of Base Cos 110.0%
B - MINOR (B-01 B-02 B-03 B-04 B-05 B-07 B-08 B-09 B-11 B CBI C-FORCE C-02 C-03 C-04 C C D-CONSTF D-01 D-02 D E-01 E-02 E-03 E-03 E-03 E-04 E-05 E	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Control / Dr. Lighting & Electrical Permanent Signing & Striping Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION ITEMS CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisions (F/A - Project Communications TSM&O Traffic & Operations (fo F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INDIRECTION ENGINEERING CONSTRUCTION ENGINEERING PROJECT CONSTRUCTION BUIL INSTRUCTION ITEMS Right-of-Way [Phase R] Utilities + Railroad Work [Phase E] Utilities + Railroad Work [Phase E] Usus Light-of-Way [Phase R] Utilities + Railroad Work [Phase E] Miscelianeous [Phase M] PRECONSTRUCTION ITEMS	Work Type efour (MCR's) r Reconstruction/Resurf. CTS 3 & INDIRECTS DGET U] Irring (SUE) Budget anagement & Operation () WATE	MIN % MEAN % 0.0% 0.0% 0.4% 0.0% 0.0% 0.3% 0.0% 0.3% 0.0% 0.3% 0.0% 0.1% 0.0%	ENT MAX % EFFORT 6.0% 3. Average 13.4% 3. Average 13.4% 3. Average 2.3% 5. Extensive 14.9% 3. Average 22.5% 3. Average 22.5% 3. Average 22.5% 3. Average 22.1% 3. Average 1.2% 3. Average 1.2% 3. Average 1.2% 3. Average 1.2% SUBTOTAL (A + B) SUBTOTAL (A + B) X 0.11% SUBTOTAL (C) SUBTOTAL (A + B + C + D) FRUCTION (A + B + C + D) AVG % EFFORT 5.2% 3. Average P-Conceptual	(% of A) Adjusted—> (% of A) (% of CBI)	% of (A) 2.42% 5.95% 1.64% 4.30% 2.00% 0.00% 0.77% 0.00% 0.33% 55.05% 155.05% % of CBI 6.00% 3.00% 0.11% 0.00% 9.11% 169.20% % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 0.75% 0.00% 0.00% 0.00% 0.00%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632 \$6,899 \$37,094 \$44,800 \$0 \$1,725 \$0 \$739 \$123,000 \$347,000 Cost \$20,820 \$10,410 \$367 \$0 \$32,000 \$379,000 \$457,000 \$457,000 \$457,000 \$457,000 \$74,000	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 20.00% 0.00% 0.77% 0.00% 58.41% 158.41% **of CBI 6.00% 3.00% 0.11% 172.71% **of CI 10.95% 9.50% 20.45% Indirect \$ **of CI 2.00% 0.00% 0.00% 12.00% 0.00% 0.00% 0.00% 12.00% 0.00% 0.00% 0.00% 16.21%	\$425,000 Cost \$10,285 \$25,285 \$21,250 \$18,275 \$13,090 \$70,380 \$50 \$3,273 \$0 \$1,403 \$673,000 Cost \$40,380 \$248,000 \$673,000 \$734,000 \$734,000 \$734,000 \$673,000 \$673,000 \$740 \$740 \$750 \$750 \$750 \$750 \$750 \$750 \$750 \$75	67.1% 67.1% of Base Cos 73.2% of Base Cos
B - MINOR (B-01 B-02 B-03 B-04 B-05 B-07 B-08 B-09 B-11 B CBI C-FORCE C-02 C-03 C-04 C C D-CONSTF D-01 D-02 D E-01 E-02 E-03 E-03 E-03 E-04 E-05 E	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Control / Dr. Lighting & Electrical Permanent Signing & Striping Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION ITEMS CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisions (for F/A - Project Communications TSM&O Traffic & Operations (for F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INDIRECTION ENGINEERING CONSTRUCTION ENGINEERING PROJECT CONSTRUCTION BUIL INSTRUCTION ITEMS Right-of-Way [Phase R] Utilities + Railroad Work [Phase E) Usubsurface Utility Enginee Transportation Systems M Environmental (NEPA) [Phase E Miscellaneous [Phase M] PRECONSTRUCTION ITEMS PROJECT BASE COST ESTIM	Work Type efour (MCR's) r Reconstruction/Resurf. CTS 3 & INDIRECTS DGET U] Irring (SUE) Budget anagement & Operation () WATE	MIN % MEAN % O.0% O.0%	ENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 5 - Average 1.2% 8 - Average 1.2% 8 - Average 1.2% 13 - Average 1.2% 3 - Average 1.2% 3 - Average 1.2% 3 - Average 1.2% SUBTOTAL (C) SUBTOTAL (A + B + C + D) FRUCTION (A + B + C + D) AVG % EFFORT 5.2% 3 - Average 1 - Conceptual	(% of A) Adjusted—> (% of A) (% of CBI)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 20.00% 0.00% 0.33% 55.05% 155.05% \$ of CBI 6.00% 3.00% 0.11% 169.20% % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 12.00% 0.00% 12.00% 12.00% 19.53%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632 \$6,899 \$37,094 \$44,800 \$0 \$1,725 \$0 \$739 \$123,000 \$1,725 \$0 \$20,820 \$1,040 \$347,000 \$347,000 \$347,000 \$379,000 \$379,000 \$379,000 \$379,000 \$379,000 \$457,000 \$457,000 \$457,000 \$457,000 \$457,000 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 16.56% 20.00% 0.77% 0.00% 0.33% 58.41% 158.41% 158.41% 172.71% % of CBI 10.95% 9.50% 20.45% Indirect 9 % of CI 2.00% 0.75% 0.00% 1.75% 0.00%	\$425,000 Cost \$10,285 \$25,285 \$21,250 \$18,275 \$13,090 \$70,380 \$85,000 \$0 \$3,273 \$0 \$1,403 \$673,000 \$673,000 \$74,000 \$74,000 \$74,000 \$755,000 \$755,00	67.1% of Base Cos 73.2% of Base Cos 11.9% of Base Cos 1100.0% of Base Cos
B - MINOR (B-01 B-02 B-03 B-04 B-05 B-07 B-08 B-09 B-11 B CBI C-FORCE C-02 C-03 C-04 C C D-CONSTF D-01 D-02 D E-01 E-02 E-03 E-03 E-03 E-04 E-05 E	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Control / Dr. Lighting & Electrical Permanent Signing & Striping Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION ITEMS CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisions (for F/A - Project Communications TSM&O Traffic & Operations (for F/A - Project Communications TSM&O Traffic & Operations (for F/A - Project Communications CONSTRUCTION ITEMS RUCTION ENGINEERING & INDIRECT CONSTRUCTION ENGINEERING CONSTRUCTION ENGINEERING PROJECT CONSTRUCTION BUIL STRUCTION ITEMS Right-of-Way [Phase R] Utilities + Railroad Work [Phase E] Subsurface Utility Enginee Transportation Systems M Environmental (NEPA) [Phase E] Miscellaneous [Phase M] PRECONSTRUCTION ITEMS RVE PROJECT BASE COST ESTIMAT	Work Type etour (MCR's) r Reconstruction/Resurfi CTS G & INDIRECTS DGET U) Ining (SUE) Budget anagement & Operation 1 WATE TE RISK RESERVE	MIN % MEAN % O.0% O.0%	ENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 13.4% 3 - Average 2.3% 5 - Extensive 14.9% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 5 - Average 1.2% 8 - Average 1.2% 8 - Average 1.2% 13 - Average 1.2% 3 - Average 1.2% 3 - Average 1.2% 3 - Average 1.2% SUBTOTAL (C) SUBTOTAL (A + B + C + D) FRUCTION (A + B + C + D) AVG % EFFORT 5.2% 3 - Average 1 - Conceptual	(% of A) Adjusted—> (% of A) (% of CBI)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 20.00% 0.00% 0.33% 55.05% 155.05% \$ of CBI 6.00% 3.00% 0.11% 169.20% % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 12.00% 0.00% 12.00% 12.00% 19.53%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632 \$6,899 \$37,094 \$44,800 \$0 \$1,725 \$0 \$739 \$123,000 \$347,000 Cost \$20,820 \$10,410 \$367 \$0 \$32,000 \$379,000 \$379,000 Cost \$41,501 \$36,005 \$78,000 \$457,000 \$457,000 \$457,000 \$457,000 \$457,000 \$457,000 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 16.56% 20.00% 0.77% 0.00% 0.33% 58.41% 158.41% 158.41% 172.71% % of CBI 10.95% 9.50% 20.45% Indirect 9 % of CI 2.00% 0.75% 0.00% 1.75% 0.00%	\$425,000 Cost \$10,285 \$25,285 \$21,250 \$18,275 \$13,390 \$70,380 \$85,000 \$0 \$3,273 \$0 \$1,403 \$248,000 \$673,000 \$673,000 \$712 \$0 \$712 \$0 \$61,000 \$884,000 \$884,000 \$884,000 \$884,000 \$884,000 \$16,075 \$0 \$16,075 \$0 \$16,075 \$0 \$16,075 \$0 \$16,075 \$0 \$16,075 \$0 \$16,075 \$0 \$16,075 \$0 \$16,075 \$0 \$16,075 \$0 \$16,075 \$0 \$119,000 \$1,003,000	67.1% of Base Cos 73.2% of Base Cos 11.9% of Base Cos 1100.0% of Base Cos
B - MINOR (B-01 B-02 B-03 B-04 B-05 B-08 B-09 B-10 B-10 C-FORCE C-01 C-02 C-03 C-04 C C CI D - CONSTR D-02 D E-04 E-05 E-04 E-05 E E RISK RESEI	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Control / Dr. Lighting & Electrical Permanent Signing & Striping Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION ITEMS CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisions (F/A - Project Communications TSM&O Traffic & Operations (for F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INDIRECTION ENGINEERING CONSTRUCTION ENGINEERING CONSTRUCTION ENGINEERING PROJECT CONSTRUCTION BUILDING SUBSURFACE Utility Enginee Transportation Systems M Environmental (NEPA) [Phase E] Miscellaneous (Phase M) PRECONSTRUCTION ITEMS PROJECT BASE COST ESTIMATE RVE PROBABILISTIC COST ESTIMATE RVE PROBABILISTIC COST ESTIMATE ROAD ROAD ROAD ROAD REVE PROBABILISTIC COST ESTIMATE ROAD ROA	Work Type etour (MCR's) r Reconstruction/Resurf. G & INDIRECTS DGET U) Irring (SUE) Budget anagement & Operation) WATE TE RISK RESERVE	MIN % MEAN %	ENT MAX % EFFORT 6.0% 3. Average 13.4% 3. Average 13.4% 3. Average 2.3% 5. Extensive 14.9% 3. Average 22.5% 3. Average 22.5% 3. Average 22.5% 3. Average 23.1% 3. Average 1.2% 3. Average 1.2% 3. Average 1.2% SUBTOTAL (A + B) SUBTOTAL (A + B) X 0.11% SUBTOTAL (A + B + C) SUBTOTAL (A + B + C) SUBTOTAL (B + C) SUBTOTAL (C)	(% of A) Adjusted—> (% of A) (% of CBI)	100.0% % of (A) 2.42% 5.95% 1.64% 4.30% 20.00% 0.00% 0.33% 55.05% 155.05% \$ of CBI 6.00% 3.00% 0.11% 169.20% % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 12.00% 0.00% 19.53%	\$224,000 Cost \$5,421 \$13,328 \$3,670 \$9,632 \$6,899 \$37,094 \$44,800 \$0 \$1,725 \$0 \$739 \$123,000 \$347,000 Cost \$20,820 \$10,410 \$367 \$0 \$32,000 \$379,000 \$457,000 \$457,000 \$457,000 RISK RESERVE ROJECT COST (P70)	100.0% % of (A) 2.42% 5.95% 5.00% 4.30% 16.56% 20.00% 0.77% 0.00% 0.33% 158.41% 158.41% 172.71% % of CBI 10.95% 9.50% 20.45% Indirect 9 % of CI 2.00% 0.75% 0.00% 16.21% RE/ME Ratic	\$425,000 Cost \$10,285 \$25,288 \$21,250 \$18,275 \$13,090 \$70,380 \$85,000 \$0 \$3,273 \$0 \$1,403 \$673,000 Cost \$40,380 \$2248,000 \$71,200	67.1% of Base Cost 73.2% of Base Cost 11.9% of Base Cost 100.0% of Base Cost

Last Update: 22-Oct-18



	OFILE	1				Model Version 3 Rev	
	Project Name	R2 BUNDLE			1	Last Update:	: 22-Oct-18
	Project Number	G-12-C XXXXX			•		
	Sub-Account Number Project Description	G-12-C					
	Project Work Type	BRIDGE REPLACEMI	ENT				
	Estimator:	E.A.	Date: 11/6/2018				
CT LO	CATION & CHARACTERIST	rics .					
<u> </u>	SATION & SHARASTERIO						
	Route:	009B	Begin MP: 53.9	End MP:	71.4	Length:	17.5
	CDOT Region:	2	FIPS City: NONE FIPS City: 00000	FIPS County: FIPS County:			
	Commont Mid waint	DofD4 60.650	<u> </u>	•			COOCI E MAD I INK
	Segment Mid-point	RefPt 62.650		Longitude:	-105.9730		OOGLE MAP LINK
	Functional Classification:	4 Minor Arterial	Urban-Rural Class: 1 Rural	Terrain:	2	Rolling	ı
	AADT:	1,900	Truck ADT: 60	Tier Class:	Tier 4	Primary Surface:	1 Asphalt
	Design Maturity:	0 - Conceptual	NEPA Action: Cat/Ex		NEPA Status:	In Progress	1
	Project Delivery Method:	Design-Bid-Build	Construction Start (MMM-YY) Sep-22	Cons	truction Duration (mo)	24.0	
						REGION'S E	STIMATE
	ONSTRUCTION COSTS:						
	MAJOR CONSTRUCTION	ON ITEMS		<u> </u>	,	DEDCE:	
CAT 1	ITEM DESCRIPTION Earthwork	<u> </u>		QTY 0	UNIT CY	PERCENTAGE 0.0%	COST \$0
)2 AT300	Pavement & Bases Itemized Structure			N/A N/A	SY N/A	0.0% 98.1%	\$0 \$678,000
_repl	Bridge Replacement			0	DECK AREA (SF)	0.0%	\$0
repa wall	Bridge Repair Walls			0	DECK AREA (SF) SF	0.0% 0.0%	\$0 \$0
culv misc	Major Culverts Miscellaneous Structures			0 36	LF LS	0.0%	\$0 \$13,000
04	Traffic / ITS			N/A	N/A	0.0%	\$0
05	Other Major Items			N/A SUBTOTAL (A)	N/A	0.0%	\$691,000
3	MINOR CONSTRUCTIO	N ITEMS		SUBTOTAL (A)	1	100.0%	00U,1 c o¢
CAT	ITEM DESCRIPTION			EFFORT	UNIT	PERCENTAGE	COST
01 02	Removals / Resets Environmental			3 - Average 3 - Average	% OF A % OF A	2.4% 6.0%	\$16,722 \$41,115
)3	Structural	-		3 - Average	% OF A % OF A	0.3% 4.3%	\$2,280
04 05	Drainage / Utilities Roadway Appurtenances			3 - Average 3 - Average	% OF A	3.1%	\$29,713 \$21,283
)6)7	Mobilization Construction Traffic Contro	ol / Detour		3 - Average 3 - Average	% OF A % OF A	16.6% 20.0%	\$114,430 \$138,200
)8)9	Lighting & Electrical			3 - Average	% OF A	0.0%	\$0
)	Permanent Signing & Stripi Traffic Signalization & ITS	ny		3 - Average 3 - Average	% OF A % OF A	0.8% 0.0%	\$5,321 \$0
	Miscellaneous			3 - Average	% OF A	0.3%	\$2,280
				SUBTOTAL (B)	% OF A	53.7%	\$371,000
			CONTRUCTION BID ITEMS (A + B)	СВІ	% OF A	153.7%	\$1,062,000
	FORCE ACCOUNTS &	TSM&O					
	ITEM DESCRIPTION	TSM&O			UNIT	PERCENTAGE	COST
CAT	ITEM DESCRIPTION F/A - General				UNIT % OF CBI % OF CBI	PERCENTAGE 6.0% 3.0%	\$63,720
CAT 1 2 3	F/A - General F/A - Minor Contract Revisi F/A - Project Communication	ions (MCR's)			% OF CBI % OF CBI % OF CBI	6.0% 3.0% 0.1%	\$63,720 \$31,860 \$1,159
CAT 01 02 03	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi	ions (MCR's)		SUBTOTAL (C)	% OF CBI % OF CBI % OF CBI	6.0% 3.0% 0.1% 0.0%	\$63,720 \$31,860 \$1,159 \$0
1 2 3	F/A - General F/A - Minor Contract Revisi F/A - Project Communication	ions (MCR's)	CONSTRUCTION ITEMS (A . B . C)	SUBTOTAL (C)	% OF CBI % OF CBI % OF CBI % OF CBI	6.0% 3.0% 0.1% 0.0% 9.1%	\$63,720 \$31,860 \$1,159 \$0 \$97,000
2	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation	ions (MCR's) ons ns	CONSTRUCTION ITEMS (A + B + C)	SUBTOTAL (C)	% OF CBI % OF CBI % OF CBI	6.0% 3.0% 0.1% 0.0%	\$63,720 \$31,860 \$1,159 \$0
1 2 3	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation	ions (MCR's)	, ,		% OF CBI % OF CBI % OF CBI % OF CBI	6.0% 3.0% 0.1% 0.0% 9.1%	\$63,720 \$31,860 \$1,159 \$0 \$97,000
CAT 11 12 13 14 14 15 16 16 16 16 16 16 16	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI	ions (MCR's) ons ns	, ,		% OF CBI W OF CBI	6.0% 3.0% 0.1% 0.0% 9.1% 167.7%	\$63,720 \$31,860 \$1,159 \$0 \$97,000 \$1,159,000
CAT 1 2 3 4 4 CAT 1	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation	ions (MCR's) ons ns	, ,		% OF CBI % OF CBI % OF CBI % OF CBI % OF CBI	6.0% 3.0% 0.1% 0.0% 9.1%	\$63,720 \$31,860 \$1,159 \$0 \$97,000
AT	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGINEER ITEM DESCRIPTION Construction Engineering	ions (MCR's) ons ns	, ,	CI	% OF CBI % OF A UNIT % OF CI % OF CI	6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5%	\$63,720 \$31,860 \$1,159 \$0 \$97,000 \$1,159,000 \$1,159,000 \$1,159,000
1 2 3 4	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGINEER ITEM DESCRIPTION Construction Engineering	ions (MCR's) ons ns	S	CI SUBTOTAL (D)	% OF CBI W OF A UNIT % OF CI	6.0% 3.0% 0.1% 0.0% 9.1% 167.7%	\$63,720 \$31,860 \$1,159 \$0 \$97,000 \$1,159,000 \$1,159,000 \$126,911 \$110,105
1 2 3 4 CAT	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGINEER ITEM DESCRIPTION Construction Engineering	ions (MCR's) ons ns	, ,	CI SUBTOTAL (D)	% OF CBI % OF A UNIT % OF CI % OF CI	6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5%	\$63,720 \$31,860 \$1,159 \$0 \$97,000 \$1,159,000 \$1,159,000 \$1,159,000
CAT D1 D2 CAT D1 D2 CAT D1 D2 D2 D1 D2 D1 D2 D1 D1 D2 D1 D1 D2 D1	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGINEER ITEM DESCRIPTION Construction Engineering	ions (MCR's) ons ns	S	CI SUBTOTAL (D)	% OF CBI % OF A UNIT % OF CI % OF CI	6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5%	\$63,720 \$31,860 \$1,159 \$0 \$97,000 \$1,159,000 \$1,159,000 \$126,911 \$110,105
CAT 01 02 03 04 01 02 03 01 01 01 01 01 01 01 01 01 01 01 01 01	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGINEED ITEM DESCRIPTION Construction Engineering Construction Indirects	ions (MCR's) ons ons NEERING & INDIRECTS	S	CI SUBTOTAL (D)	% OF CBI % OF A UNIT % OF CI % OF CI	6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5%	\$63,720 \$31,860 \$1,159 \$0 \$97,000 \$1,159,000 \$1,159,000 \$126,911 \$110,105
CAT 01 02 03 04 04 04 05 05 05 05 05 05 05 05 05 05 05 05 05	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGINE ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION COS PRECONSTRUCTION ITEM DESCRIPTION	ions (MCR's) ons ons NEERING & INDIRECTS	S	CI SUBTOTAL (D)	% OF CBI WOF A UNIT % OF CI % OF CI W OF CI UNIT	6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4%	\$63,720 \$31,860 \$1,159 \$0 \$97,000 \$1,159,000 \$1,159,000 \$1,159,000 \$1,396,000 \$1,396,000
CAT D1 CAT D1 CAT D1 D1 D2 D1	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGINE ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION COS PRECONSTRUCTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [P	ions (MCR's) ons ons ons NEERING & INDIRECTS STS: TEMS	S	CI SUBTOTAL (D)	% OF CBI % OF A UNIT % OF CI % OF CI % OF CI	6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0%	\$63,720 \$31,860 \$1,159 \$0 \$97,000 \$1,159,000 \$1,159,000 \$1,26,911 \$110,105 \$237,000 \$1,396,000 \$1,396,000
CAT 01	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGINE ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION COST	ions (MCR's) ons ons ons ons NEERING & INDIRECTS TEMS Phase U] ise D]	S	CI SUBTOTAL (D)	% OF CBI **OF A **UNIT % OF CI	6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0%	\$63,720 \$31,860 \$1,159 \$0 \$97,000 \$1,159,000 \$1,159,000 \$126,911 \$110,105 \$237,000 \$1,396,000 \$1,396,000
CAT 01 02 03 04 04 04 01 02 03 03 04 04 01 02 01 02 03 03 03 03 03 03 03 03 03 03 03 03 03	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGINE ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION COS PRECONSTRUCTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase R] Subsurface Utility Engine Transportation Systems Means and Systems Means and Systems Means and Subsurface Utility Engine Transportation Systems Means and Systems Means a	ions (MCR's) ons ons NEERING & INDIRECTS TEMS Phase U] ase D] sering (SUE) Budget Management & Operation (1	PROJECT CONSTRUCTION BUDG	CI SUBTOTAL (D)	# OF CBI # OF A # OF A # OF A # UNIT # OF CI	6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 0.8% 0.0%	\$63,720 \$31,860 \$1,159 \$0 \$97,000 \$1,159,000 \$1,159,000 \$1,159,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000
CAT 1 2 2 3 3 1 3 3 2 4 4	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGINE ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION COS PRECONSTRUCTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase R] Design & Engineering [Phase R] Subsurface Utility Engine	ions (MCR's) ons ons NEERING & INDIRECTS TEMS Phase U] ase D] sering (SUE) Budget Management & Operation (1	PROJECT CONSTRUCTION BUDG	CI SUBTOTAL (D)	% OF CBI % OF CI	6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.8%	\$63,720 \$31,860 \$1,159 \$0 \$97,000 \$1,159,000 \$1,159,000 \$126,911 \$110,105 \$237,000 \$1,396,000 \$1,396,000 \$1,396,000
CAT 1 2 2 3 4 4 CCAT 1 1 2 2 3 3 5 1 5 2 4 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGINE ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION COS PRECONSTRUCTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase R] Design & Engineering [Phase Subsurface Utility Engine Transportation Systems M Environmental (NEPA) [Phase R]	ions (MCR's) ons ons NEERING & INDIRECTS TEMS Phase U] ase D] sering (SUE) Budget Management & Operation (1	PROJECT CONSTRUCTION BUDG	CI SUBTOTAL (D)	W OF CBI	6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 0.0% 0.0% 0.0% 0.0%	\$63,720 \$31,860 \$1,159 \$0 \$97,000 \$1,159,000 \$1,159,000 \$1,159,000 \$1,396,000 \$237,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,500 \$1
CAT D1 D2 D2 D3	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGINE ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION COS PRECONSTRUCTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase R] Design & Engineering [Phase Subsurface Utility Engine Transportation Systems M Environmental (NEPA) [Phase R]	ions (MCR's) ons ons NEERING & INDIRECTS TEMS Phase U] ase D] sering (SUE) Budget Management & Operation (1	PROJECT CONSTRUCTION BUDG	SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E)	# OF CBI # OF A # OF A # OF A # OF CI	6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0% 0.0% 14.1%	\$63,720 \$31,860 \$1,159 \$0 \$97,000 \$1,159,000 \$1,159,000 \$1,159,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000
CAT 01 02 03 03 04 04 07 01 02 03 03 03 04 04 07 01 02 03 03 03 03 03 03 04 04 07 01 02 03 03 03 03 03 03 04 04 04 04 04 04 04 04 04 04 04 04 04	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGINE ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION COS PRECONSTRUCTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase R] Design & Engineering [Phase Subsurface Utility Engine Transportation Systems M Environmental (NEPA) [Phase R]	ions (MCR's) ons ons NEERING & INDIRECTS TEMS Phase U] ase D] sering (SUE) Budget Management & Operation (1	PROJECT CONSTRUCTION BUDG	SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E)	# OF CBI # OF A # OF A # OF A # OF CI	6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0% 0.0% 14.1%	\$63,720 \$31,860 \$1,159 \$0 \$97,000 \$1,159,000 \$1,159,000 \$1,159,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000
CAT 01 02 03 03 04 04 07 01 02 03 03 03 04 04 07 01 02 03 03 03 03 03 03 04 04 07 01 02 03 03 03 03 03 03 04 04 04 04 04 04 04 04 04 04 04 04 04	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGINE ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION COS PRECONSTRUCTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase R] Design & Engineering [Phase Subsurface Utility Engine Transportation Systems M Environmental (NEPA) [Phase R]	ions (MCR's) ons ons NEERING & INDIRECTS TEMS Phase U] ase D] sering (SUE) Budget Management & Operation (1	PROJECT CONSTRUCTION BUDG	SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E)	# OF CBI # OF A # OF A # OF A # OF CI	6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0% 0.0% 14.1%	\$63,720 \$31,860 \$1,159 \$0 \$97,000 \$1,159,000 \$1,159,000 \$1,159,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000
CAT (1)1 (2)2 (3)3 (4)4 (4)4 (5)5 (6)5 (7)5 (7)5 (7)5 (7)5 (7)5 (7)5 (7)5 (7	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGINE ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION IN ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase R] Subsurface Utility Engine Transportation Systems M Environmental (NEPA) [Phase M] Miscellaneous [Phase M]	ions (MCR's) ons ons NEERING & INDIRECTS TEMS Phase U] ase D] sering (SUE) Budget Management & Operation (1	PROJECT CONSTRUCTION BUDG	SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E)	# OF CBI # OF A # OF A # OF A # OF CI	6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0% 0.0% 16.1%	\$63,720 \$31,860 \$1,159 \$0 \$97,000 \$1,159,000 \$1,159,000 \$1,159,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000
CAT 01 02 03 03 04 04 07 01 02 03 03 03 04 04 07 01 02 03 03 03 03 03 03 04 04 07 01 02 03 03 03 03 03 03 04 04 04 04 04 04 04 04 04 04 04 04 04	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGINE ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION COS PRECONSTRUCTION ITEM DESCRIPTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase R] Subsurface Utility Engine Transportation Systems M Environmental (NEPA) [Phase M] Miscellaneous [Phase M]	ions (MCR's) ons ons ons NEERING & INDIRECTS TEMS Phase U] use D] usering (SUE) Budget Management & Operation (1) ase E]	PROJECT CONSTRUCTION BUDG	SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E)	W OF CBI	6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0% 0.0% 0.0% 16.1% DN)	\$63,720 \$31,860 \$1,159 \$0 \$97,000 \$1,159,000 \$1,159,000 \$1,159,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,52,293 \$9,518 \$0 \$0 \$152,293 \$9,518 \$0 \$152,293 \$152,293 \$9,518 \$0 \$1,1583,000
CAT 01 02 03 04 04 05 05 05 05 0	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGINE ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION IN ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase R] Subsurface Utility Engine Transportation Systems M Environmental (NEPA) [Phase M] Miscellaneous [Phase M]	ions (MCR's) ons ons ons NEERING & INDIRECTS TEMS Phase U] use D] usering (SUE) Budget Management & Operation (1) ase E]	PROJECT CONSTRUCTION BUDG	SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E) (CONSTRUCTION	W OF CBI	6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0% 0.0% 16.1%	\$63,720 \$31,860 \$1,159 \$0 \$97,000 \$1,159,000 \$1,159,000 \$1,159,000 \$110,105 \$237,000 \$1,396,000 \$152,293 \$9,518 \$0 \$0 \$152,293 \$9,518 \$0 \$152,293 \$
CAT 01 02 03 04 04 05 05 05 05 0	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGINE ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION COS PRECONSTRUCTION ITEM DESCRIPTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase R] Subsurface Utility Engine Transportation Systems M Environmental (NEPA) [Phase M] Miscellaneous [Phase M]	ions (MCR's) ons ons ons NEERING & INDIRECTS TEMS Phase U] use D] usering (SUE) Budget Management & Operation (1) ase E]	PROJECT CONSTRUCTION BUDG	SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E) (CONSTRUCTION	W OF CBI	6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.0% 12.0% 0.0% 14.1% 16.1% 13.4%	\$63,720 \$31,860 \$1,159 \$0 \$97,000 \$1,159,000 \$1,159,000 \$1,159,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,396,000 \$1,52,293 \$9,518 \$0 \$0 \$152,293 \$9,518 \$0 \$152,293 \$152,293 \$9,518 \$0 \$1,1583,000
CAT 12 2 3 3 1 1 2 2 3 3 1 1 2 2 4 5 5	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGINE ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION COST PRECONSTRUCTION ITEM DESCRIPTION LITEM DESCRIPTION LITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase R] Litilities + Railroad Work [Phase R] Subsurface Utility Engine Transportation Systems M Environmental (NEPA) [Phase M] Miscellaneous [Phase M]	ions (MCR's) ons ons ons NEERING & INDIRECTS TEMS Phase U] use D] usering (SUE) Budget Management & Operation (1) ase E]	PROJECT CONSTRUCTION BUDG	SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E) (CONSTRUCTION	W OF CBI	6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.0% 12.0% 0.0% 14.1% 16.1% 13.4%	\$63,720 \$31,860 \$1,159 \$0 \$97,000 \$1,159,000 \$1,159,000 \$1,159,000 \$110,105 \$237,000 \$1,396,000 \$152,293 \$9,518 \$0 \$0 \$152,293 \$9,518 \$0 \$152,293 \$
T PI	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGINE ITEM DESCRIPTION Construction Engineering Construction Indirects RECONSTRUCTION COST PRECONSTRUCTION ITEM DESCRIPTION LITEM DESCRIPTION LITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase R] Litilities + Railroad Work [Phase R] Subsurface Utility Engine Transportation Systems M Environmental (NEPA) [Phase M] Miscellaneous [Phase M]	ions (MCR's) ons ons ons NEERING & INDIRECTS TEMS Phase U] use D] usering (SUE) Budget Management & Operation (1) ase E]	PROJECT CONSTRUCTION BUDG	SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E) (CONSTRUCTION	W OF CBI	6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.0% 12.0% 0.0% 14.1% 16.1% 13.4%	\$63,720 \$31,860 \$1,159 \$0 \$97,000 \$1,159,000 \$1,159,000 \$1,159,000 \$110,105 \$237,000 \$1,396,000 \$152,293 \$9,518 \$0 \$0 \$152,293 \$9,518 \$0 \$152,293 \$

PCPT - MODEL & REGION ESTIMATE FORM PROJECT PROFILE Project Name Project Number Sub-Account Number **Project Description** Project Work Type BRIDGE REPLACEMENT E.A. Date: 11/6/2018 PROJECT LOCATION & CHARACTERISTICS Begin MP: 53.9 City: NONE Route: CDOT Region: End MP: 71.4 Length: 17.5 Park Co FIPS City: FIPS County RefPt 62.650 Latitude: 39.1880 Longitude: -105.9730 **GOOGLE MAP LINK** Seament Mid-point Functional Classification: 4 Minor Arterial Urban-Rural Class: 1 Rural Terrain: 2 1.900 Primary Surface: 1 Asphalt Truck ADT: 60 Tier Class: Tier 4 AADT: NEPA Action: Cat/Ex 0 - Conceptual NEPA Status: In Progress Design Maturity: Project Delivery Method: Design-Bid-Build Construction Start (MMM-YY) Sep-22 Construction Duration (mo) 24.0 A - MAJOR CONSTRUCTION ITEMS Unit Cost A-01 Cost: 0.0% 0.0% A-02 PAVEMENT & BASES Unit Cost Unit Cost A-02 Cost A-03 MAJOR STRUCTURES (CAT 300 ITEMS Unit Cost A-03 REPL Cost A-03_repa BRIDGE REPAIR A-03_REPA Cost: A-03_WALL Cost 0.0% R2 A-03_CULV Cost \$12,600 A-03 misc 72 Inch Reinforced Concrete Pipe
A-03 misc 10x8 Foot Concrete Box Culvert (Precast) A-03_misc 12x10 Foot Concrete Box Culvert (Precast) A-03_misc 14x6 Foot Concrete Box Culvert (Precast) A-03_misc 18x6 Foot Concrete Box Culvert (Precast) A-03 misc 20x6 Foot Concrete Box Culvert (Precast)
A-03 misc 20x8 Foot Concrete Box Culvert (Precast) A-03 MISC Cost A-03 Cost: 100.0% \$261,000 100.0% \$691,000 Unit Cost A-04 Cost: 0.0% 0.0% A-05 OTHER CATEGORY OTHER MAJOR ITEMS Qty Unit Cost Unit Cost Cost Cost MAJOR CONSTRUCTION ITEMS SUBTOTAL (A) (% of A) \$261,00 \$691,000 Work Type: BRIDGE REPLACEMENT
MIN % MEAN % MAX % EFFORT
3 - Average
3 - Average
3 - Average % of (A) Cost Cost B-01 B-02 B-03 B-04 B-05 B-06 B-07 Removals / Resets Environmental \$16,722 \$41,115 6.0% 13.4% Adjusted—> Adjusted—> \$15,530 13.4% 2.3% 14.9% 5.5% 23.5% 26.1% 3.2% 1.8% 3.4% 1.2% Structural \$861 \$2,280 \$29,713 Drainage / Utilities \$11,223 adway Appurtenances \$21,283 \$43,222 \$114,430 Construction Traffic Control / Detour Lighting & Electrical B-08 B-09 B-10 B-11 \$0 \$2,010 Permanent Signing & Striping
Traffic Signalization & ITS \$0 \$861 \$0 \$2,280 В MINOR CONSTRUCTION ITEMS SUBTOTAL (B) (% of A) 53.74% \$140,000 53.74% \$371,000 153.74% 153.74% \$1,062,000 CBI CONTRUCTION BID ITEMS SUBTOTAL (A + B) (% of A) \$401,000 67.1% % of CBI F/A - General
F/A - Minor Contract Revisions (MCR's)
F/A - Project Communications FIA - Minor Contract Revisions (MCRS)
FIA - Project Communications

[Level 4 \$1,062,000 X 0.11%]
TSM&O Traffic & Operations (for Reconstruction/Resurfacing projects only) \$37,000 \$97,000 F/A's & TSM&O SUBTOTAL (C) (% of CBI) 9.11% CI CONSTRUCTION ITEMS SUBTOTAL (A + B + C) (% of A) 167.82% \$438,000 167.73% \$1,159,000 D - CONSTRUCTION ENGINEERING & INDIRECTS % of CI \$47,961 \$41,610 % of CI (Default: 10.95%) CONSTRUCTION ENGINEERING & INDIRECTS SUBTOTAL (D) (% of CI) \$90,000 20.45% \$237,000 PROJECT CONSTRUCTION BUDGET \$1,396,000 CONSTRUCTION (A + B + C + D) \$528,000 88.2% of Base Cost Indirect % Indirect % AVG % EFFORT % of CI % of CI (% CI + Indir (% CI + Indire Right-of-Way [Phase R]

Utilities + Railroad Work [Phase U]

Design & Engineering [Phase D]

Subsurface Utility Engineering (SUE) Budget

Transportation Systems Management & Operation (TSM&O) Budget

Environmental (NEPA) [Phase E] E-01 E-02 E-03 E-03.1 Design Maturity: 0 - Conceptual E-03.2 0.00% 0.00% 0.00% Е SUBTOTAL (E) (% of CI) 19.63% 16.13% PRECONSTRUCTION ITEMS 11.8% PROJECT BASE COST ESTIMATE (CONSTRUCTION + PRECONSTRUCTION) RE/ME Ratio: RISK RESERVE PROBABILISTIC COST ESTIMATE RISK RESERVE DATE: 11/6/2018 RISK RESERVE 13.4% TOTAL PROJECT COST (P70) 113.4% ESCALATION Escalation from Estimate Date: Nov-18 Construction Start \$253,000 **ESCALATION** Duration (mo) to Construction Mid-Point Date: Sep-23 ESCALATED COST \$2,048,000 129.4%

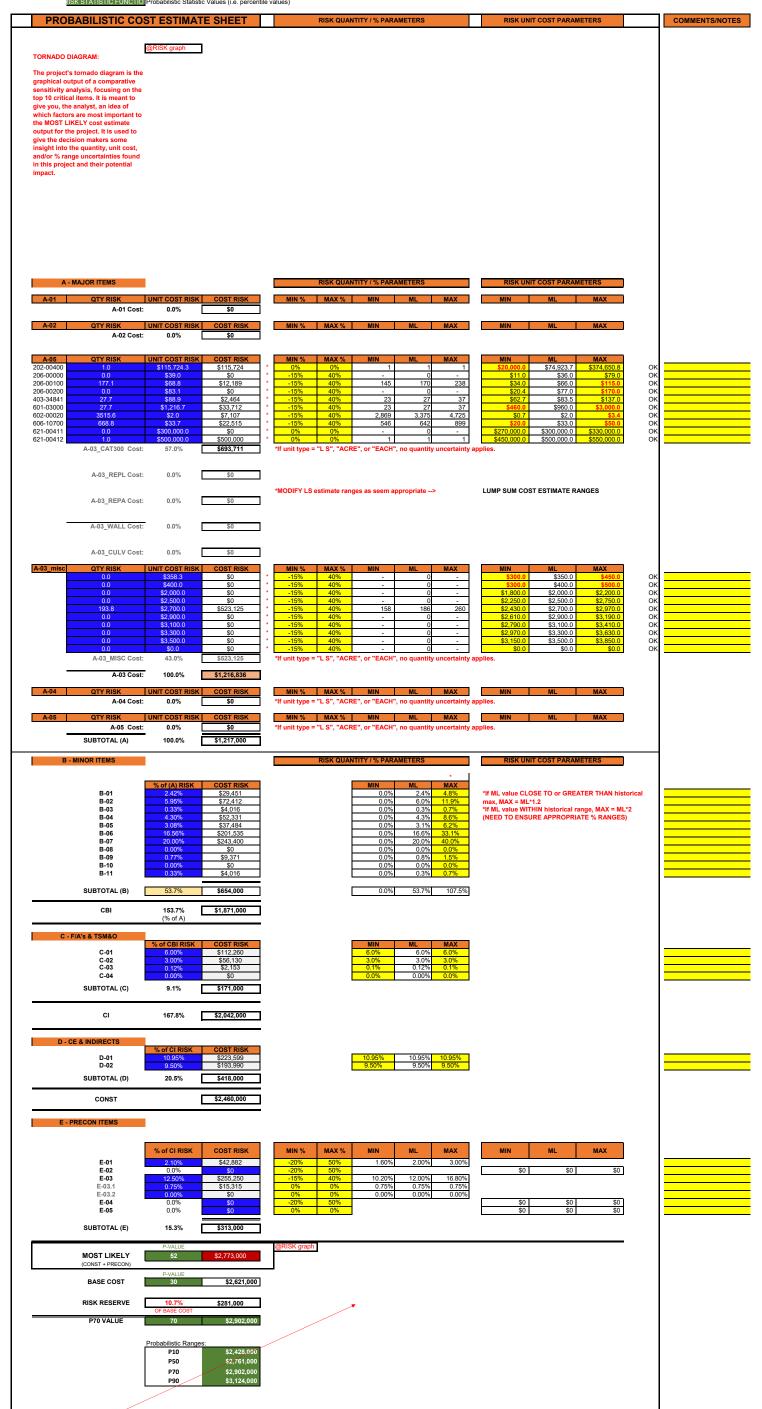
Model Version 3 Rev 04

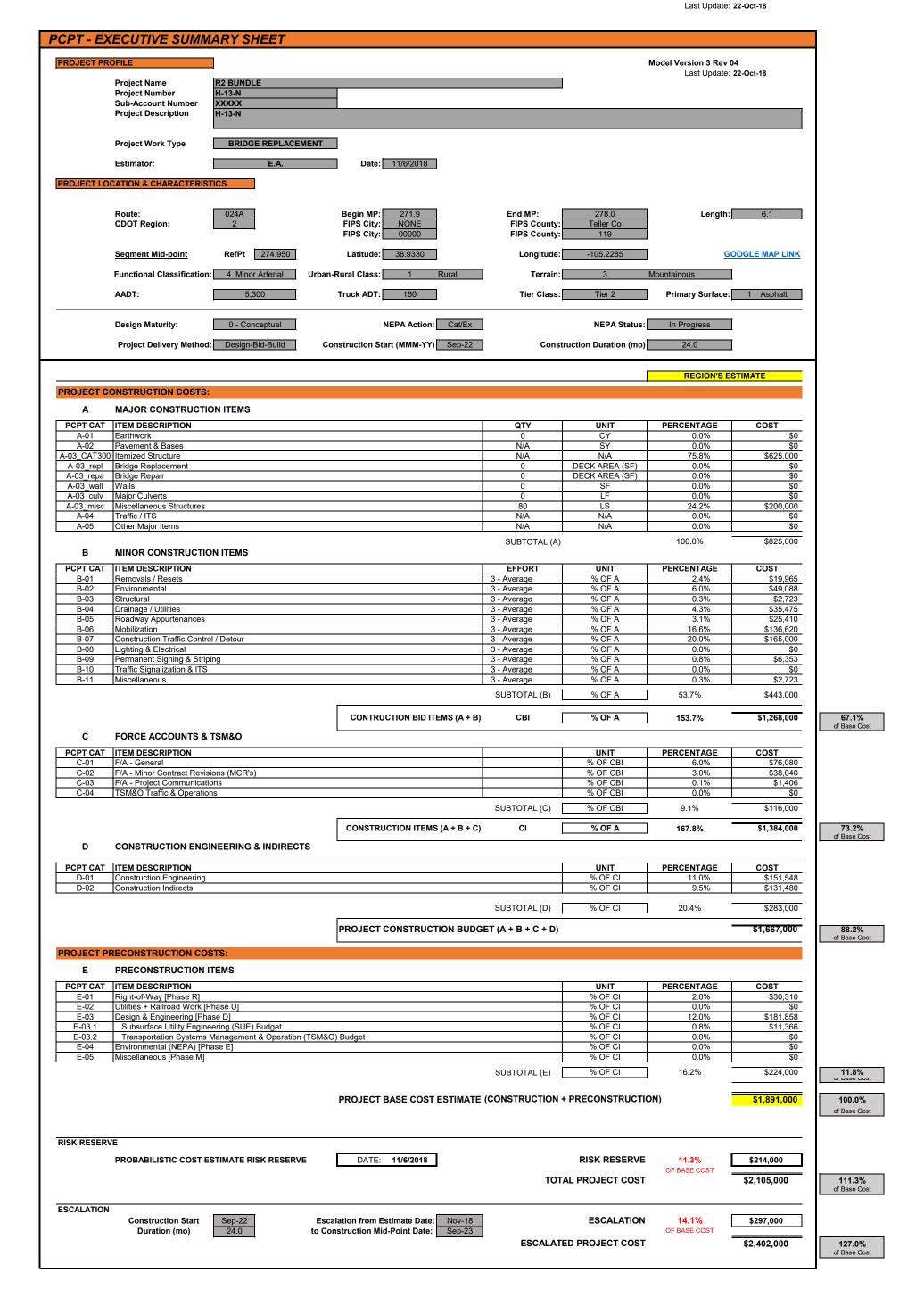
Last Update: 22-Oct-18

PROBABILISTIC COST ESTIMATE SHEET RISK QUANTITY / % PARAMETERS COMMENTS/NOTES graphical output of a comparative sensitivity analysis, focusing on the top 10 critical items. It is meant to give you, the analyst, an idea of which factors are most important to the MOST LIKELY cost estimate RISK QUANTITY / % PARAMETERS RISK UNIT COST PARAMETERS A - MAJOR ITEMS MIN % MAX % MIN ML MAX MIN ML MAX A-01 QTY RISK UNIT COST RISK COST RISK A-01 Cost: 0.0% QTY RISK UNIT COST RISK COST RISK MIN % MAX % MIN ML MAX MIN ML MAX MIN % MAX % MAX \$74,923.7 \$36.0 \$66.0 \$77.0 \$83.5 \$960.0 \$2.0 \$33.0 \$300,000.0 202-00400 206-00000 206-00100 206-00200 403-34841 601-03000 602-00020 606-10700 621-00411 621-00412 1,288 273 40 40 4,725 899 \$0 \$500,000 **\$735,190** A-03_CAT300 Cost: *If unit type = "L S", "ACRE" A-03_REPL Cost: 0.0% \$0 *MODIFY LS estimate ranges as seem appropriate --> LUMP SUM COST ESTIMATE RANGES A-03_REPA Cost: 0.0% \$0 A-03 WALL Cost: 0.0% 50 \$13,438 31 \$350.0 \$400.0 \$2,000.0 \$2,500.0 \$2,700.0 \$2,900.0 \$3,100.0 \$3,300.0 A-03_MISC Cost: 1.8% *If unit type = "L S", "ACRE", or "EACH", no quantity A-03 Cost: 100.0% \$748,628 A-04 QTY RISK MIN % MAX % MIN ML MAX MIN ML MAX A-04 Cost: *If unit type = "L S", "ACRE", or "EACH", no quantity uncertainty applies. 0.0% MIN % | MAX % | MIN | ML | MAX | MIN | ML | MAX A-05 QTY RISK UNIT COST RISK A-05 Cost: SUBTOTAL (A) \$749,000 B - MINOR ITEMS % of (A) RISK *If ML value CLOSE TO or GREATER THAN historical max, MAX = ML*1.2 *If ML value WITHIN historical range, MAX = ML*2 (NEED TO ENSURE APPROPRIATE % RANGES) \$18,126 \$44,566 \$2,472 \$32,207 2.4% 6.0% 0.3% 4.8% 11.9% 0.7% B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 0.0% 4.39 3.19 16.69 \$23,069 \$124,034 \$149,800 0.89 \$0 \$2,472 53.7% \$403,000 0.0% 53.7% 107.5% SUBTOTAL (B) 153.7% \$1,152,000 CBI C-01 C-02 C-03 C-04 SUBTOTAL (C) \$105,000 9.1% CI 167.7% \$1,257,000 D - CE & INDIRECTS \$137,642 \$119,415 SUBTOTAL (D) 20.5% \$257,000 \$1,514,000 **COST RISK** MIN ML MAX E-01 E-02 E-03 E-03.1 E-03.2 \$0 E-04 E-05 0.0% 0.0% SUBTOTAL (E) 15.4% \$193,000 MOST LIKELY BASE COST \$1,583,000 RISK RESERVE P70 VALUE \$1,469,000 \$1,693,000 P50

	ROFILE					Model Version 3 Rev 0 Last Update:	
	Project Name Project Number	R2 BUNDLE I-13-G					
	Sub-Account Number	XXXXX					
	Project Description	I-13-G					
	Project Work Type	BRIDGE REPLACEMEN	NT				
	Estimator:	E.A.	Date: 11/6/2018				
CTIO	OCATION & CHARACTERIST						
CILU	CATION & CHARACTERIST	IICS					
	Route:	024A	Begin MP: 271.9	End MP:	278.0	Length:	6.1
	CDOT Region:	2	FIPS City: NONE FIPS City: 00000	FIPS County: FIPS County:		_	
	Segment Mid-point	RefPt 274.950	Latitude: 38.9330	Longitude:		G	OOGLE MAP LINK
	·						DOGLE WAF LINK
	Functional Classification:		rban-Rural Class: 1 Rural	Terrain:	3	Mountainous	
	AADT:	5,300	Truck ADT: 160	Tier Class:	Tier 2	Primary Surface:	1 Asphalt
	Design Maturity:	0 - Conceptual	NEPA Action: Cat/Ex		NEPA Status:	In Progress	
	Project Delivery Method:		Construction Start (MMM-YY) Sep-22	Cons	truction Duration (mo)	24.0	
	Project Delivery Method.	. Design-bid-build	Construction Start (MMM-11)	Cons	udenon buranon (mo)	24.0	
						REGION'S ES	STIMATE
ECT C	CONSTRUCTION COSTS:						
١.	MAJOR CONSTRUCTION	ON ITEMS					
CAT	ITEM DESCRIPTION			QTY	UNIT	PERCENTAGE	COST
2	Earthwork Pavement & Bases			0 N/A	CY SY	0.0%	\$0 \$0
AT300 _repl	0 Itemized Structure Bridge Replacement			N/A 0	N/A DECK AREA (SF)	56.1% 0.0%	\$642,000 \$0
repa wall	Bridge Repair Walls			0	DECK AREA (SF) SF	0.0% 0.0%	\$0 \$0
culv	Major Culverts Miscellaneous Structures			0 186	LF LS	0.0%	\$0 \$0 \$502,000
misc 04	Traffic / ITS			N/A	N/A	43.9% 0.0%	\$0
05	Other Major Items			N/A SUBTOTAL (A)	N/A	0.0% 100.0%	\$0 \$1,144,000
3	MINOR CONSTRUCTIO	ON ITEMS		SUBTOTAL (A)		100.070	φι, ι 44 ,υυυ
CAT 01				EFFORT 3 Average	UNIT	PERCENTAGE	COST \$27,695
12	Removals / Resets Environmental			3 - Average 3 - Average	% OF A % OF A	2.4% 6.0%	\$27,685 \$68,068
3 4	Structural Drainage / Utilities			3 - Average 3 - Average	% OF A % OF A	0.3% 4.3%	\$3,775 \$49,192
5 6	Roadway Appurtenances Mobilization			3 - Average 3 - Average	% OF A % OF A	3.1% 16.6%	\$35,235 \$189,446
7	Construction Traffic Contro	ol / Detour		3 - Average	% OF A	20.0%	\$228,800
9 9	Lighting & Electrical Permanent Signing & Stripi	ing		3 - Average 3 - Average	% OF A % OF A	0.0% 0.8%	\$0 \$8,809
) 	Traffic Signalization & ITS Miscellaneous			3 - Average 3 - Average	% OF A % OF A	0.0% 0.3%	\$0 \$3,775
				SUBTOTAL (B)	% OF A	53.7%	\$615,000
				СВІ			-
			CONTRUCTION BID ITEMS (A + B)		% OF A	153.8%	\$1.759.000
	FORCE ACCOUNTS &	TSM&O	CONTRUCTION BID ITEMS (A + B)	СЫ	% OF A	153.8%	\$1,759,000
CAT	FORCE ACCOUNTS &	TSM&O	CONTRUCTION BID ITEMS (A + B)	СЫ	WNIT	PERCENTAGE	\$1,759,000 COST
1	ITEM DESCRIPTION F/A - General		CONTRUCTION BID ITEMS (A + B)	СЫ	UNIT % OF CBI	PERCENTAGE 6.0%	COST \$105,540
1 2 3	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication	ions (MCR's)	CONTRUCTION BID ITEMS (A + B)	СЫ	UNIT % OF CBI % OF CBI % OF CBI	PERCENTAGE 6.0% 3.0% 0.1%	COST \$105,540 \$52,770 \$2,024
CAT 1 2	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi	ions (MCR's)	CONTRUCTION BID ITEMS (A + B)		WNIT % OF CBI % OF CBI % OF CBI % OF CBI	PERCENTAGE 6.0% 3.0% 0.1% 0.0%	COST \$105,540 \$52,770 \$2,024 \$0
CAT 1 2	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication	ions (MCR's)		SUBTOTAL (C)	WNIT % OF CBI % OF CBI % OF CBI % OF CBI	PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1%	\$105,540 \$52,770 \$2,024 \$0 \$160,000
CAT 01 02 03 04	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation	ions (MCR's) ons ns	CONTRUCTION BID ITEMS (A + B) CONSTRUCTION ITEMS (A + B + C)		WNIT % OF CBI % OF CBI % OF CBI % OF CBI	PERCENTAGE 6.0% 3.0% 0.1% 0.0%	COST \$105,540 \$52,770 \$2,024 \$0
1 2 3 4	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI	ions (MCR's)		SUBTOTAL (C)	WNIT % OF CBI	PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1%	\$105,540 \$52,770 \$2,024 \$0 \$160,000 \$1,919,000
CAT)1 (CAT)1	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI	ions (MCR's) ons ns		SUBTOTAL (C)	WNIT % OF CBI UNIT % OF CI	PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0%	\$105,540 \$52,770 \$2,024 \$0 \$160,000 \$1,919,000
CAT 01 02 03 04 04 01 01 01 01 01 01 01 01 01 01 01 01 01	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI	ions (MCR's) ons ns		SUBTOTAL (C)	UNIT % OF CBI UNIT	PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 167.7%	\$105,540 \$52,770 \$2,024 \$0 \$160,000 \$1,919,000
CAT 1 2 3 4 4 CAT 1	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI	ions (MCR's) ons ns		SUBTOTAL (C)	WNIT % OF CBI UNIT % OF CI	PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0%	\$105,540 \$52,770 \$2,024 \$0 \$160,000 \$1,919,000
CAT 01 02 03 004 00 00 00 00 00 00 00 00 00 00 00 00	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI	ions (MCR's) ons ns		SUBTOTAL (C) CI SUBTOTAL (D)	UNIT % OF CBI UNIT % OF CI % OF CI	PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5%	COST \$105,540 \$52,770 \$2,024 \$0 \$160,000 \$1,919,000 COST \$210,131 \$182,305
01 01 02 03 04 04	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI	ions (MCR's) ons ns NEERING & INDIRECTS	CONSTRUCTION ITEMS (A + B + C)	SUBTOTAL (C) CI SUBTOTAL (D)	UNIT % OF CBI UNIT % OF CI % OF CI	PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5%	\$105,540 \$52,770 \$2,024 \$0 \$160,000 \$1,919,000 \$210,131 \$182,305 \$392,000
C T CAT -01 -02 -03 -04 D T CAT -01 -02 ECT P	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects	ions (MCR's) ons ons NEERING & INDIRECTS	CONSTRUCTION ITEMS (A + B + C)	SUBTOTAL (C) CI SUBTOTAL (D)	UNIT % OF CBI UNIT % OF CI % OF CI	PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5%	\$105,540 \$52,770 \$2,024 \$0 \$160,000 \$1,919,000 \$210,131 \$182,305 \$392,000
T CAT 01 02 03 04 04 00 00 00 00 00 00 00 00 00 00 00	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects PRECONSTRUCTION COST	ions (MCR's) ons ons NEERING & INDIRECTS	CONSTRUCTION ITEMS (A + B + C)	SUBTOTAL (C) CI SUBTOTAL (D)	UNIT % OF CBI WOF A UNIT % OF CI % OF CI % OF CI UNIT UNIT % OF CI UNIT	PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4%	COST \$105,540 \$52,770 \$2,024 \$0 \$160,000 \$1,919,000 COST \$210,131 \$182,305 \$392,000 \$2,311,000
CAT D1 D2 D2 D3 D4 D4 D5	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects PRECONSTRUCTION COS PRECONSTRUCTION I ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [P	ions (MCR's) ons ons NEERING & INDIRECTS STS: TEMS	CONSTRUCTION ITEMS (A + B + C)	SUBTOTAL (C) CI SUBTOTAL (D)	UNIT % OF CBI UNIT % OF CI % OF CI % OF CI	PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4%	COST \$105,540 \$52,770 \$2,024 \$0 \$160,000 \$1,919,000 COST \$210,131 \$182,305 \$392,000 \$2,311,000
CAT 01 02 03 04 04 01 002 03 04 01 002 03 04 01 002 003 004 01 002 003 004 004 005 005 005 005 005 005 005 005	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects PRECONSTRUCTION COST	ions (MCR's) ons ons ons NEERING & INDIRECTS STS: TEMS Phase U] use D]	CONSTRUCTION ITEMS (A + B + C)	SUBTOTAL (C) CI SUBTOTAL (D)	UNIT % OF CBI % OF CBI % OF CBI % OF CBI WOF A UNIT % OF CI	PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 20.4%	COST \$105,540 \$52,770 \$2,024 \$0 \$160,000 \$1,919,000 COST \$210,131 \$182,305 \$392,000 \$2,311,000 COST \$42,026 \$0 \$252,157
CAT 1 2 2 3 3 4 4 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects PRECONSTRUCTION COS PRECONSTRUCTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase R] Subsurface Utility Engine Transportation Systems N	ions (MCR's) ons ons ons NEERING & INDIRECTS STS: TEMS Phase U] ase D] sering (SUE) Budget Management & Operation (TS	CONSTRUCTION ITEMS (A + B + C) PROJECT CONSTRUCTION BUDG	SUBTOTAL (C) CI SUBTOTAL (D)	UNIT % OF CBI WOF A UNIT % OF CI	PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0%	COST \$105,540 \$52,770 \$2,024 \$0 \$160,000 \$1,919,000 COST \$210,131 \$182,305 \$392,000 \$2,311,000 COST \$42,026 \$0 \$252,157 \$15,760 \$0
CAT 1 2 2 2 3	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects PRECONSTRUCTION COS PRECONSTRUCTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase R] Utilities + Railroad Work [Phase R] Subsurface Utility Engine	ions (MCR's) ons ons ons NEERING & INDIRECTS STS: TEMS Phase U] ase D] sering (SUE) Budget Management & Operation (TS	CONSTRUCTION ITEMS (A + B + C) PROJECT CONSTRUCTION BUDG	SUBTOTAL (C) CI SUBTOTAL (D)	UNIT % OF CBI % OF CBI % OF CBI % OF CBI WOF A UNIT % OF CI	PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.8%	COST \$105,540 \$52,770 \$2,024 \$0 \$160,000 \$1,919,000 COST \$210,131 \$182,305 \$392,000 \$2,311,000 COST \$42,026 \$0 \$42,026 \$0 \$252,157 \$15,760
CAT D1 D2 CAT D1 D2 CAT D1 D2 D3 D3 D3 D3 D4 D5	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects PRECONSTRUCTION COS PRECONSTRUCTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phasign & Engineering Phasibus Subsurface Utility Engine Transportation Systems In Environmental (NEPA) [Phasibus Phasibus P	ions (MCR's) ons ons ons NEERING & INDIRECTS STS: TEMS Phase U] ase D] sering (SUE) Budget Management & Operation (TS	CONSTRUCTION ITEMS (A + B + C) PROJECT CONSTRUCTION BUDG	SUBTOTAL (C) CI SUBTOTAL (D)	UNIT % OF CBI WOF A UNIT % OF CI	PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0% 0.0% 0.0%	COST \$105,540 \$52,770 \$2,024 \$0 \$160,000 \$1,919,000 COST \$210,131 \$182,305 \$392,000 \$2,311,000 COST \$42,026 \$0 \$252,157 \$15,760 \$0 \$0
CAT 01 02 03 04 04 05 05 05 05 05 05 05 05 05 05 05 05 05	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects PRECONSTRUCTION COS PRECONSTRUCTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phasign & Engineering Phasibus Subsurface Utility Engine Transportation Systems In Environmental (NEPA) [Phasibus Phasibus P	ions (MCR's) ons ons ons NEERING & INDIRECTS STS: TEMS Phase U] ase D] sering (SUE) Budget Management & Operation (TS	CONSTRUCTION ITEMS (A + B + C) PROJECT CONSTRUCTION BUDG SM&O) Budget	SUBTOTAL (C) CI SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E)	UNIT % OF CBI WOF A UNIT % OF CI	PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0% 0.0% 16.2%	COST \$105,540 \$52,770 \$2,024 \$0 \$160,000 \$1,919,000 COST \$210,131 \$182,305 \$392,000 \$2,311,000 COST \$42,026 \$0 \$252,157 \$15,760 \$0 \$0 \$0 \$0 \$0 \$0
CAT 01 02 03 3.1 3.2 04	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects PRECONSTRUCTION COS PRECONSTRUCTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phasign & Engineering Phasibus Subsurface Utility Engine Transportation Systems In Environmental (NEPA) [Phasibus Phasibus P	ions (MCR's) ons ons ons NEERING & INDIRECTS STS: TEMS Phase U] ase D] sering (SUE) Budget Management & Operation (TS	CONSTRUCTION ITEMS (A + B + C) PROJECT CONSTRUCTION BUDG	SUBTOTAL (C) CI SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E)	UNIT % OF CBI WOF A UNIT % OF CI	PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0% 0.0% 16.2%	COST \$105,540 \$52,770 \$2,024 \$0 \$160,000 \$1,919,000 COST \$210,131 \$182,305 \$392,000 \$2,311,000 COST \$42,026 \$0 \$252,157 \$15,760 \$0 \$0 \$0
CAT	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects PRECONSTRUCTION COS PRECONSTRUCTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phasign & Engineering Phasibus Subsurface Utility Engine Transportation Systems In Environmental (NEPA) [Phasibus Phasibus P	ions (MCR's) ons ons ons NEERING & INDIRECTS STS: TEMS Phase U] ase D] sering (SUE) Budget Management & Operation (TS	CONSTRUCTION ITEMS (A + B + C) PROJECT CONSTRUCTION BUDG SM&O) Budget	SUBTOTAL (C) CI SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E)	UNIT % OF CBI WOF A UNIT % OF CI	PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0% 0.0% 16.2%	COST \$105,540 \$52,770 \$2,024 \$0 \$160,000 \$1,919,000 \$1,919,000 COST \$210,131 \$182,305 \$392,000 \$2,311,000 \$2,311,000 \$0 \$252,157 \$15,760 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$
CAT D1 D2 D3 D3 D4 D5	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects PRECONSTRUCTION COS PRECONSTRUCTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phasing & Engineering [Phasing & Engineering [Phasing & Engineering [Phasing & Engineering [Phasing & Environmental (NEPA) [Phasing & Environmen	ions (MCR's) ons ons ons NEERING & INDIRECTS STS: TEMS Phase U] ase D] sering (SUE) Budget Management & Operation (TS	CONSTRUCTION ITEMS (A + B + C) PROJECT CONSTRUCTION BUDG SM&O) Budget	SUBTOTAL (C) CI SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E)	UNIT % OF CBI WOF A UNIT % OF CI	PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0% 0.0% 16.2%	COST \$105,540 \$52,770 \$2,024 \$0 \$160,000 \$1,919,000 COST \$210,131 \$182,305 \$392,000 \$2,311,000 COST \$42,026 \$0 \$252,157 \$15,760 \$0 \$0 \$0 \$0 \$0 \$0
T CAT 01 02 03 04 04 05 05 05 05 05 05 05 05 05 05 05 05 05	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects PRECONSTRUCTION COS PRECONSTRUCTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phasing & Engineering [Phasing & Engineering [Phasing & Engineering [Phasing & Engineering [Phasing & Environmental (NEPA) [Phasing & Environmen	ions (MCR's) ons ons ons NEERING & INDIRECTS STS: TEMS Phase U] ase D] pering (SUE) Budget Management & Operation (TS ase E]	CONSTRUCTION ITEMS (A + B + C) PROJECT CONSTRUCTION BUDG SM&O) Budget	SUBTOTAL (C) CI SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E)	UNIT % OF CBI WOF A UNIT % OF CI	PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.0% 12.0% 0.0% 16.2% DN)	COST \$105,540 \$52,770 \$2,024 \$0 \$160,000 \$1,919,000 COST \$210,131 \$182,305 \$392,000 \$2,311,000 COST \$42,026 \$0 \$252,157 \$15,760 \$0 \$0 \$0 \$0 \$0 \$0
CAT 01 02 03 04 04 05 05 05 05 05 05 05 05 05 05 05 05 05	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects PRECONSTRUCTION COSTRUCTION ITEM DESCRIPTION ITEM DESCRIPTION Construction Indirects PRECONSTRUCTION ITEM DESCRIPTION ITEM DESCRIPTION ITEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase N] Subsurface Utility Engine Transportation Systems Itenvironmental (NEPA) [Phase M] Miscellaneous [Phase M]	ions (MCR's) ons ons ons NEERING & INDIRECTS STS: TEMS Phase U] ase D] pering (SUE) Budget Management & Operation (TS ase E]	PROJECT CONSTRUCTION BUDG SM&O) Budget PROJECT BASE COST ESTIMATE	SUBTOTAL (C) CI SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E) (CONSTRUCTION	UNIT % OF CBI % OF CBI WOF A UNIT % OF CI	PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.0% 12.0% 0.0% 16.2% DN)	COST \$105,540 \$52,770 \$2,024 \$0 \$160,000 \$1,919,000 COST \$210,131 \$182,305 \$392,000 \$2,311,000 COST \$42,026 \$0 \$0 \$252,157 \$15,760 \$0 \$0 \$0 \$310,000 \$2,621,000
CAT 1 2 3 4 4 5 5 5 SERN	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects PRECONSTRUCTION COST ITEM DESCRIPTION Construction Indirects PRECONSTRUCTION INDIPERSON IN INTERPOLATION IN INTERPOLATION IN INTERPOLATION IN INTERPOLATION INTERPOLA	ions (MCR's) ons ons ons NEERING & INDIRECTS STS: TEMS Phase U] ase D] pering (SUE) Budget Management & Operation (TS ase E]	PROJECT CONSTRUCTION BUDG SM&O) Budget PROJECT BASE COST ESTIMATE	SUBTOTAL (C) CI SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E) (CONSTRUCTION	UNIT % OF CBI WOF A UNIT % OF CI	PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.0% 12.0% 0.0% 16.2% DN)	COST \$105,540 \$52,770 \$2,024 \$0 \$160,000 \$1,919,000 COST \$210,131 \$182,305 \$392,000 \$2,311,000 COST \$42,026 \$0 \$252,157 \$15,760 \$0 \$0 \$0 \$310,000 \$2,621,000
AT P	ITEM DESCRIPTION F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation CONSTRUCTION ENGI ITEM DESCRIPTION Construction Engineering Construction Indirects PRECONSTRUCTION COST ITEM DESCRIPTION Construction Indirects PRECONSTRUCTION INDIPERSON IN INTERPOLATION IN INTERPOLATION IN INTERPOLATION IN INTERPOLATION INTERPOLA	ions (MCR's) ons ons ons NEERING & INDIRECTS STEMS Phase U] see D] sering (SUE) Budget Management & Operation (TS ase E] STIMATE RISK RESERVE	PROJECT CONSTRUCTION BUDG SM&O) Budget PROJECT BASE COST ESTIMATE	SUBTOTAL (C) CI SUBTOTAL (D) ET (A + B + C + D) SUBTOTAL (E) (CONSTRUCTION	UNIT % OF CBI WOF A UNIT % OF CI	PERCENTAGE 6.0% 3.0% 0.1% 0.0% 9.1% 167.7% PERCENTAGE 11.0% 9.5% 20.4% PERCENTAGE 2.0% 0.0% 12.0% 0.0% 12.0% 0.0% 16.2% DN)	COST \$105,540 \$52,770 \$2,024 \$0 \$160,000 \$1,919,000 COST \$210,131 \$182,305 \$392,000 \$2,311,000 COST \$42,026 \$0 \$252,157 \$15,760 \$0 \$0 \$0 \$310,000 \$2,621,000

PROJECT P	ROFIL F										
. 11002011	Project Name	R2 BUNDLE I-13-G									
		XXXXX I-13-G									
	Project Work Type	BRIDGE REPLACEM	ENT								
	Estimator:	E.A.	Date: 11/6/2018	3							
PROJECT L	OCATION & CHARACTERIS	STICS									
	Route: CDOT Region:	024A 2	Begin MP: 271.9 City: NONE		End MP: County:	278.0 Teller Co		Length:	6.1		
	Seament Mid-point	RefPt 274.950	FIPS City: 00000 Latitude: 38.9330	_	IPS County:	-105.2285		G	OOGLE MAP LINI	ĸ	
	Functional Classification:		Urban-Rural Class: 1	Rural	Longitude.	-100.2200		Terrain:	(1-		
	AADT:	5,300	Truck ADT: 160		Tier Class:	Tier 2		Primary Surface:	1 Asphalt		
	Design Maturity:	0 - Conceptual	NEPA Acti	ion: Cat/Ex			NEPA Statu	s: In Progress			
	Project Delivery Method:	Design-Bid-Build	Construction Start (MMM-	YY) Sep-22		Constructi	ion Duration (m	0) 24.0			
A - MAJOR	CONSTRUCTION ITEMS						Mod	el Estimate	Regio	on Estimate	1
A-01	EARTHWORK				Unit	Qty A-01 Cost:	Unit Cost 0.0%	Cost \$0	Unit Cost 0.0%	Cost \$0	
A-02	PAVEMENT & BASES				Unit	Qty	Unit Cost	Cost	Unit Cost	Cost	
A-03	MAJOR STRUCTURES (C	CAT 300 ITEMS)				A-02 Cost:	0.0%	\$0	0.0%	\$0	
A-03_CAT30 A-03_CAT30	DO PAYITEM GROUP CATEGO 00 202 - Removal of Structure	GORY Cost and Obstructions 2	CAT 300 STRUCTURAL PAYITEM 02-00400 - Removal of Bridge		Unit EACH	Qty 1	Unit Cost \$74,923.7	Cost \$74,924	Unit Cost \$74,923.7	Cost \$74,924	
A-03 CAT30 A-03 CAT30	206 - Structure Excavation 200 206 - Structure Excavation	& Backfill, Cofferdam an 2 & Backfill, Cofferdam an 2	06-00000 - Structure Excavation 06-00100 - Structure Backfill (Clas		CY CY	0 170	\$21.6 \$45.3	\$0 \$7,700	\$36.0 \$66.0	\$0 \$11,220	
A-03 CAT30 A-03 CAT30	00 206 - Structure Excavation 00 403 - Hot Bituminous Pave 00 601 - Structural Concrete	ement 4	06-00200 - Structure Backfill (Clas 03-34841 - Hot Mix Asphalt (Gradi 01-03000 - Concrete Class D		CY TON CY	0 27 27	\$48.2 \$83.5 \$960.0	\$0 \$2,220 \$25,536	\$77.0 \$83.5 \$960.0	\$0 \$2,220 \$25,536	
A-03 CAT30 A-03 CAT30	00 602 - Reinforcing Steel 00 606 - Guardrail and Bridge	Rail 6	02-00020 - Reinforcing Steel (Epo 06-10700 - Bridge Rail Type 7		LB LF LS	3,375 642 0	\$1.0 \$95.5 \$65,000.0	\$3,396 \$61,298	\$2.0 \$33.0 \$300,000.0	\$6,750 \$21,186	
	00 621 - Detour 00 621 - Detour		21-00411 - Structure Temporary A 21-00412 - Structure Temporary A		LS	0 1 3_CAT300 Cost:	\$65,000.0 \$50,000.0 30.9%	\$0 \$50,000 \$225,000	\$300,000.0 \$500,000.0 56.1%	\$0 \$500,000 \$642,000	
A-03_repl	BRIDGE REPLACEMENT										
A-03 rena	BRIDGE REPAIR				A	-03_REPL Cost:	0.0%	\$0	0.0%	\$0	
					А	-03_REPA Cost:	0.0%	\$0	0.0%	\$0	
A-03_wall	WALLS				A	-03_WALL Cost:	0.0%	\$0	0.0%	\$0	
A-03_culv	MAJOR CULVERTS				A	-03_CULV Cost:	R2 0.0%	\$0	0.0%	\$0	
	MISCELLANEOUS STRU				Unit	Qty	Unit Cost	Cost	Unit Cost	Cost	
A-03 misc A-03 misc A-03 misc	72 Inch Reinforced Concre	te Pipe			LF LF	0 0 0	\$350.0 \$400.0 \$2,000.0	\$0 \$0 \$0	\$350.0 \$400.0 \$2,000.0	\$0 \$0 \$0	
A-03_misc		Culvert (Precast)			LF LF	0 186	\$2,500.0 \$2,500.0 \$2,700.0	\$0 \$0 \$502,200	\$2,500.0 \$2,500.0 \$2,700.0	\$0 \$0 \$502,200	
A-03 misc A-03 misc A-03 misc		ulvert (Precast)			LF LF	0 0 0	\$2,900.0 \$3,100.0 \$3,300.0	\$0 \$0 \$0	\$2,900.0 \$3,100.0 \$3,300.0	\$0 \$0 \$0	
A-03 misc A-03 misc	20x8 Foot Concrete Box C				LF LF	0	\$3,500.0 \$3,500.0 \$0.0	\$0 \$0 \$0	\$3,500.0 \$3,500.0 \$0.0	\$0 \$0 \$0	
					-	A-03_MISC Cost:	69.1%	\$502,000	43.9%	\$502,000	
A-04	TRAFFIC/ITS				Unit	A-03 Cost:	100.0% Unit Cost	\$727,000 Cost	100.0% Unit Cost	\$1,144,000 Cost	
						A-04 Cost:	0.0%	\$0	0.0%	\$0	
A-05	OTHER CATEGORY	C	THER MAJOR ITEMS								
					Unit	Qty A-05 Cost:	Unit Cost 0.0%	Cost \$0	Unit Cost 0.0%	Cost \$0	
А	MAJOR CONSTRUCTION	ITEMS		sui	BTOTAL (A)						43.6% of Base Cost
	MAJOR CONSTRUCTION		DDIOC PENA		_	A-05 Cost:	0.0%	\$0	0.0%	\$0	
	CONSTRUCTION ITEMS Removals / Resets		rk Type: BRIDGE REPLL MIN % MEAN % 0.0% 2.4%	ACEMENT MAX %	_	A-05 Cost:	0.0%	\$0	0.0% 100.0% % of (A) 2.42%	\$0	43.6% of Base Cost
B-01 B-02 B-03	Removals / Resets Environmental Structural		MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 0.3%	MAX % 6.0% 3 13.4% 3 2.3% 3	EFFORT 3 - Average 3 - Average 3 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—>	0.0% 100.0% % of (A) 2.42% 5.95% 0.33%	\$0 \$727,000 Cost \$17,593 \$43,257 \$2,399	0.0% 100.0% % of (A) 2.42% 5.95% 0.33%	\$0 \$1,144,000 Cost \$27,685 \$68,068 \$3,775	
B-01 B-02 B-03 B-04 B-05 B-06	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization	Wo	MIN % MEAN % 0.0% 2.4% 0.09% 6.0% 0.09% 0.3% 0.09% 4.3% 0.09% 3.1% 0.09% 3.16%	MAX % 6.0% 6.13.4% 2.3% 2.3% 14.9% 5.5% 2.3.5% 3.2.5%	EFFORT 3 - Average	A-05 Cost: (% of A) Adjusted> Adjusted> Adjusted> Adjusted> Adjusted> Adjusted>	0.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.55%	\$0 \$727,000 \$727,000 \$17,593 \$43,257 \$2,399 \$31,261 \$22,392 \$120,391	0.0% 100.0% % of (A) 2.42% 0.33% 4.30% 16.55%	\$0 \$1,144,000 \$1,144,000 \$27,685 \$88,088 \$3,775 \$49,192 \$35,235 \$35,235 \$189,446	
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical	Wo	MIN % MEAN % 0.0% 2.4% 0.0%	ACEMENT MAX % 6.0%	BTOTAL (A) EFFORT 3 - Average	A-05 Cost: (% of A) Adjusted>	0.0% 100.0% *6 of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 20.00%	\$0 \$727,000 \$727,000 \$17,593 \$43,257 \$2,399 \$31,261 \$22,392 \$120,391 \$145,400 \$0	0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 18.56% 20.00%	\$0 \$1,144,000 \$1,144,000 \$27,685 \$80,088 \$3,775 \$49,192 \$35,235 \$189,446 \$228,800 \$0	
B-01 B-02 B-03 B-04 B-05 B-06 B-07	Removals / Resets Environmental Structural Torainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con	Wo is trol / Detour	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 0.3% 0.09% 0.3% 0.09% 3.1% 0.0% 16.6% 0.0% 20.0%	MAX % 6 6.0% 6 13.4% 6 14.9% 6 23.5% 2 25.1% 2 25.1% 3 .2% 6 1.8% 6 3.2% 6 3.2% 6 3.3.4% 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	EFFORT 3 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—>	0.0% 100.0% * of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 20.00%	\$0 \$727,000 \$727,000 \$17,593 \$43,257 \$2,399 \$31,261 \$22,392 \$120,391 \$145,400	0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 20.00%	\$0 \$1,144,000 \$1,144,000 \$27,695 \$88,068 \$3,775 \$49,192 \$35,235 \$189,446 \$228,800	
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10	Removals / Resets Environmental Structural Torainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & Tr	Wo s trol / Detour	MIN % MEAN % 0.0% 2.4% 0.0%	ACEMENT MAX % 6.0% 13.4% 2.5% 2.5% 5.5% 22.5% 20.1% 3.2% 3.4% 3.4% 1.2%	EFFORT 3 - Average	A-05 Cost: (% of A) Adjusted>	0.0% 100.0% 100.0% % of (A) 2.42% 0.55% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.77%	\$0 \$727,000 \$1727,000 \$17,593 \$43,257 \$2,399 \$31,261 \$22,392 \$120,391 \$145,400 \$0 \$5,598 \$0	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 16.56% 0.00% 0.00% 0.77%	\$0 \$1,144,000 \$1,144,000 \$27,685 \$68,068 \$3,775 \$49,192 \$35,235 \$189,446 \$228,800 \$0 \$8,809 \$0 \$0	
B-MINOR (6) B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT: Miscellaneous	wo strol / Detour siping S	MIN % MEAN % 0.0% 2.4% 0.0%	CEMENT MAX % 6.0% \$ 13.4% \$ 2.3% \$ 14.9% \$ 23.5% \$ 26.1% \$ 23.5% \$ 1.8% \$ 3.4% \$ 3.	EFFORT 3 - Average	A-05 Cost: (% of A) Adjusted—>	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.07% 0.00%	\$0 \$727,000 \$727,000 \$17.593 \$43,257 \$2,399 \$31,261 \$22,392 \$120,391 \$145,400 \$0 \$5,598 \$0 \$2,399	0.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.00% 0.33%	\$0 \$1,144,000 \$1,144,000 \$27,685 \$86,068 \$3,775 \$49,192 \$35,235 \$189,446 \$22,800 \$0 \$0 \$3,775	of Base Cost
B-MINOR (S B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION	wo strol / Detour siping S	MIN % MEAN % 0.0% 2.4% 0.0%	CEMENT MAX % 6.0% \$ 13.4% \$ 2.3% \$ 14.9% \$ 23.5% \$ 26.1% \$ 23.5% \$ 1.8% \$ 3.4% \$ 3.	EFFORT 3 - Average	A-05 Cost: (% of A) Adjusted> (% of A)	0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 20.00% 0.00% 0.77% 0.00% 0.33%	\$0 \$727,000 \$727,000 \$17,593 \$43,257 \$2,399 \$31,261 \$22,392 \$120,391 \$145,400 \$0 \$5,598 \$0 \$2,399 \$391,000	0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 4.30% 4.30% 16.56% 20.00% 0.77% 0.00% 0.33%	\$0 \$1,144,000 \$1,144,000 \$27,685 \$88,008 \$3,775 \$49,192 \$35,235 \$189,446 \$228,800 \$0 \$8,809 \$0 \$3,775 \$0 \$3,775	of Base Cost
B-MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-10 B-11 B CBI	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT: Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General	Wo strol / Detour iping S ITEMS	MIN % MEAN % 0.0% 2.4% 0.0%	CEMENT MAX % 6.0% \$ 13.4% \$ 2.3% \$ 14.9% \$ 23.5% \$ 26.1% \$ 23.5% \$ 1.8% \$ 3.4% \$ 3.	EFFORT 3 - Average	A-05 Cost: (% of A) Adjusted> (% of A)	0.0% 100.0% 100.0% % of (A) 2.42% 5.55% 0.33% 4.30% 3.08% 16.55% 20.00% 0.07% 5.374% 153.74%	\$0 \$727,000 \$727,000 \$17,593 \$43,257 \$2,399 \$31,261 \$22,392 \$120,391 \$145,400 \$0 \$5,598 \$0 \$2,399 \$31,118,000 \$1,118,000	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.55% 0.00% 0.00% 0.00% 1.77% 0.00% 1.53.74% 153.74%	\$0 \$1,144,000 \$1,144,000 \$1,144,000 \$27,695 \$88,068 \$3,775 \$49,192 \$35,235 \$189,446 \$228,000 \$0 \$0 \$3,775 \$615,000 \$1,759,000	of Base Cost
B - MINOR (S B-01 B-02 B-03 B-04 B-06 B-07 B-10 B-11 B CBI	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & ITI Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEN ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica	Wo strol / Detour iping S ITEMS AS	MIN % MEAN % 0.0% 2.4% 0.0%	MAX % 6 6.0% 2.3% 2.3% 2.3% 2.3.5% 2.	EFFORT 3 - Average	A-05 Cost: (% of A) Adjusted> (% of A)	0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 20.00% 0.77% 0.00% 0.33% 53.74% 153.74%	\$0 \$727,000 Cost \$17,593 \$43,257 \$2,399 \$31,261 \$22,392 \$120,391 \$145,400 \$0 \$5,598 \$0 \$2,399 \$1,118,000	0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 16.56% 20.00% 0.77% 0.00% 0.33% 53.74% 153.74%	\$0 \$1,144,000 \$1,144,000 \$27,695 \$88,095 \$88,095 \$3,775 \$49,192 \$35,235 \$189,446 \$228,800 \$0 \$0 \$8,809 \$0 \$3,775 \$4,192 \$1,759,000	of Base Cost
B-MINOR (S B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-09 B-10 B-11 B-11 CBI	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & ITI Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEN ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica	Wo strol / Detour iping S ITEMS AS	MIN % MEAN % 0.0% 2.4% 0.0% 0.24% 0.0	MAX %	EFFORT 3 - Average BTOTAL (B)	A-05 Cost: (% of A) Adjusted> (% of A)	0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 10.56% 20.00% 0.07% 0.00% 153.74% 153.74% % of CBI 6.00% 3.00% 3.00%	\$0 \$727,000 \$727,000 \$17,593 \$43,257 \$2,399 \$31,261 \$22,392 \$120,391 \$145,400 \$0 \$5,598 \$0 \$2,399 \$31,118,000 \$1,118,000	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 4.30% 20.00% 0.00% 0.077% 0.00% 153.74% 153.74% % of CBI 6.00% 3.00% 3.00%	\$0 \$1,144,000 \$1,144,000 \$27,685 \$88,088 \$3,775 \$49,192 \$35,235 \$189,449 \$228,800 \$0 \$0 \$8,809 \$0 \$3,775 \$615,000 \$1,759,000 Cost \$105,540 \$52,770 \$2,024	of Base Cost
B-MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-10 B-11 B CBI C-FORCE C-01 C-02 C-03 C-04	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT: Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operati	Wo strol / Detour iping S ITEMS AS	MIN % MEAN % 0.0% 2.4% 0.0% 0.24% 0.0	MAX %	EFFORT 3 - Average 5 - Average 5 - Average 5 - Average 6 - Average 7 - Average 8 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A)	0.0% 100.0% 100.0% % of (A) 2.42% 5.55% 0.33% 4.30% 3.08% 16.55% 20.00% 0.07% 53.74% 153.74% % of CBI 6.00% 3.00% 3.00% 0.12% 0.00%	\$0 \$727,000 \$727,000 \$17,593 \$43,257 \$2,399 \$31,261 \$22,392 \$120,391 \$145,400 \$0 \$5,598 \$0 \$2,399 \$31,118,000 \$1,118,000	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.77% 153.74% 153.74% % of CBI 6.00% 3.00% 3.00% 0.00%	\$0 \$1,144,000 \$1,144,000 \$1,144,000 \$27,695 \$88,058 \$3,775 \$49,192 \$35,235 \$189,446 \$22,800 \$0 \$0 \$3,775 \$615,000 \$1,759,000 \$1,759,000 \$2,775 \$2,000 \$3,775 \$4,000 \$5,775 \$6,000 \$5,775 \$6,000 \$5,000	67.1% of Base Cost
B-MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-10 B-11 B CBI C-FORCE C-01 C-03 C-04 C	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT: Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operati F/A - STSM&O CONSTRUCTION ITEMS CONSTRUCTION ITEMS	Wo strol / Detour iping S ITEMS AS isions (MCR's) titions ons (for Reconstruction/	MIN % MEAN % 0.0% 2.4% 0.0% 0.24% 0.0	MAX %	EFFORT 3. Average 4. Average 4. Average 5. Average 5. Average 6. Average 6. Average 7. Average 8. A	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A)	0.0% 100.0% 100.0% % of (A) 2.42% 5.55% 0.33% 4.30% 3.00% 16.55% 0.00% 0.077% 153.74% 153.74% % of CBI % of	\$0 \$727,000 \$727,000 Cost \$17,593 \$43,257 \$2,399 \$31,261 \$52,392 \$120,391 \$145,400 \$0 \$0 \$5,598 \$0 \$2,399 \$391,000 \$1,118,000 Cost \$67,080 \$33,540 \$1,1287 \$0 \$1,1000	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.77% 153.74% 153.74% % of CBI 6.00% 3.00% 3.00% 9.12%	\$0 \$1,144,000 \$1,144,000 \$1,144,000 \$27,685 \$88,068 \$3,775 \$49,192 \$35,235 \$189,446 \$22,800 \$0 \$3,775 \$49,192 \$35,235 \$189,446 \$52,775 \$615,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000	of Base Cost
B - MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-10 B-10 C-FORCE C-01 C-02 C-03 C-04 C CI D-CONSTF	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT: Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operati F/A'S & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & CONSTRUCTION ITEMS	wo trol / Detour iping S ITEMS AS isions (MCR's) titions ons (for Reconstruction/	MIN % MEAN %	MAX % 5.0% 2.3% 2.3% 2.3% 2.3% 3.4% 3.3.2% 3.12% 3.000 X 0.7	EFFORT 3. Average 4. Average 4. Average 5. Average 5. Average 6. Average 6. Average 7. Average 8. A	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A)	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.33% 53.74% 153.74% 153.74% 167.81%	\$0 \$727,000 Cost \$17,593 \$43,257 \$2,399 \$31,261 \$22,392 \$120,391 \$145,400 \$5,598 \$0 \$2,399 \$31,118,000 \$1,118,000 Cost \$67,080 \$33,540 \$1,227 \$0 \$1,287 \$0 \$1,287	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 4.30% 0.00% 0.00% 0.33% 53.74% 153.74% \$ of CBI 6.00% 3.00% 0.12% 9.12% 167.74%	\$0 \$1,144,000 \$1,144,000 \$1,144,000 \$27,685 \$88,068 \$3,775 \$49,192 \$35,235 \$189,446 \$228,800 \$0 \$0 \$8,8009 \$0 \$3,775 \$615,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$2,024 \$0 \$1,919,000 \$1,919,000	67.1% of Base Cost
B - MINOR (S B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 C-01 C-03 C-04 C	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT: Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEN ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revir(A - Project Communica TSM&O Traffic & Operati F/A's & TSM&O CONSTRUCTION ITEMS	wo itrol / Detour iping S ITEMS AS ISIONS (MCR's) Itions ons (for Reconstruction/	MIN % MEAN % 0.0% 2.4% 0.0% 0.24% 0.0	SUBTOTAL SIGNAT SUBTOTAL SUBSTAN SU	EFFORT 3. Average 4. Average 4. Average 5. Average 5. Average 6. Average 6. Average 7. Average 8. A	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A)	0.0% 100.0% 100.0% % of (A) 2.42% 5.55% 0.33% 4.30% 3.08% 16.56% 0.00% 0.077% 0.00% 153.74% 153.74% 153.74% 450.00% 9.12% 167.81%	\$0 \$727,000 \$727,000 \$17,593 \$43,257 \$2,399 \$31,261 \$22,392 \$120,391 \$145,400 \$0 \$5,598 \$0 \$2,399 \$31,118,000 \$1,118,000 \$1,118,000 \$1,220,000	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.55% 0.00% 0.00% 0.077% 0.00% 153.74% 153.74% 167.74%	\$0 \$1,144,000 \$1,144,000 \$1,144,000 \$27,695 \$88,068 \$3,775 \$49,192 \$35,235 \$189,446 \$22,800 \$0 \$0 \$3,775 \$615,000 \$1,759,000 \$1,759,000 \$1,919,000 \$1,919,000 \$1,919,000	67.1% of Base Cost
B - MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-10 B-11 B CBI C-FORCE C-02 C-03 C-04 C CI D-CONSTE	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT- Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operati F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & I CONSTRUCTION ITEMS RUCTION ENGINEERING & I CONSTRUCTION ENGINEERING	wo trol / Detour iping S ITEMS AS isions (MCR's) itions ons (for Reconstruction/	MIN % MEAN % 0.0% 2.4% 0.0% 0.24% 0.0%	SUBTOTAL SIGNAT SUBTOTAL SUBSTACL	BTOTAL (A) EFFORT 3. Average 4. Average 3. Average 4. Average 5. Average 5. Average 6. Average 6. Average 6. Average 7. Average 8.	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A)	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 0.00% 0.77% 0.00% 0.33% 53.74% 153.74% % of CBI 6.00% 3.00% 0.12% 9.12%	\$0 \$727,000 Cost \$17,593 \$43,257 \$2,399 \$31,261 \$22,392 \$120,391 \$145,400 \$0 \$5,598 \$0 \$2,399 \$31,118,000 \$1,118,000 \$1,118,000 \$1,118,000 Cost \$67,080 \$33,540 \$1,287 \$0 \$1,287 \$0 \$1,287 \$0 \$1,287 \$0 \$1,287 \$0 \$1,287 \$0 \$1,290 \$11,20000	0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 20.00% 0.00% 0.77% 0.00% 0.33% 53.74% 153.74% % of CBI 6.00% 0.12% 0.00% 9.12% 167.74%	\$0 \$1,144,000 \$1,144,000 \$27,685 \$27,685 \$88,068 \$3,775 \$49,192 \$35,235 \$189,446 \$228,800 \$0 \$8,809 \$0 \$3,775 \$615,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000	67.1% of Base Cost
B - MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-10 B-10 B-10 C-02 C-03 C-04 C C CI D-CONSTF	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT: Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - Ceneral F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operati F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & I Construction Engineering Construction Indirects CONSTRUCTION ENGINE	wo trol / Detour iping S ITEMS AS isions (MCR's) itions ons (for Reconstruction/	MIN % MEAN % 0.0% 2.4% 0.0% 0.24% 0.0%	CEMENT S	BTOTAL (A) EFFORT 3. Average 4. Average 3. Average 4. Average 5. Average 5. Average 6. Average 6. Average 6. Average 7. Average 8.	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A)	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 0.00% 0.77% 0.00% 0.33% 53.74% 153.74% % of CBI 6.00% 3.00% 0.12% 9.12%	\$0 \$727,000 \$727,000 Cost \$17.593 \$43,257 \$2,399 \$31,261 \$52,392 \$120,391 \$145,400 \$5 \$0 \$2,399 \$31,118,000 \$1,118,000 Cost \$67,080 \$33,540 \$1,220,000 \$1,220,000 \$1,220,000	0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 20.00% 0.00% 0.77% 0.00% 0.33% 53.74% 153.74% % of CBI 6.00% 0.12% 0.00% 9.12% 167.74%	\$0 \$1,144,000 \$1,144,000 \$1,144,000 \$27,685 \$88,088 \$3,775 \$49,192 \$35,235 \$189,446 \$22,800 \$0 \$0 \$3,775 \$615,000 \$1,759,000 \$1,759,000 \$1,919,000 \$1,919,000 \$210,131 \$182,305 \$392,000	67.1% of Base Cost
B - MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-10 B-10 B-10 C-02 C-03 C-04 C C CI D-CONSTF	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT: Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operation F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & CONSTRUCTION ENGINEERING & PROJECT CONSTRUCTION PROJECT CONSTRUCTION	wo trol / Detour iping S ITEMS AS isions (MCR's) itions ons (for Reconstruction/	MIN % MEAN % 0.0% 2.4% 0.0% 0.24% 0.0%	SUBTOTAL	EFFORT 3 - Average 5 - Average 6 - Average 7 - Average 8 - Average 9 - Average 9 - Average 1 - Average 1 - Average 1 - Average 2 - Average 8 - Average 9 - Average 1 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A)	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 0.00% 0.77% 0.00% 0.33% 53.74% 153.74% % of CBI 6.00% 3.00% 0.12% 9.12%	\$0 \$727,000 Cost \$17,593 \$43,257 \$2,399 \$31,261 \$22,392 \$120,391 \$145,400 \$5,598 \$0 \$2,399 \$31,118,000 \$1,118,000 \$1,118,000 \$1,118,000 Cost \$67,080 \$33,540 \$1,287 \$0 \$1,287 \$0 \$1,287 \$0 \$1,287 \$0 \$1,287 \$0 \$1,287 \$0 \$1,280 \$1,	0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 20.00% 0.00% 0.77% 0.00% 0.33% 53.74% 153.74% % of CBI 6.00% 0.12% 0.00% 9.12% 167.74%	\$0 \$1,144,000 \$1,144,000 \$1,144,000 \$27,685 \$88,068 \$83,775 \$49,192 \$35,235 \$189,446 \$228,800 \$0 \$8,809 \$0 \$3,775 \$615,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$2,211,000 \$2,211,000 \$2,311,000	67.1% of Base Cost
B - MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-10 B-10 B-10 C-02 C-03 C-04 C C CI D-CONSTF	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization of Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT: Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operation F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & I Construction Engineerin Construction Indirects RIGHT-OF-Way [Phase R]	isions (MCR's) isions (MCR's) itions ons (for Reconstruction/	MIN % MEAN % 0.0% 2.4% 0.0% 0.24% 0.0%	SUBTOTAL SUBTOTAL AVG % AVG % AVG % AVG % AVG %	BTOTAL (A) EFFORT 3. Average 4. Average 3. Average 4. Average 5. Average 5. Average 6. Average 6. Average 6. Average 7. Average 8.	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A)	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 10.56% 20.00% 0.00% 0.33% 53.74% 153.74% 167.81% % of CBI 6.00% 3.00% 9.12% 167.81%	\$0 \$727,000 \$727,000 Cost \$17,593 \$43,257 \$2,399 \$31,261 \$22,392 \$120,391 \$145,400 \$5,598 \$0 \$2,399 \$31,118,000 \$1,118,000 \$1,118,000 \$1,220,000 \$1,220,000 \$1,220,000 \$1,220,000 \$1,220,000	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.33% 53.74% 153.74% 167.74% 167.74% % of CBI 10.95% 9.12% 167.74%	\$0 \$1,144,000 \$1,144,000 \$1,144,000 \$27,695 \$88,068 \$3,775 \$49,192 \$35,235 \$189,449 \$22,800 \$0 \$0 \$3,775 \$615,000 \$1,759,000 \$1,759,000 \$1,919,000 \$1,919,000 \$1,919,000 \$2,311,000 \$2,311,000	67.1% of Base Cost
B - MINOR (S B - M	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operati F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & I CONSTRUCTION ENGINEERING & I CONST	wo itrol / Detour iping S ITEMS AS ISIONS (MCR's) isions (for Reconstruction/ INDIRECTS g EERING & INDIRECTS ON BUDGET [Phase U] hase D]	MIN % MEAN	SUBTOTAL SUBTOTAL AVG % AVG % AVG % AVG % AVG %	EFFORT 3 - Average 5 - Average 5 - Average 5 - Average 7 - Average 8 - Average 9 - Average 9 - Average 9 - Average 1 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A) (% of A) (% of CB)	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 0.00% 0.77% 0.00% 0.33% 53.74% 153.74% % of CBI 6.00% 3.00% 0.12% 9.12% 167.81% % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00%	\$0 \$727,000 \$727,000 \$727,000 \$727,000 \$17,593 \$43,257 \$2,399 \$31,261 \$22,392 \$120,391 \$145,400 \$5,598 \$5 \$5 \$2,399 \$31,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.33% 53.74% 153.74% 153.74% 167.74% 167.74% % of CBI 10.95% 9.12% 167.74% indirect 9 w of CI 10.95% 9.55% 20.45%	\$0 \$1,144,000 \$1,144,000 \$1,144,000 \$27,695 \$88,068 \$3,775 \$49,192 \$35,235 \$189,449 \$228,800 \$0 \$0 \$3,775 \$615,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,919,000 \$1,919,000 \$1,919,000 \$2,311,000 \$2,311,000 \$2,311,000	67.1% of Base Cost
B-MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-11 C-02 C-03 C-04 C CI D-CONSTF D-01 D-02 D E-01 E-02 E-03 E-03.1 E-03.2 E-03.2 E-04.	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT: Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operation F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & CONSTRUCTION Engineerin Construction Engineeri	isions (MCR's) isions (MCR's) itions isions (MCR's) itions ons (for Reconstruction/	MIN % MEAN % 0.0% 2.4% 0.0% 0.0% 0.0% 0.0% 0.0% 0.3% 0.0% 3.1% 0.0% 20.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.3% 0.0% 0.0% 0.0% 0	SUBTOTAL SUBTOTAL AVG % 5.2% 13.4% 2.3% 14.9% 2.5.1% 2.5.1% 2.5.1% 3.2% 3.2% 5.5%	EFFORT 3 - Average 5 - Average 5 - Average 5 - Average 7 - Average 8 - Average 9 - Average 9 - Average 9 - Average 1 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A) (% of A) (% of CB)	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.55% 0.33% 4.30% 3.08% 16.55% 20.00% 0.00% 0.33% 53.74% 153.74% 153.74% 167.81% % of CBI 10.95% 9.12% 167.81% % of CI 10.95% 9.50% 20.45%	\$0 \$727,000 \$727,000 \$727,000 \$727,000 \$17.593 \$43,257 \$2,399 \$31,261 \$5,2392 \$120,391 \$145,400 \$5 \$5 \$5 \$5 \$5 \$5 \$5 \$5 \$5 \$5 \$8 \$5 \$5 \$1,118,000	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.77% 0.00% 153.74% 153.74% 153.74% 167.74% % of CBI 10.95% 0.00% 9.12% 167.74% Indirect 9 % of CI 10.95% 9.50% 20.45%	\$0 \$1,144,000 \$1,144,000 \$1,144,000 \$27,695 \$88,058 \$88,058 \$3,775 \$49,192 \$35,235 \$189,446 \$22,800 \$0 \$0 \$3,775 \$615,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,919,000 \$1,919,000 \$1,919,000 \$2,201 \$0 \$1,919,000 \$1,919,000 \$2,201 \$0 \$392,000 \$2,211,000 \$2,211,000 \$2,211,000 \$2,211,000 \$2,211,000 \$2,211,000 \$2,211,000 \$2,211,000 \$2,211,000 \$2,211,000 \$2,211,000 \$2,211,000 \$2,211,000 \$2,211,000 \$3,25,2157 \$3,57,500 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	67.1% of Base Cost
B - MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 C-11 B CBI C-FORCE C-02 C-03 C-04 C C CI D - CONSTE D-01 E-02 D E-01 E-02 E-03 E-03 E-03 E-03 E-04 E-05	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operati F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & I Construction Engineering (P) PROJECT CONSTRUCTION ISTRUCTION ITEMS Right-of-Way [Phase R] Utilities + Railroad Work Dossign & Engineering (P) Subsurface Utility E Transportation Syst Environmental (NEPA) [P) Miscellaneous [Phase M] Miscellaneous [Phase M]	isions (MCR's) isions (MCR's) isions (MCR's) isions (for Reconstruction/ indirects g EERING & INDIRECTS ON BUDGET [Phase U] hase D] ingineering (SUE) Budge tens Management & Ope hase E]	MIN % MEAN % 0.0% 2.4% 0.0% 0.0% 0.0% 0.0% 0.0% 0.3% 0.0% 3.1% 0.0% 20.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.3% 0.0% 0.0% 0.0% 0	SUBTOTAL SUBTOTAL SUBTOTAL AVG % 5.5% 2.3% 2.3% 2.35% 2.35% 3.2% 3.2% 3.2% 5.5%	EFFORT 3 - Average 5 - Average 5 - Average 6 - Average 7 - Average 8 - Average 8 - Average 9 - Average 9 - Average 1 - Average 1 - Average 1 - Average 8 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A) (% of CBI) (% of CI)	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 10.55% 20.00% 0.00% 0.33% 153.74% 153.74% 153.74% 167.81% % of CBI 10.95% 9.12% 167.81% % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 0.00% 0.00% 0.00% 0.00%	\$0 \$727,000 \$727,000 \$727,000 \$727,000 \$17,593 \$43,257 \$2,399 \$31,261 \$22,392 \$120,391 \$145,400 \$5,598 \$5 \$0 \$2,399 \$31,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.33% 153.74% 153.74% 153.74% 167.74% 167.74% 167.74% Indirect 9 % of CI 2.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00%	\$0 \$1,144,000 \$1,144,000 \$1,144,000 \$27,695 \$88,068 \$3,775 \$49,192 \$35,235 \$189,449 \$228,800 \$0 \$0 \$3,775 \$615,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,919,000 \$1,919,000 \$1,919,000 \$2,311,000 \$2,311,000 \$2,311,000 \$2,311,000 \$2,311,000	67.1% of Base Cos
B-MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-11 C-02 C-03 C-04 C CI D-CONSTF D-01 D-02 D E-01 E-02 E-03 E-03.1 E-03.2 E-03.2 E-04.	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT: Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operation F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & CONSTRUCTION Engineerin Construction Engineeri	isions (MCR's) isions (MCR's) isions (MCR's) isions (for Reconstruction/ indirects g EERING & INDIRECTS ON BUDGET [Phase U] hase D] ingineering (SUE) Budge tens Management & Ope hase E]	MIN % MEAN % 0.0% 2.4% 0.0% 0.0% 0.0% 0.0% 0.0% 0.3% 0.0% 3.1% 0.0% 20.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.3% 0.0% 0.0% 0.0% 0	SUBTOTAL SUBTOTAL SUBTOTAL AVG % 5.5% 2.3% 2.3% 2.35% 2.35% 3.2% 3.2% 3.2% 5.5%	EFFORT 3 - Average 5 - Average 5 - Average 5 - Average 7 - Average 8 - Average 9 - Average 9 - Average 9 - Average 1 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A) (% of A) (% of CB)	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.55% 0.33% 4.30% 3.08% 16.55% 20.00% 0.00% 0.33% 53.74% 153.74% 153.74% 167.81% % of CBI 10.95% 9.12% 167.81% % of CI 10.95% 9.50% 20.45%	\$0 \$727,000 \$727,000 \$727,000 \$727,000 \$17.593 \$43,257 \$2,399 \$31,261 \$5,2392 \$120,391 \$145,400 \$5 \$5 \$5 \$5 \$5 \$5 \$5 \$5 \$5 \$5 \$8 \$5 \$5 \$1,118,000	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.77% 0.00% 153.74% 153.74% 153.74% 167.74% % of CBI 10.95% 0.00% 9.12% 167.74% Indirect 9 % of CI 10.95% 9.50% 20.45%	\$0 \$1,144,000 \$1,144,000 \$1,144,000 \$27,695 \$88,058 \$88,058 \$3,775 \$49,192 \$35,235 \$189,446 \$22,800 \$0 \$0 \$3,775 \$615,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,919,000 \$1,919,000 \$1,919,000 \$2,201 \$0 \$1,919,000 \$1,919,000 \$2,201 \$0 \$392,000 \$2,211,000 \$2,211,000 \$2,211,000 \$2,211,000 \$2,211,000 \$2,211,000 \$2,211,000 \$2,211,000 \$2,211,000 \$2,211,000 \$2,211,000 \$2,211,000 \$2,211,000 \$2,211,000 \$3,25,2157 \$3,57,500 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	67.1% of Base Cos 73.2% of Base Cos 88.2% of Base Cos
B - MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 C-11 B CBI C-FORCE C-02 C-03 C-04 C C CI D - CONSTE D-01 E-02 D E-01 E-02 E-03 E-03 E-03 E-03 E-04 E-05	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operati F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & I Construction Engineering (P) PROJECT CONSTRUCTION ISTRUCTION ITEMS Right-of-Way [Phase R] Utilities + Railroad Work Dossign & Engineering (P) Subsurface Utility E Transportation Syst Environmental (NEPA) [P) Miscellaneous [Phase M] Miscellaneous [Phase M]	wo itrol / Detour iping S ITEMS AS ISIONS (MCR's) isions (MCR's) itions ons (for Reconstruction/ INDIRECTS g EERING & INDIRECTS ON BUDGET [Phase U] hase D] ingineering (SUE) Budge tems Management & Ope hase E]	MIN % MEAN	SUBTOTAL SUBTOTAL SUBTOTAL AVG % 5.5% 2.3% 2.3% 2.35% 2.35% 3.2% 3.2% 3.2% 5.5%	BTOTAL (A) EFFORT 3 - Average 4 - Average 5 - Average 5 - Average 6 - Average 7 - Average 8 - Average 8 - Average 8 - Average 9 - Average 9 - Average 9 - Average 1 - Average 8 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A) (% of CBI) (% of CI)	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 10.55% 20.00% 0.00% 0.33% 53.74% 153.74% 153.74% 167.81% % of CBI 10.95% 9.12% 167.81% % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 0.00% 0.00% 0.00% 0.00%	\$0 \$727,000 \$727,000 \$727,000 \$727,000 \$17,593 \$43,257 \$2,399 \$31,261 \$22,392 \$120,391 \$145,400 \$5,598 \$5 \$0 \$2,399 \$31,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.33% 153.74% 153.74% 153.74% 167.74% 167.74% 167.74% Indirect 9 % of CI 2.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00%	\$0 \$1,144,000 \$1,144,000 \$1,144,000 \$27,695 \$88,068 \$3,775 \$49,192 \$35,235 \$189,449 \$228,800 \$0 \$0 \$3,775 \$615,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,919,000 \$1,919,000 \$1,919,000 \$2,311,000 \$2,311,000 \$2,311,000 \$2,311,000 \$2,311,000	67.1% 67.1% 67.88e Cos 73.2% 67.88e Cos 11.8% 67.88e Cos
B - MINOR (B-01 B-02 B-03 B-04 B-05 B-07 B-08 B-09 B-11 B CBI C-FORCE C-02 C-03 C-04 C C D-CONSTF D-01 D-02 D E-01 E-02 E-03 E-03 E-03 E-04 E-05 E	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT: Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operation F/A'S & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & CONSTRUCTION ENGINEERING & CONSTRUCTION ENGINE PROJECT CONSTRUCTION ISTRUCTION ITEMS RIght-of-Way (Phase R) Utilities * Railroad Work Design & Engineering [P) Subsurface Utility E Transportation Syst Environmental (NEPA) [P Miscellaneous [Phase M] PRECONSTRUCTION ITE PROJECT BASE COST	wo itrol / Detour iping S ITEMS AS ISIONS (MCR's) isions (MCR's) itions ons (for Reconstruction/ INDIRECTS g EERING & INDIRECTS ON BUDGET [Phase U] hase D] ingineering (SUE) Budge tems Management & Ope hase E]	MIN % MEAN	SUBTOTAL SUBTOTAL SUBTOTAL AVG % 5.5% 2.3% 2.3% 2.3% 2.35% 2.3.5% 3.2% 3.2% 3.2% SUBTOTAL	BTOTAL (A) EFFORT 3 - Average 4 - Average 5 - Average 5 - Average 6 - Average 7 - Average 8 - Average 8 - Average 8 - Average 9 - Average 9 - Average 9 - Average 1 - Average 8 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A) (% of CBI) (% of CI)	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 10.55% 20.00% 0.00% 0.33% 53.74% 153.74% 153.74% 167.81% % of CBI 10.95% 9.12% 167.81% % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 0.00% 0.00% 0.00% 0.00%	\$0 \$727,000 \$727,000 \$727,000 \$727,000 \$17,593 \$43,257 \$2,399 \$31,261 \$22,392 \$120,391 \$145,400 \$5,598 \$5 \$5 \$2,399 \$31,118,000 \$1,118,000	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.33% 153.74% 153.74% 153.74% 167.74% 167.74% 167.74% Indirect 9 % of CI 2.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00%	\$0 \$1,144,000 \$1,144,000 \$1,144,000 \$27,685 \$88,068 \$3,775 \$49,192 \$35,235 \$189,446 \$228,800 \$0 \$3,775 \$615,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$2,024 \$0 \$0 \$1,919,000 \$1,919,000 \$1,919,000 \$1,919,000 \$2,024 \$0 \$0 \$1,919,000 \$1,919,000 \$1,919,000 \$1,919,000 \$2,11,000 \$2,311,000 \$2,311,000 \$2,311,000 \$30 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	67.1% 67.1% 67.88e Cos 73.2% 67.88e Cos 11.8% 67.88e Cos
B - MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 C-11 B CBI C-FORCE C-02 C-03 C-04 C C CI D - CONSTE D-01 E-02 D E-01 E-02 E-03 E-03 E-03 E-03 E-04 E-05	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT: Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operation F/A'S & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & CONSTRUCTION ENGINEERING & CONSTRUCTION ENGINE PROJECT CONSTRUCTION ISTRUCTION ITEMS RIght-of-Way (Phase R) Utilities * Railroad Work Design & Engineering [P) Subsurface Utility E Transportation Syst Environmental (NEPA) [P Miscellaneous [Phase M] PRECONSTRUCTION ITE PROJECT BASE COST	isions (MCR's) isions (MCR's) isions (MCR's) isions (MCR's) isions (MCR's) itions ons (for Reconstruction/ indirects g EERING & INDIRECTS ON BUDGET [Phase U] hase D] ingineering (SUE) Budge tems Management & Ope hase E] EMS F ESTIMATE	MIN % MEAN %	SUBTOTAL SUBTOTAL SUBTOTAL AVG % 5.5% 2.3% 2.3% 2.3% 2.35% 2.3.5% 3.2% 3.2% 3.2% SUBTOTAL	BTOTAL (A) EFFORT 3 - Average 4 - Average 5 - Average 5 - Average 6 - Average 7 - Average 8 - Average 8 - Average 8 - Average 9 - Average 9 - Average 9 - Average 1 - Average 8 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A) (% of CBI) (% of CI)	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 10.55% 20.00% 0.00% 0.33% 53.74% 153.74% 153.74% 167.81% % of CBI 10.95% 9.12% 167.81% % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 0.00% 0.00% 0.00% 0.00%	\$0 \$727,000 \$727,000 \$727,000 \$727,000 \$17,593 \$43,257 \$2,399 \$31,261 \$22,392 \$120,391 \$145,400 \$5,598 \$5 \$5 \$2,399 \$31,118,000 \$1,118,000	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.00% 153.74% 153.74% 153.74% 153.74% 167.74% % of CBI 0.00% 3.00% 9.12% 167.74% Indirect 9 % of CI 10.95% 20.45% Indirect 9 % of CI 10.95% 0.00% 1.50% 0.00% 1.50% 0.00% 1.50% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00%	\$0 \$1,144,000 \$1,144,000 \$1,144,000 \$27,685 \$88,068 \$3,775 \$49,192 \$35,235 \$189,446 \$228,800 \$0 \$3,775 \$615,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$2,024 \$0 \$0 \$1,919,000 \$1,919,000 \$1,919,000 \$1,919,000 \$2,024 \$0 \$0 \$1,919,000 \$1,919,000 \$1,919,000 \$1,919,000 \$2,311,000 \$2,311,000 \$2,311,000 \$2,311,000 \$30 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0	67.1% 67.1% 67.88e Cos 73.2% 67.88e Cos 11.8% 67.88e Cos
B - MINOR (B-01 B-02 B-03 B-04 B-05 B-07 B-08 B-09 B-11 B CBI C-FORCE C-02 C-03 C-04 C C D-CONSTF D-01 D-02 D E-01 E-02 E-03 E-03 E-03 E-04 E-05 E	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT: Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operation F/A'S & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & ITEM CONSTRUCTION ENGINE RUCTION ENGINEERING & ITEM CONSTRUCTION ENGINE PROJECT CONSTRUCTION ISTRUCTION ITEMS Right-of-Way [Phase R] Utilities + Railroad Work Design & Engineering [P] Subsurface Utility Transportation Syst Environmental (NEPA) [P Miscellaneous [Phase M] PRECONSTRUCTION ITE PROJECT BASE COST	isions (MCR's) isions (MCR's) isions (MCR's) isions (MCR's) isions (MCR's) itions ons (for Reconstruction/ indirects g EERING & INDIRECTS ON BUDGET [Phase U] hase D] ingineering (SUE) Budge tems Management & Ope hase E] EMS F ESTIMATE	MIN % MEAN %	SUBTOTAL SUBTOTAL SUBTOTAL AVG % 5.2% 2.3% 2.3% 2.3% 2.3% 3.2% 3.2% 3.2% 3.2% 3.2% 3.2% 3.34% 5.5% 3.2% 5.5%	BTOTAL (A) EFFORT 3 - Average 4 - Average 5 - Average 5 - Average 6 - Average 7 - Average 8 - Average 8 - Average 8 - Average 9 - Average 9 - Average 9 - Average 1 - Average 8 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A) (% of CBI) (% of CI)	0.0% 100.0% 100.0% 100.0% 100.0% % of (A) 2.42% 6.55% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.33% 153.74% 153.74% 153.74% 167.81% % of CI 10.95% 9.12% Indirect % of CI 10.95% 0.00% 12.00%	\$0 \$727,000 \$727,000 \$727,000 \$727,000 \$17,593 \$43,257 \$2,399 \$31,261 \$22,392 \$120,391 \$145,400 \$0 \$5,598 \$0 \$2,399 \$391,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,118,000 \$1,220,000 \$1,220,000 \$1,220,000 \$1,220,000 \$1,249,000 \$1,469,000	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 4.30% 4.30% 4.30% 4.30% 6.65% 0.00% 0.00% 153.74% 153.74% 153.74% 153.74% 167.74% % of CBI 10.95% 9.12% 167.74% indirect 9 % of CI 2.00% 0.00% 20.45% Indirect 9 % of CI 2.00% 0.00% 1.75% 0.00% 1.55%	\$0 \$1,144,000 \$1,144,000 \$1,144,000 \$1,144,000 \$27,685 \$88,068 \$3,775 \$49,192 \$35,235 \$189,446 \$22,800 \$0 \$3,775 \$615,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,919,000 \$1,919,000 \$1,919,000 \$1,919,000 \$2,211,000 \$2,311,000 \$2,311,000 \$2,311,000 \$3,000	67.1% of Base Cost 73.2% of Base Cost 11.8% of Base Cost 110.0% of Base Cost
B - MINOR (B-01 B-02 B-03 B-04 B-05 B-07 B-08 B-09 B-11 B CBI C-FORCE C-02 C-03 C-04 C C D-CONSTF D-01 D-02 D E-01 E-02 E-03 E-03 E-03 E-04 E-05 E	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operati F/A - StSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & I CONSTRUCTION ITEMS RIGHT-OF-Way [Phase R] Utilities + Railroad Work Dossign & Engineering [P) Subsurface Utility E Transportation Syst Environmental (NEPA) [P) Miscellaneous [Phase M] PRECONSTRUCTION ITE PROJECT BASE COST RVE PROBABILISTIC COST E	Wo itrol / Detour iping S ITEMS AS ISIONS (MCR's) itions ons (for Reconstruction/ INDIRECTS g EERING & INDIRECTS ON BUDGET IPhase UJ hase DJ ingineering (SUE) Budge tems Management & Ope hase E] EMS T ESTIMATE STIMATE	MIN % MEAN %	SUBTOTAL SUBTOTAL SUBTOTAL AVG % 5.5% 2.3% 2.3% 2.3% 2.3% 3.2% 3.2% 3.2% 3.2% 3.2% 3.2% 3.2% 3.2% 3.2% SUBTOTAL SUBTO	BTOTAL (A) EFFORT 3 - Average 4 - Average 5 - Average 5 - Average 6 - Average 7 - Average 8 - Average 8 - Average 8 - Average 9 - Average 9 - Average 9 - Average 1 - Average 8 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A) (% of CBI) (% of CI)	0.0% 100.0% 100.0% 100.0% 100.0% % of (A) 2.42% 6.55% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.33% 153.74% 153.74% 153.74% 167.81% % of CI 10.95% 9.12% Indirect % of CI 10.95% 0.00% 12.00%	\$0 \$727,000 \$727,000 \$727,000 \$17,200 \$17,593 \$43,257 \$2,399 \$31,261 \$22,392 \$120,391 \$145,400 \$0 \$5,598 \$0 \$1,118,000	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 20.00% 0.00% 0.00% 0.77% 0.00% 153.74% 153.74% 153.74% 153.74% 167.74% % of CBI 6.00% 3.00% 9.12% 167.74% Indirect 9 % of CI 10.95% 20.45% Indirect 9 % of CI 10.95% 0.00% 0.00% 12.00% 0.00% 16.15%	\$0 \$1,144,000 \$1,144,000 \$1,144,000 \$27,695 \$88,068 \$3,775 \$49,192 \$35,235 \$189,446 \$228,800 \$0 \$0 \$3,775 \$615,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,919,000 \$1,919,000 \$2,2024 \$0 \$160,000 \$1,919,000 \$2,2024 \$0 \$1,919,000 \$1,919,000 \$1,919,000 \$1,919,000 \$2,311,000 \$2,311,000 \$2,311,000 \$2,311,000 \$310,000 \$310,000 \$310,000 \$310,000	67.1% of Base Cost 73.2% of Base Cost 11.8% of Base Cost 100.0% of Base Cost
B - MINOR (B-01 B-02 B-03 B-04 B-05 B-08 B-09 B-10 B-10 C-FORCE C-01 C-02 C-03 C-04 C C CI D - CONSTR D-02 D E-04 E-05 E-04 E-05 E E RISK RESEI	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operati F/A'S & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & IT CONSTRUCTION ENGINE PROJECT CONSTRUCTION ISTRUCTION ITEMS RIGHT-Of-Way [Phase R] Utilities + Railroad Work Design & Engineering [P) Subsurface Utility E Transportation Syst Environmental (NEPA) [P Miscellaneous [Phase M] PRECONSTRUCTION ITE PROJECT BASE COST RVE PROBABILISTIC COST E	isions (MCR's) isions (MCR's) isions (MCR's) isions (MCR's) isions (MCR's) itions ons (for Reconstruction/ indirects g EERING & INDIRECTS ON BUDGET [Phase U] hase D] ingineering (SUE) Budge tems Management & Ope hase E] EMS F ESTIMATE	MIN % MEAN %	SUBTOTAL SUBTOTAL SUBTOTAL AVG % 5.2% 23.5% 23.5% 23.5% 3.2% 3.1% SUBTOTAL SUBTOTAL SUBTOTAL SUBTOTAL SUBTOTAL AVG % 5.2% 5.2% SUBTOTAL S	BTOTAL (A) EFFORT 3 - Average 4 - Average 5 - Average 5 - Average 6 - Average 7 - Average 8 - Average 8 - Average 8 - Average 9 - Average 9 - Average 9 - Average 1 - Average 8 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A) (% of CBI) (% of CI)	0.0% 100.0% 100.0% 100.0% 100.0% % of (A) 2.42% 6.55% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.33% 153.74% 153.74% 153.74% 167.81% % of CI 10.95% 9.12% Indirect % of CI 10.95% 0.00% 12.00%	\$0 \$727,000 \$727,000 \$727,000 \$727,000 \$17.593 \$43,257 \$2,399 \$31,261 \$92,392 \$120,391 \$145,400 \$0 \$5,598 \$0 \$2,399 \$391,000 \$1,118,000	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.00% 153.74% 153.74% 153.74% 153.74% 167.74% % of CBI 0.00% 3.00% 9.12% 167.74% Indirect 9 % of CI 10.95% 20.45% Indirect 9 % of CI 10.95% 0.00% 1.50% 0.00% 1.50% 0.00% 1.50% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00%	\$0 \$1,144,000 \$1,144,000 \$1,144,000 \$1,144,000 \$27,685 \$88,088 \$3,775 \$49,192 \$35,235 \$189,446 \$22,800 \$0 \$3,775 \$615,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,759,000 \$1,919,000 \$1,919,000 \$1,919,000 \$1,919,000 \$2,210,131 \$182,305 \$392,000 \$2,210,131 \$182,305 \$392,000 \$2,211,100 \$2,211,100 \$2,311,000 \$2,311,000 \$2,311,000 \$3,000	67.1% of Base Cost 73.2% of Base Cost 11.8% of Base Cost 110.0% of Base Cost

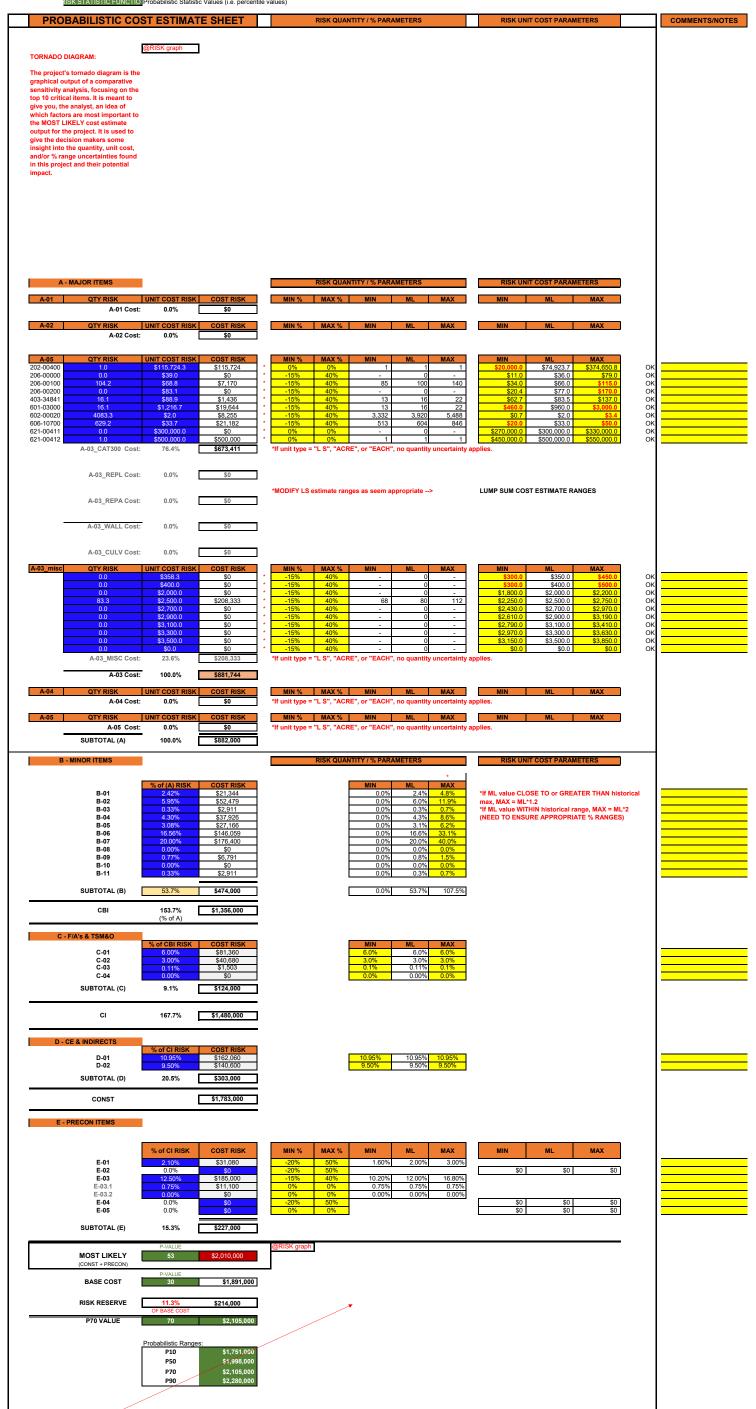




	PROFILE									
	Project Name R2	2 BUNDLE			1					
	Sub-Account Number XX	-13-N XXXX -13-N								
	Project Work Type	BRIDGE REPLACEMEN	NT							
	Estimator:	E.A.	Date: 11/6/2018]						
PROJECT L	OCATION & CHARACTERISTI	ICS								
	Route: CDOT Region:	024A 2	Begin MP: 271.9 City: NONE	End MP: County			Length:	6.1		
	Seament Mid-point	RefPt 274.950	FIPS City: 00000 Latitude: 38.9330	FIPS County Longitude			G	OOGLE MAP LINI	ĸ	
	Functional Classification: 4			Rural			Terrain:	3	_	
	AADT:	5,300	Truck ADT: 160	Tier Class	Tier 2		Primary Surface:	1 Asphalt		
	Design Maturity:	0 - Conceptual	NEPA Action:	Cat/Ex		NEPA Statu	s: In Progress			
	Project Delivery Method:	Design-Bid-Build	Construction Start (MMM-YY)	Sep-22	Construct	ion Duration (m	0) 24.0			
A - MAJOR	CONSTRUCTION ITEMS				[Mod	el Estimate	Regio	on Estimate	
A-01	EARTHWORK			Unit	Qty A-01 Cost:	Unit Cost 0.0%	Cost \$0	Unit Cost 0.0%	Cost \$0	
A-02	PAVEMENT & BASES			Unit	Qty	Unit Cost	Cost	Unit Cost	Cost	
A-03	MAJOR STRUCTURES (CA				A-02 Cost:	0.0%	\$0	0.0%	\$0	
A-03_CAT30	00 PAYITEM GROUP CATEGO 00 202 - Removal of Structures a	and Obstructions 202	1-00400 - Removal of Bridge	Unit EACH CY	Qty 1 0	Unit Cost \$74,923.7 \$21.6	\$74,924	Unit Cost \$74,923.7	\$74,924 \$0	
A-03 CAT30 A-03 CAT30	00 206 - Structure Excavation & 00 206 - Structure Excavation & 00 206 - Structure Excavation &	Backfill, Cofferdam an 206 Backfill, Cofferdam an 206	i-00100 - Structure Backfill (Class 1) i-00200 - Structure Backfill (Class 2)	CY CY	100 0	\$45.3 \$48.2	\$0 \$4,530 \$0	\$66.0 \$77.0	\$6,600 \$0	
A-03_CAT30	00 403 - Hot Bituminous Paveme 00 601 - Structural Concrete 00 602 - Reinforcing Steel	601	i-34841 - Hot Mix Asphalt (Grading S -03000 - Concrete Class D d-00020 - Reinforcing Steel (Epoxy C	CY	16 16 3,920	\$83.5 \$960.0 \$1.0	\$1,294 \$14,880 \$3,944	\$83.5 \$960.0 \$2.0	\$1,294 \$14,880 \$7,840	
A-03 CAT30 A-03 CAT30	00 606 - Guardrail and Bridge Ra 00 621 - Detour	ail 606 621	i-10700 - Bridge Rail Type 7 -00411 - Structure Temporary Acces	LF ss Road (Loca L S	604	\$95.5 \$65,000.0 \$50,000.0	\$57,670 \$0	\$33.0 \$300,000.0	\$19,932 \$0	
A-03_CA130	00 621 - Detour	<u> 621</u>	-00412 - Structure Temporary Acces		1 03_CAT300 Cost:	\$50,000.0 50.9%	\$50,000 \$207,000	\$500,000.0 75.8%	\$500,000 \$625,000	
A-03_repl	BRIDGE REPLACEMENT				A-03_REPL Cost:	0.0%	\$0	0.0%	\$0	
A-03_repa	BRIDGE REPAIR				A-03_REPA Cost:	0.0%	\$0	0.0%	\$0	
A-03_wall	I WALLS									
A-03 out	/ MAJOR CULVERTS				A-03_WALL Cost:	0.0% R2	\$0	0.0%	\$0	
					A-03_CULV Cost:	0.0%	\$0	0.0%	\$0	
A-03_misc A-03 misc A-03 misc		Pipe		Unit LF LF	Qty 0 0	\$350.0 \$400.0	\$0 \$0	\$350.0 \$400.0	\$0 \$0	
A-03 misc A-03 misc	10x8 Foot Concrete Box Culv 12x10 Foot Concrete Box Cu	vert (Precast) Ilvert (Precast)		LF LF	0 80	\$2,000.0 \$2,500.0	\$0 \$0 \$200,000	\$2,000.0 \$2,500.0	\$0 \$200,000	
	14x6 Foot Concrete Box Culv 14x10 Foot Concrete Box Culv 18x6 Foot Concrete Box Culv	llvert (Precast)*		LF LF LF	0 0 0	\$2,700.0 \$2,900.0 \$3,100.0	\$0 \$0 \$0	\$2,700.0 \$2,900.0 \$3,100.0	\$0 \$0 \$0	
A-03 misc A-03 misc	20x6 Foot Concrete Box Culv 20x8 Foot Concrete Box Culv	vert (Precast)		LF LF	0	\$3,300.0 \$3,500.0	\$0 \$0	\$3,300.0 \$3,500.0	\$0 \$0	
A-03 misc	e 0			LF	A-03_MISC Cost:	\$0.0 49.1%	\$0 \$200,000	\$0.0	\$0 \$200,000	
					A-03 Cost:	100.0%	\$407,000	100.0%	\$825,000	
A-04	TRAFFIC/ITS			Unit	Qty A-04 Cost:	Unit Cost 0.0%	Cost \$0	Unit Cost 0.0%	Cost \$0	
A-05	OTHER CATEGORY	OTI	HER MAJOR ITEMS	Unit	Qty A-05 Cost:	Unit Cost 0.0%	Cost \$0	Unit Cost 0.0%	Cost \$0	
Α	MAJOR CONSTRUCTION IT	ГЕМЅ			(0/ -f A)					
B - MINOR (SUBTOTAL (A	(% of A)	100.0%	\$407,000	100.0%	\$825,000	43.6% of Base Cost
	CONSTRUCTION ITEMS) (% OI A)	100.0%	\$407,000	100.0%	\$825,000	
B-01		Work	Type: BRIDGE REPLACEN MIN % MEAN % 0.0% 2.4%	MENT EFFORT] [% of (A)	Cost	% of (A)	Cost	
B-01 B-02 B-03	Removals / Resets Environmental Structural	Work	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 0.3%	MENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 3 - Average	Adjusted—> Adjusted—> Adjusted—>	% of (A) 2.42% 5.95% 0.33%	Cost \$9,849 \$24,217 \$1,343	% of (A) 2.42% 5.95% 0.33%	Cost \$19,965 \$49,088 \$2,723	
B-02	Removals / Resets Environmental	Work	MIN % MEAN % 0.0% 2.4% 0.0% 6.0%	MENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 3 - Average 14.9% 3 - Average 5.5% 3 - Average	Adjusted—> Adjusted—>	% of (A) 2.42% 5.95%	Cost \$9,849 \$24,217	% of (A) 2.42% 5.95%	Cost \$19,965 \$49,088	
B-02 B-03 B-04 B-05 B-06 B-07 B-08	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contro	ol / Detour	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 0.3% 0.0% 3.1% 0.0% 3.1% 0.0% 16.6% 0.0% 20.0% 0.0% 0.0%	MENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 3 - Average 14.9% 3 - Average 25.5% 3 - Average 25.5% 3 - Average 26.1% 3 - Average 3.2% 3 - Average	Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—>	% of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 20.00% 0.00%	Cost \$9,849 \$24.217 \$1,343 \$17,501 \$12,536 \$67,399 \$81,400 \$0	% of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 20.00%	Cost \$19,965 \$49,086 \$2,723 \$35,475 \$25,410 \$136,620 \$165,000 \$0	
B-02 B-03 B-04 B-05 B-06 B-07	Removals / Resets Environmental Structural Diracinage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contro	ol / Detour	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 6.0% 0.0% 0.3% 0.0% 0.3% 0.0% 3.1% 0.0% 3.1% 0.0% 16.5% 0.0% 20.0%	MENT MAX % 6.0% 3 - Average 13.4% 3 - Average 2.3% 3 - Average 14.9% 3 - Average 5.5% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 24.5% 3 - Average 25.5% 3 - Average	Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—>	% of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 20.00%	Cost \$9.849 \$24,217 \$1,343 \$17,501 \$12,536 \$67,399 \$81,400	% of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 20.00%	Cost \$19,965 \$49,088 \$2,773 \$35,475 \$25,410 \$136,620 \$165,000	43.6% of Base Cost
B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripl Traffic Signalization & ITS	ol / Detour ling	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 0.3% 0.0% 3.1% 0.0% 3.1% 0.0% 3.1% 0.0% 16.6% 0.0% 20.0% 0.0% 0.0% 0.0% 0.0%	MENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 3 - Average 14.9% 3 - Average 25.5% 3 - Average 23.5% 3 - Average 25.5% 3 - Average 26.1% 3 - Average 1.8% 3 - Average	Adjusted—>	% of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.77% 0.00%	Cost \$9,849 \$24,217 \$1,343 \$17,501 \$12,536 \$67,399 \$81,400 \$0 \$0 \$3,134	% of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.77% 0.00%	Cost \$19,965 \$49,085 \$2,723 \$35,475 \$25,410 \$136,620 \$165,000 \$0 \$6,353 \$0	
B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous	ol / Detour ling	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 0.3% 0.0% 3.1% 0.0% 3.1% 0.0% 3.1% 0.0% 16.6% 0.0% 20.0% 0.0% 0.0% 0.0% 0.0%	MENT MAX %	Adjusted—> (# of A)	% of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 20.00% 0.00% 0.00% 0.33%	Cost \$9.849 \$24.217 \$1.343 \$17,501 \$12,536 \$67,399 \$81,400 \$0 \$3,134 \$0 \$1,343	% of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 20.00% 0.00% 0.00% 0.33%	Cost \$19,965 \$49,088 \$2,723 \$35,475 \$25,410 \$136,620 \$165,000 \$0 \$6,353 \$0 \$2,723	
B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-10 B-11 B	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION IT	ol / Detour ling	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 0.3% 0.0% 3.1% 0.0% 3.1% 0.0% 3.1% 0.0% 16.6% 0.0% 20.0% 0.0% 0.0% 0.0% 0.0%	MENT MAX %	Adjusted—> (# of A)	% of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 20.00% 0.00% 0.07% 53.74%	Cost \$9.849 \$24.217 \$1.343 \$17,501 \$12,536 \$67,399 \$81,400 \$0 \$1,343 \$1,343 \$219,000	% of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 20.00% 0.00% 0.77% 0.00% 0.33% 53.74%	Cost \$19,965 \$49,088 \$2,723 \$35,475 \$25,410 \$136,620 \$165,000 \$0 \$6,353 \$0 \$2,723 \$443,000	of Base Cost
B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contre Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION IT CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General	ol / Detour ing	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 0.3% 0.0% 3.1% 0.0% 3.1% 0.0% 3.1% 0.0% 16.6% 0.0% 20.0% 0.0% 0.0% 0.0% 0.0%	MENT MAX %	Adjusted—> (# of A)	% of (A) 2.42% 5.95% 0.33% 4.50% 3.08% 16.56% 20.00% 0.00% 0.77% 0.00% 0.33% 53.74%	Cost \$9,849 \$24,217 \$1,343 \$17,501 \$12,536 \$67,399 \$81,400 \$0 \$3,134 \$0 \$1,343 \$219,000	% of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 20.00% 0.07% 0.00% 0.33% 53.74% 153.74%	Cost \$19,965 \$49,088 \$2,723 \$35,475 \$25,410 \$136,620 \$165,000 \$0 \$0 \$6,353 \$0 \$2,723 \$443,000	of Base Cost
B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-10 B-11 B	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contro Lighting & Electrical Permanent Signing & Strip Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION IT CONTRUCTION BID ITEMS ACCOUNTS & TSM&O	ol / Detour ing FEMS	MIN % MEAN % 0.0% 2.4% 0.0% 5.0% 0.0% 0.3% 0.0% 0.3% 0.0% 3.1% 0.0% 3.1% 0.0% 20.0% 0.0% 0.6% 0.0% 0.8% 0.0% 0.3%	MENT MAX %	Adjusted—> (# of A)	% of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 10.56% 20.00% 0.77% 0.00% 53.74% 153.74%	Cost \$9,849 \$24,217 \$1,343 \$17,501 \$12,536 \$67,399 \$81,400 \$0 \$3,134 \$0 \$1,343 \$219,000	% of (A) 2.42% 5.95% 4.30% 4.30% 3.08% 16.56% 20.00% 0.77% 0.00% 53.74% 153.74%	Cost \$19,965 \$49,088 \$2,723 \$35,475 \$25,410 \$136,620 \$165,000 \$0 \$6,353 \$0 \$2,723 \$443,000	of Base Cost
B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION IT CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisi F/A - Project Communicatic F/A - Project Communicatic F/A - Project Communicatic	ol / Detour ing FEMS	MIN % MEAN % 0.0% 2.4% 0.0% 5.0% 0.0% 0.3% 0.0% 0.3% 0.0% 3.1% 0.0% 3.1% 0.0% 20.0% 0.0% 0.6% 0.0% 0.8% 0.0% 0.3%	MENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 3 - Average 14.9% 3 - Average 25.5% 3 - Average 26.1% 3 - Average 26.1% 3 - Average 18.9% 3 - Average 1.2% 3 - Average 1.2% 3 - Average 1.2% S - Average	Adjusted—> (% of A) (% of A)	% of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 20.00% 0.77% 0.00% 53.74% 153.74%	Cost \$9,849 \$24,217 \$1,343 \$17,501 \$12,536 \$67,399 \$81,400 \$0 \$1,343 \$1,343 \$219,000 \$219,000	% of (A) 2.42% 5.95% 6.30% 3.08% 16.56% 20.00% 0.77% 0.00% 53.74% 153.74%	Cost \$19,965 \$49,088 \$2,723 \$35,475 \$25,410 \$136,620 \$165,000 \$0 \$0 \$2,723 \$1,268,000 \$1,268,000	of Base Cost
B-02 B-03 B-04 B-05 B-06 B-07 B-09 B-10 B-11 B CBI	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contre Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION IT CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Hinor Contract Revisi F/A - Project Communicatic TSM&O Traffic & Operation	ol / Detour ing FEMS	MIN % MEAN % 0.0% 2.4% 0.0% 5.0% 0.0% 0.3% 0.0% 0.3% 0.0% 3.1% 0.0% 3.1% 0.0% 20.0% 0.0% 0.6% 0.0% 0.8% 0.0% 0.3%	MENT MAX %	Adjusted—> (% of A) (% of A)	% of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 20.00% 0.77% 0.00% 53.74% 153.74%	Cost \$9,849 \$24,217 \$1,343 \$17,501 \$12,536 \$67,399 \$81,400 \$0 \$1,343 \$219,000 \$219,000 \$219,000	% of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 20.00% 0.00% 0.33% 53.74% 153.74% **Of CBI 6.00% 3.00% 0.11% 0.00%	Cost \$19,965 \$49,088 \$2,723 \$35,475 \$25,410 \$136,620 \$165,000 \$0 \$0 \$2,723 \$443,000 \$1,268,000 \$1,268,000	of Base Cost
B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-01 C-02 C-03 C-04 C	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contre Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION IT CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisi F/A - Project Communicatio TSM&O Traffic & Operation F/A's & TSM&O	ons (MCR's)	MIN % MEAN % 0.0% 2.4% 0.0% 5.0% 0.0% 0.3% 0.0% 0.3% 0.0% 3.1% 0.0% 3.1% 0.0% 20.0% 0.0% 0.6% 0.0% 0.8% 0.0% 0.3%	MENT MAX %	Adjusted—> (% of A) (% of A)	% of (A) 2,42% 5,95% 0,33% 4,30% 3,08% 10,56% 20,00% 0,77% 0,00% 53,74% 153,74% % of CBI 6,00% 3,00% 0,11% 0,00% 9,11%	Cost \$9,849 \$24,217 \$1,343 \$17,501 \$12,536 \$67,399 \$81,400 \$0 \$3,134 \$0 \$1,343 \$219,000 \$626,000 Cost \$37,560 \$18,780 \$994 \$0 \$50 \$57,000	% of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 20.00% 0.77% 0.00% 53.74% 153.74% **Of CBI 6.00% 3.00% 0.11% 5.00% 9.11%	Cost \$19,965 \$49,088 \$2,723 \$35,475 \$25,410 \$136,820 \$165,000 \$0 \$6,353 \$0 \$2,723 \$443,000 \$1,268,000	67.1% of Base Cost
B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-01 C-02 C-03 C-04 C	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contre Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION IT CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisi F/A - Project Communicatio TSM&O Traffic & Operation F/A's & TSM&O CONSTRUCTION ITEMS	ons (MCR's)	MIN % MEAN % 0.0% 2.4% 0.0% 5.0% 0.0% 0.3% 0.0% 0.3% 0.0% 3.1% 0.0% 3.1% 0.0% 20.0% 0.0% 0.6% 0.0% 0.8% 0.0% 0.3%	MENT MAX %	Adjusted—> (% of A) (% of A)	% of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 20.00% 0.77% 0.00% 53.74% 153.74% 163.74%	Cost \$9,849 \$24,217 \$1,343 \$17,501 \$12,536 \$67,399 \$81,400 \$0 \$3,134 \$0 \$1,343 \$219,000 \$219,000 \$626,000	% of (A) 2.42% 5.95% 1.30% 3.08% 4.30% 20.00% 0.00% 0.77% 0.00% 53.74% 153.74% 165.00% 3.00% 3.00% 9.11%	Cost \$19,965 \$49,088 \$2,723 \$35,475 \$25,410 \$136,620 \$165,000 \$0 \$6,353 \$0 \$2,723 \$443,000 \$1,268,000 \$1,268,000 \$1,406 \$1,406 \$1,406 \$0 \$1,406 \$1,406 \$1,406	67.1% of Base Cost
B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-01 C-02 C-03 C-04 C CI D-CONSTF	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contre Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION IT CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INC	ol / Detour ling TEMS ons (MCR's) ons s (for Reconstruction/Re	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 0.3% 0.0% 4.3% 0.0% 3.1% 0.0% 20.0% 0.0	MENT MAX %	Adjusted—> (% of A) (% of A) (% of A)	% of (A) 2.42% 5.95% 0.33% 4.30% 16.56% 20.00% 0.77% 0.00% 0.33% 53.74% 153.74% * of CBI 6.00% 0.11% 0.00% 9.11%	Cost \$9,849 \$24,217 \$1,343 \$17,501 \$12,536 \$67,399 \$81,400 \$0 \$3,134 \$0 \$1,343 \$1,343 \$1,343 \$219,000 Cost \$37,560 \$18,780 \$683,000 \$683,000	% of (A) 2.42% 5.95% 0.33% 4.30% 16.56% 20.00% 0.77% 0.00% 0.33% 53.74% 153.74% % of CBI 6.00% 3.00% 0.11% 9.11%	Cost \$19,965 \$49,085 \$2,723 \$35,475 \$25,410 \$136,820 \$165,000 \$0 \$0 \$6,353 \$0 \$2,723 \$443,000 \$1,268,000 \$1,406 \$50 \$1,384,000 \$1,384,000	67.1% of Base Cost
B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-01 C-02 C-03 C-04 C CI D-CONSTE	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contre Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION IT CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisi F/A - Project Communication TSM&O Traffic & Operation F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INI Construction Engineering Construction Engineering Construction Indirects	ol / Detour ing IEMS Ons (MCR's) ons (for Reconstruction/Re DIRECTS	MIN % MEAN % 0.0% 2.4% 0.0% 5.0% 0.0% 5.0% 0.0% 0.3% 0.0% 0.3% 0.0% 3.1% 0.0% 0.0% 0.6% 0.0%	MENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 3 - Average 2.3% 3 - Average 2.5% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.2% 3 - Average SUBTOTAL (B SUBTOTAL (A + B X 0.11% SUBTOTAL (A + B + C	Adjusted—> (% of A) (% of A) (% of A)	% of (A) 2,42% 5,95% 0,33% 4,30% 3,08% 10,56% 20,00% 0,77% 0,00% 0,33% 153,74% 153,74% 167,81%	Cost \$9,849 \$24,217 \$1,343 \$17,501 \$12,236 \$67,399 \$81,400 \$0 \$3,134 \$0 \$1,343 \$1,343 \$1,343 \$219,000 \$626,000 Cost \$37,560 \$18,780 \$894 \$0 \$50 \$1,343	% of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 20.00% 0.77% 0.00% 53.74% 153.74% 167.76% 467.76%	Cost \$19,965 \$49,085 \$2,723 \$35,475 \$25,410 \$136,820 \$165,000 \$0 \$6,353 \$0 \$2,723 \$443,000 \$1,268,000 \$1,384,000 \$1,384,000 \$1,384,000 \$1,384,000	67.1% of Base Cost
B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-01 C-02 C-03 C-04 C CI D-CONSTE D-01 D-02 D	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION IT CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisi F/A - Project Communicatio TSM&O Traffic & Operation F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INC Construction Engineering Construction Indirects CONSTRUCTION ENGINEE	ol / Detour ing IEMS Ons (MCR's) ons (for Reconstruction/Re DIRECTS	MIN % MEAN % 0.0% 2.4% 0.0% 5.0% 0.0% 5.0% 0.0% 0.3% 0.0% 0.3% 0.0% 3.1% 0.0% 0.0% 0.6% 0.0%	MENT MAX %	Adjusted—> (% of A) (% of A) (% of A)	% of (A) 2,42% 5,95% 0,33% 4,30% 3,08% 10,56% 20,00% 0,77% 0,00% 0,33% 153,74% 153,74% 167,81%	Cost \$9,849 \$24,217 \$1,343 \$17,501 \$12,536 \$67,399 \$81,400 \$0 \$1,343 \$13,43 \$13,400 \$17,501 \$13,43 \$13,43 \$13,43 \$13,43 \$13,43 \$13,43 \$13,43 \$13,43 \$13,43 \$13,600 \$13,7,600 \$13,7,600 \$13,7,600 \$13,7,600 \$13,7,600 \$13,7,600 \$13,7,600 \$13,7,600 \$13,7,600 \$13,7,600 \$13,7,600 \$13,7,600 \$13,7,600 \$13,7,600 \$13,7,600 \$13,7,600 \$13,7,7,7,600 \$13,7,7,7,7,7,7,7,7,7,7,7,7,7,7,7,7,7,7,7	% of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 20.00% 0.77% 0.00% 53.74% 153.74% 167.76% 467.76%	Cost \$19,965 \$49,088 \$2,723 \$35,475 \$25,410 \$130,620 \$165,000 \$0 \$6,353 \$0 \$2,723 \$3443,000 \$1,268,000 \$1,384,	67.1% of Base Cost
B-02 B-03 B-04 B-05 B-05 B-07 B-08 B-10 B-11 B CBI C-FORCE C-01 C-02 C-02 C-04 C CI D-CONSTE D-01 D-02 D	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contre Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION IT CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisi F/A - Project Communicatio TSM&O Traffic & Operation F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INC Construction Engineering Construction Indirects CONSTRUCTION ENGINEER PROJECT CONSTRUCTION	ol / Detour ing IEMS Ons (MCR's) ons (for Reconstruction/Re DIRECTS	MIN % MEAN % 0.0% 2.4% 0.0% 5.0% 0.0% 5.0% 0.0% 0.3% 0.0% 0.3% 0.0% 3.1% 0.0% 0.0% 0.6% 0.0%	MENT MAX %	Adjusted—> (% of A) (% of A) (% of A)	% of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 20.00% 0.77% 0.00% 53.74% 153.74% 167.81% 167.81%	Cost \$9,849 \$24,217 \$1,343 \$17,501 \$12,536 \$67,399 \$81,400 \$0 \$3,134 \$0 \$1,343 \$219,000 Cost \$37,560 \$18,780 \$587,000 \$683,000 Cost \$74,789 \$64,885 \$140,000 \$823,000	% of (A) 2.42% 5.95% 4.30% 4.30% 3.08% 16.56% 20.00% 0.77% 0.00% 53.74% 153.74% 167.76% 467.76% 167.76%	Cost \$19,965 \$49,088 \$2,723 \$35,475 \$25,410 \$130,620 \$165,000 \$6,353 \$0 \$2,723 \$32,723 \$31,268,000 \$1,268,000 \$1,384,000 \$1,384,000 \$1,384,000 \$1,384,000 \$1,384,000 \$1,384,000 \$1,384,000 \$1,6	67.1% of Base Cost
B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-01 C-02 C-03 C-04 C CI D-CONSTE D-01 D-02 D E-PRECON	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contre Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION IT CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisi- F/A - Project Communication TSM&O Traffic & Operation F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INI Construction Engineering Construction Indirects CONSTRUCTION ENGINEE PROJECT CONSTRUCTION NSTRUCTION ITEMS Right-of-Way [Phase R] Utilities + Railroad Work [P	ons (MCR's) ons (MCR's) ons (for Reconstruction/Re DIRECTS RING & INDIRECTS N BUDGET	MIN % MEAN % 0.0% 2.4% 0.0% 5.0% 0.0% 5.0% 0.0% 0.3% 0.0% 4.3% 0.0% 3.1% 0.0% 1.6% 0.0% 0.6% 0.0% 0.6% 0.0% 0.6% 0.0%	MENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 3 - Average 2.3% 3 - Average 2.5.5% 3 - Average 2.5.5% 3 - Average 2.5.5% 3 - Average 2.5.5% 3 - Average 2.5.7% 3 - Average 2.5.7% 3 - Average 1.2% 3 - Average 5 - Average SUBTOTAL (A + B X 0.11% SUBTOTAL (A + B + C + D SUBTOTAL (D AVG % EFFORT 5.2% 3 - Average	Adjusted—> (% of A) (% of A) (% of A) (% of A)	% of (A) 2.42% 5.95% 0.33% 4.30% 16.56% 20.00% 0.77% 0.00% 0.33% 53.74% 153.74% 167.81% 167.81% 167.81% Indirect % of CI 5.16% 0.00%	Cost \$9,849 \$24,217 \$1,343 \$17,501 \$12,536 \$67,399 \$81,400 \$0 \$3,134 \$0 \$1,343 \$1,343 \$1,343 \$1,343 \$219,000 Cost \$37,560 \$13,780 \$683,000 \$683,000 \$683,000 \$683,000 \$683,000 \$683,000 \$683,000	% of (A) 2.42% 5.95% 4.30% 4.30% 4.30% 16.56% 20.00% 0.77% 0.00% 0.33% 53.74% 153.74% 167.76% % of CBI 10.95% 9.50% 20.45%	Cost \$19,965 \$49,085 \$2,723 \$35,475 \$25,410 \$136,620 \$165,000 \$0 \$6,353 \$0 \$2,723 \$31,268,000 \$1,268,000 \$1,268,000 \$1,384,000 \$1,38	67.1% of Base Cost
B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-01 C-03 C-04 C CI D-CONSTE D-01 D-02 D E-PRECON	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contre Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION IT CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisi F/A - Project Communicatio TSM&O Traffic & Operation F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INI Construction Engineering Construction Indirects CONSTRUCTION ENGINEE PROJECT CONSTRUCTION NSTRUCTION ITEMS Right-of-Way [Phase R] Utilities + Railroad Work [P] Design & Engineering [Phas Subsurface Utility Eng	ol / Detour ing TEMS Ons (MCR's) ons (MCR's) ons is (for Reconstruction/Reco	MIN % MEAN % 0.0% 2.4% 0.0% 5.0% 0.0% 5.0% 0.0% 0.3% 0.0% 4.3% 0.0% 3.1% 0.0% 1.6.% 0.0	MENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 3 - Average 2.3% 3 - Average 2.5.5% 3 - Average 2.5.5% 3 - Average 2.5.5% 3 - Average 2.5.5% 3 - Average 2.5.7% 3 - Average 2.5.7% 3 - Average 1.2% 3 - Average 5 - Average SUBTOTAL (A + B X 0.11% SUBTOTAL (A + B + C + D SUBTOTAL (D AVG % EFFORT 5.2% 3 - Average	Adjusted—> (% of A) (% of A) (% of A) (% of A)	% of (A) 2.42% 5.95% 6.30% 4.30% 4.30% 6.55% 20.00% 0.77% 0.00% 53.74% 153.74% 153.74% 167.81% 167.81%	Cost \$9,849 \$24,217 \$1,343 \$17,501 \$12,536 \$67,399 \$81,400 \$0 \$3,134 \$0 \$1,343 \$1,343 \$219,000 Cost \$37,560 \$18,780 \$58,780	% of (A) 2.42% 5.95% 6.33% 4.30% 2.0.00% 2.0.00% 0.77% 0.00% 0.33% 53.74% 153.74% 167.76% 467.76% 167.76% 167.76% 167.76% 167.76%	Cost \$19,965 \$49,085 \$2,723 \$35,475 \$25,410 \$136,620 \$165,000 \$0 \$6,353 \$0 \$2,723 \$37,400 \$1,268,00	67.1% of Base Cost
B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-02 C-03 C-04 C CI D-CONSTF D-01 D-02 D E-PRECON	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contre Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION IT CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisi F/A - Project Communicatio TSM&O Traffic & Operation F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INI Construction Engineering Construction Indirects CONSTRUCTION ENGINEE PROJECT CONSTRUCTION NSTRUCTION ITEMS Right-of-Way [Phase R] Utilities + Railroad Work [P] Design & Engineering [Phas Subsurface Utility Eng	ol / Detour ing EMS ons (MCR's) ons (MCR	MIN % MEAN % 0.0% 2.4% 0.0% 5.0% 0.0% 5.0% 0.0% 0.3% 0.0% 4.3% 0.0% 3.1% 0.0% 1.6.% 0.0	MENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 3 - Average 2.3% 3 - Average 2.5.5% 3 - Average 2.5.5% 3 - Average 2.5.5% 3 - Average 2.5.5% 3 - Average 2.5.7% 3 - Average 2.5.7% 3 - Average 1.2% 3 - Average 5 - Average SUBTOTAL (A + B X 0.11% SUBTOTAL (A + B + C + D SUBTOTAL (D AVG % EFFORT 5.2% 3 - Average	Adjusted—> (% of A) (% of A) (% of A) (% of A)	% of (A) 2.42% 5.95% 0.33% 4.30% 4.30% 20.00% 0.77% 0.00% 0.33% 53.74% 153.74% 153.74% 167.81% 167.81% 167.81% Indirect % of CI 10.95% 9.50% 20.45%	Cost \$9,849 \$24,217 \$1,343 \$17,501 \$12,536 \$67,399 \$81,400 \$0 \$3,134 \$0 \$1,343 \$219,000 \$626,000 Cost \$37,560 \$13,780 \$694 \$0 \$574,789 \$64,885 \$140,000 \$823,000 \$823,000 \$823,000	% of (A) 2.42% 5.95% 4.30% 4.30% 16.56% 20.00% 0.77% 0.00% 53.74% 153.74% 167.76% 467.76% 167.76% 167.76% 167.76% 167.76% 167.76%	Cost \$19,965 \$49,088 \$2,723 \$35,475 \$25,410 \$136,820 \$165,000 \$0 \$6,353 \$0 \$2,723 \$443,000 \$1,268,000 \$1,384,000 \$1,384,000 \$1,384,000 \$1,384,000 \$1,384,000 \$1,384,000 \$1,667,0	67.1% of Base Cost
B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-02 C-02 C-03 C-04 C C CI D-CONSTF D-01 D-02 D E-PRECON E-01 E-02 E-03 E-03.1 E-03.2 E-04	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION IT CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisi F/A - Project Communicatio TSM&O Traffic & Operation F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INI Construction Engineering Construction Indirects CONSTRUCTION ENGINEE PROJECT CONSTRUCTION INSTRUCTION ITEMS RIGHt-of-Way [Phase R] Utilities + Railroad Work [Pi Design & Engineering [Phas Subsurface Utility Eng Transportation System Transportation System Environmental (NEPA) [Pha	ons (MCR's) ons (M	MIN % MEAN % 0.0% 2.4% 0.0% 5.0% 0.0% 5.0% 0.0% 0.3% 0.0% 4.3% 0.0% 3.1% 0.0% 1.6.% 0.0	MENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 3 - Average 2.3% 3 - Average 2.5.5% 3 - Average 2.5.5% 3 - Average 2.5.5% 3 - Average 2.5.5% 3 - Average 2.5.7% 3 - Average 2.5.7% 3 - Average 1.2% 3 - Average 5 - Average SUBTOTAL (A + B X 0.11% SUBTOTAL (A + B + C + D SUBTOTAL (D AVG % EFFORT 5.2% 3 - Average	Adjusted—>	% of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 20.00% 0.77% 0.00% 0.33% 53.74% 153.74% 167.81% 167.81% % of CI 10.95% 9.11% 167.85% 20.45%	Cost \$9,849 \$24,217 \$1,343 \$17,501 \$12,536 \$67,399 \$81,400 \$0 \$0 \$3,134 \$219,000 Cost \$37,560 \$18,780 \$57,000 \$683,000 Cost \$74,789 \$64,885 \$140,000 \$823,000 Cost \$74,789 \$64,885 \$140,000 \$823,000	% of (A) 2.42% 5.95% 5.95% 3.08% 4.30% 3.08% 16.56% 20.00% 0.77% 0.00% 0.33% 53.74% 153.74% 167.76% **Of CBI 6.00% 9.11% 167.76% **Of CI 10.95% 9.50% 20.45% Indirect 9 **Of CI 2.00% 0.00% 12.00% 0.00% 12.00% 0.00% 12.00% 0.00% 12.00% 0.00% 0.00%	Cost \$19,965 \$49,088 \$2,723 \$25,410 \$25,410 \$130,620 \$165,000 \$0 \$6,353 \$0 \$2,723 \$21,723 \$21,723 \$21,723 \$21,723 \$21,723 \$21,724 \$21,723 \$21,723 \$21,723 \$21,723 \$21,723 \$21,723 \$21,723 \$21,724 \$21,	67.1% 67.1% 67.88 67.96
B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-02 C-03 C-04 C CI D-CONSTF D-01 D-02 D E-01 E-02 E-03 E-03 E-03 E-03 E-04 E-05	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION IT CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisi F/A - Project Communicatio TSM&O Traffic & Operation F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INT Construction Engineering Construction Indirects CONSTRUCTION ENGINEE PROJECT CONSTRUCTION STRUCTION ITEMS Right-of-Way [Phase R] Utilities + Railroad Work [P] Design & Engineering [Pha Subsurface Utility Eng Transportation System Environmental (NEPA) [Phase M] Miscellaneous [Phase M] PRECONSTRUCTION ITEMS	ons (MCR's) ons (M	MIN % MEAN % 0.0% 2.4% 0.0% 5.0% 0.0% 5.0% 0.0% 0.3% 0.0% 0.3% 0.0% 3.1% 0.0% 0.6% 0.0% 0.6% 0.0%	MENT MAX % 6.0% 3 - Average 13.4% 3 - Average 2.3% 3 - Average 2.3% 3 - Average 22.5% 3 - Average 22.5% 3 - Average 23.5% 3 - Average 25.5% 3 - Average 26.1% 3 - Average 1.8% 3 - Average 1.2% 3 - Average 1.2% 3 - Average 5 - Average 1.2% SUBTOTAL (A + B X 0.11% SUBTOTAL (A + B + C + D AVG % EFFORT 5.2% 3 - Average 0 - Conceptual	Adjusted—> (% of A) (% of CBI)	% of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 20.00% 0.77% 0.00% 0.33% 153.74% 153.74% 167.81% % of CBI 6.00% 9.11% 167.81% % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 0.00% 0.75% 0.00% 0.00% 0.00%	Cost \$9,849 \$24,217 \$1,343 \$17,501 \$12,538 \$67,399 \$81,400 \$0 \$3,134 \$0 \$13,134 \$13,43 \$13,44 \$13,43 \$13,44 \$13,43 \$13,44 \$13,43 \$13,44 \$13,443 \$13,443 \$13,443 \$13,443 \$13,443 \$140,000 \$14,780 \$18,7	% of (A) 2.42% 5.95% 4.30% 4.30% 16.56% 20.00% 0.77% 0.00% 53.74% 153.74% 153.74% 167.76% 167.76% 167.76% 167.76% 167.76% 167.76% 167.76%	Cost \$19,965 \$49,085 \$2,723 \$35,475 \$25,410 \$136,820 \$150,000 \$6,353 \$0 \$2,723 \$443,000 \$1,268,000 \$1,384,000 \$1,384,000 \$1,384,000 \$1,384,000 \$1,384,000 \$1,466,000 \$1,466,000 \$1,406 \$0 \$1,406 \$0 \$1,406 \$0 \$1,406	67.1% of Base Cos 73.2% of Base Cos 11.8% of Base Cos
B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-02 C-03 C-04 C CI D-CONSTF D-01 D-02 D E-01 E-02 E-03 E-03 E-03 E-03 E-04 E-05	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION IT CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisi F/A - Project Communicatio TSM&O Traffic & Operation F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INT Construction Engineering Construction Indirects CONSTRUCTION ENGINEE PROJECT CONSTRUCTION NSTRUCTION ITEMS Right-of-Way [Phase R] Utilities + Railroad Work [P] Design & Engineering [Pha Subsurface Utility Eng Transportation Symportation Symportation Environmental (NEPA) [Phase Miscellaneous [Phase M]	ons (MCR's) ons (M	MIN % MEAN % 0.0% 2.4% 0.0% 5.0% 0.0% 5.0% 0.0% 0.3% 0.0% 0.3% 0.0% 3.1% 0.0% 0.6% 0.0% 0.6% 0.0%	MENT MAX % 6.0% 3 - Average 13.4% 3 - Average 2.3% 3 - Average 2.3% 3 - Average 25.5% 3 - Average 25.5% 3 - Average 26.1% 3 - Average 27.5% 3 - Average 28.1% 3 - Average 29.1% 3 - Average 29.1% 3 - Average 20.1% SUBTOTAL (A + B + C + D + C + D + C + D + C + D + C + D + C + D + C + D + C + D + C + D + C + D + C + D + D	Adjusted—> (% of A) (% of CBI)	% of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 20.00% 0.77% 0.00% 0.33% 153.74% 167.81% % of CBI 6.00% 9.11% 167.81% % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 0.75% 0.00% 0.75% 0.00% 0.00% 0.00%	Cost \$9,849 \$24,217 \$1,343 \$17,501 \$12,538 \$67,399 \$81,400 \$0 \$3,134 \$0 \$1,343 \$219,000 \$626,000 Cost \$37,560 \$18,780 \$683,000 \$683,000 \$683,000 \$683,000 \$683,000 \$683,000 \$683,000 \$683,000 \$683,000	% of (A) 2.42% 5.95% 4.30% 4.30% 16.56% 20.00% 0.77% 0.00% 53.74% 153.74% 153.74% 167.76% 167.76% 167.76% 167.76% 167.76% 167.76% 167.76%	Cost \$19,965 \$49,088 \$2,723 \$35,475 \$25,410 \$136,820 \$165,000 \$0 \$0 \$6,353 \$0 \$2,723 \$3443,000 \$1,268,000 \$1,368,040 \$1,368,040 \$1,406 \$0 \$1,384,000 \$1,38	67.1% of Base Cos 73.2% of Base Cos
B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-02 C-03 C-04 C CI D-CONSTF D-01 D-02 D E-01 E-02 E-03 E-03 E-03 E-03 E-04 E-05	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION IT CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisi- F/A - Project Communication TSM&O Traffic & Operation F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INIT Construction Engineering Construction Indirects CONSTRUCTION ENGINEE PROJECT CONSTRUCTION NSTRUCTION ITEMS Right-of-Way [Phase R] Utilities + Railroad Work [P] Design & Engineering [Phas Subsurface Utility Engineering [Phas Subsurface Utility Engineering [Phas Subsurface Utility Engineering [Phas Miscellaneous [Phase M] PRECONSTRUCTION ITEMS PROJECT BASE COST E	DI / Detour Ing ITEMS OONS (MCR'S) OONS (MCR'S) OONS IS (for Reconstruction/Reconstruction	MIN % MEAN % 0.0% 2.4% 0.0% 5.0% 0.0% 6.0% 0.0% 0.3% 0.0% 0.3% 0.0% 0.1% 0.0% 0.1% 0.0%	MENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 3 - Average 2.3% 3 - Average 2.5.5% 3 - Average 2.5.5% 3 - Average 2.5.5% 3 - Average 2.5.5% 3 - Average 2.5.1% 3 - Average 2.5.1% 3 - Average 2.5.1% 3 - Average 1.2% 3 - Average 1.2% 3 - Average 5.2% 1 - Average 2.5.1% 3	Adjusted—> (% of A) (% of CBI)	% of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 20.00% 0.77% 0.00% 0.33% 153.74% 167.81% % of CBI 6.00% 9.11% 167.81% % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 0.75% 0.00% 0.75% 0.00% 0.00% 0.00%	Cost \$9,849 \$24,217 \$1,343 \$17,501 \$12,536 \$67,399 \$81,400 \$0 \$3,134 \$0 \$13,134 \$0 \$219,000 Cost \$37,560 \$13,780 \$683,000 \$683,000 Cost \$74,789 \$64,885 \$140,000 \$823,000 \$823,000 \$823,000 \$823,000	% of (A) 2.42% 5.95% 4.30% 4.30% 4.30% 16.56% 20.00% 0.77% 0.00% 0.33% 53.74% 153.74% 167.76% % of CBI 6.00% 3.00% 0.11% 167.76% % of CI 10.95% 9.55% 20.45% Indirect 9 % of CI 2.00% 0.00% 12.00% 0.00% 12.00% 13.00% 14.18%	Cost \$19,965 \$49,085 \$2,773 \$35,475 \$25,410 \$316,620 \$165,000 \$0 \$6,353 \$0 \$2,723 \$31,268,000 \$1,384,000 \$1,38	67.1% 67.1% 67.1% 67.8ae Cos 73.2% 67.8ae Cos 11.8% 67.8ae Cos
B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-01 C-03 C-04 C CI D-CONSTE D-01 D-02 D E-PRECON E-03.1 E-03.2 E-04 E-05 E	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contre Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION IT CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisi F/A - Project Communicatio TSM&O Traffic & Operation F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INI Construction Engineering Construction Indirects CONSTRUCTION ENGINEE PROJECT CONSTRUCTION NSTRUCTION ITEMS Right-of-Way [Phase R] Utilities + Railroad Work [P] Design & Engineering [Phas Subsurface Utility Eng Transportation System Environmental (NEPA) [Pha Miscellaneous [Phase M] PRECONSTRUCTION ITEMS	DI / Detour Ing ITEMS OONS (MCR'S) OONS (MCR'S) OONS IS (for Reconstruction/Reconstruction	MIN % MEAN % 0.0% 2.4% 0.0% 5.0% 0.0% 5.0% 0.0% 0.3% 0.0% 0.3% 0.0% 3.1% 0.0% 0.6% 0.0% 0.6% 0.0%	MENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 3 - Average 2.3% 3 - Average 2.5.5% 3 - Average 2.5.5% 3 - Average 2.5.5% 3 - Average 2.5.5% 3 - Average 2.5.1% 3 - Average 2.5.1% 3 - Average 2.5.1% 3 - Average 1.2% 3 - Average 1.2% 3 - Average 5.2% 1 - Average 2.5.1% 3	Adjusted—> (% of A) (% of CBI)	% of (A) 2.42% 5.95% 0.33% 4.30% 16.56% 20.00% 0.77% 0.00% 0.33% 53.74% 153.74% ** of CBI 6.00% 3.00% 0.11% 167.81% ** of CI 10.95% 9.50% 20.45% Indirect ** of CI 5.16% 0.00% 0.00% 12.00% 0.00% 19.62%	Cost \$9,849 \$24,217 \$1,343 \$17,501 \$12,536 \$67,399 \$81,400 \$0 \$3,134 \$0 \$13,134 \$1219,000 Cost \$32,1560 \$13,780 \$537,560 \$18,780 \$594 \$50 \$574,789 \$64,855 \$140,000 \$823,000 Cost \$74,789 \$64,855 \$140,000 \$823,000 RISK RESERVE	% of (A) 2.42% 5.95% 6.33% 4.30% 16.56% 20.00% 0.77% 0.00% 0.33% 53.74% 153.74% **of CBI 6.00% 3.00% 0.11% 9.11% 167.76% **of CI 10.95% 9.50% 20.45% Indirect 9 **of CI 2.00% 0.00% 0.00% 12.00% 0.00% 0.00% 0.00% 12.00% 0.00% 0.00% 0.00%	Cost \$19,965 \$49,085 \$2,723 \$35,475 \$25,410 \$136,620 \$165,000 \$0 \$6,353 \$0 \$2,723 \$37,400 \$1,268,00	67.1% of Base Cos 73.2% of Base Cos 11.8% of Base Cos 100.0% of Base Cos
B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-02 C-03 C-04 C C CI D-CONSTE D-01 D-02 D E-PRECON E-01 E-02 E-03 E-03.1 E-03.2 E-04 E-05 E	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contre Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION IT CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisi- F/A - Project Communication F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INI Construction Engineering Construction Indirects CONSTRUCTION ENGINEE PROJECT CONSTRUCTION INSTRUCTION ITEMS Right-of-Way [Phase R] Utilities + Railroad Work [P] Design & Engineering [Phas Subsurface Utility Eng Transportation System Environmental (NEPA) [Phase M] Miscellaneous [Phase M] PRECONSTRUCTION ITEMS RVE PROJECT BASE COST EST RVE PROBABILISTIC COST EST	DI / Detour Ing ITEMS OONS (MCR'S) OONS (MCR'S) OONS IS (for Reconstruction/Reconstruction	MIN % MEAN % 0.0% 2.4% 0.0% 5.0% 0.0% 6.0% 0.0% 0.3% 0.0% 0.3% 0.0% 0.1% 0.0% 0.1% 0.0%	MENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 3 - Average 2.3% 3 - Average 2.5.5% 3 - Average 2.5.5% 3 - Average 2.5.5% 3 - Average 2.5.5% 3 - Average 2.5.1% 3 - Average 2.5.1% 3 - Average 2.5.1% 3 - Average 1.2% 3 - Average 1.2% 3 - Average 5.2% 1 - Average 2.5.1% 3	Adjusted—> (% of A) (% of CBI)	% of (A) 2.42% 5.95% 0.33% 4.30% 16.56% 20.00% 0.77% 0.00% 0.33% 53.74% 153.74% ** of CBI 6.00% 3.00% 0.11% 167.81% ** of CI 10.95% 9.50% 20.45% Indirect ** of CI 5.16% 0.00% 0.00% 12.00% 0.00% 19.62%	Cost \$9,849 \$24,217 \$1,343 \$17,501 \$12,536 \$67,399 \$81,400 \$0 \$3,134 \$0 \$13,134 \$0 \$219,000 Cost \$37,560 \$13,780 \$683,000 \$683,000 Cost \$74,789 \$64,885 \$140,000 \$823,000 \$823,000 \$823,000 \$823,000	% of (A) 2.42% 5.95% 4.30% 4.30% 16.56% 20.00% 0.77% 0.00% 53.74% 153.74% 153.74% 167.76% % of CBI 6.00% 9.11% 167.76% % of CI 10.95% 9.50% 20.45% Indirect 9 w of CI 2.00% 0.00% 16.18%	Cost \$19,965 \$49,085 \$2,773 \$35,475 \$25,410 \$316,620 \$165,000 \$0 \$6,353 \$0 \$2,723 \$31,268,000 \$1,384,000 \$1,38	67.1% of Base Cost 73.2% of Base Cost 11.8% of Base Cost
B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-01 C-03 C-04 C CI D-CONSTE D-01 D-02 D E-PRECON E-03.1 E-03.2 E-04 E-05 E	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION IT CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisi F/A - Project Communicatio TSM&O Traffic & Operation F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INC CONSTRUCTION ENGINEERING CONSTRUCTION ENGINEERING CONSTRUCTION ENGINEERING CONSTRUCTION ENGINEERING CONSTRUCTION ITEMS RIGHT-OF-Way [Phase R] Utilities + Railroad Work [P) Design & Engineering [Phas Subsurface Utility Eng Transportation System Environmental (NEPA) [Pha Miscellaneous [Phase M] PRECONSTRUCTION ITEMS RVE PROJECT BASE COST EST RVE PROBABILISTIC COST EST	DI / Detour Ing IEMS IEMS IONS (MCR's)	MIN % MEAN % 0.0% 2.4% 0.0% 5.0% 0.0% 0.3% 0.0% 0.3% 0.0% 0.3% 0.0%	MENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 3 - Average 2.3% 3 - Average 2.5.5% 3 - Average	Adjusted—> (% of A) (% of CBI)	% of (A) 2.42% 5.95% 0.33% 4.30% 16.56% 20.00% 0.77% 0.00% 0.33% 53.74% 153.74% ** of CBI 6.00% 3.00% 0.11% 167.81% ** of CI 10.95% 9.50% 20.45% Indirect ** of CI 5.16% 0.00% 0.00% 12.00% 0.00% 19.62%	Cost \$9,849 \$24,217 \$1,343 \$17,501 \$12,536 \$67,399 \$81,400 \$0 \$3,134 \$0 \$13,134 \$1219,000 Cost \$32,1560 \$13,780 \$537,560 \$18,780 \$594 \$50 \$574,789 \$64,855 \$140,000 \$823,000 Cost \$74,789 \$64,855 \$140,000 \$823,000 RISK RESERVE	% of (A) 2.42% 5.95% 4.30% 4.30% 16.56% 20.00% 0.77% 0.00% 53.74% 153.74% 153.74% 167.76% % of CBI 6.00% 9.11% 167.76% % of CI 10.95% 9.50% 20.45% Indirect 9 w of CI 2.00% 0.00% 16.18%	Cost \$19,965 \$49,085 \$2,723 \$35,475 \$25,410 \$136,620 \$165,000 \$0 \$6,353 \$0 \$2,723 \$37,400 \$1,268,00	67.1% of Base Cost 73.2% of Base Cost 11.8% of Base Cost 110.0% of Base Cost
B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-02 C-03 C-04 C C CI D-CONSTE D-01 D-02 D E-PRECON E-01 E-02 E-03 E-03.1 E-03.2 E-04 E-05 E	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Contro Lighting & Electrical Permanent Signing & Stripi Traffic Signalization & ITS Miscellaneous MINOR CONSTRUCTION IT CONTRUCTION BID ITEMS ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Revisi F/A - Project Communicatio TSM&O Traffic & Operation F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & INT Construction Engineering Construction Indirects CONSTRUCTION ENGINEE PROJECT CONSTRUCTION INSTRUCTION ITEMS Right-of-Way [Phase R] Utilities + Railroad Work [P] Design & Engineering [Phase Subsurface Utility Eng Transportation System Environmental (NEPA) [Pha Miscellaneous [Phase M] PRECONSTRUCTION ITEMS RVE PROJECT BASE COST EST	ons (MCR's) ons (MCR's) ons (MCR's) ons (MCR's) ons (for Reconstruction/Re DIRECTS PRING & INDIRECTS N BUDGET hase U] se D] gineering (SUE) Budget ms Management & Operal ase E] S S SSTIMATE	MIN % MEAN % 0.0% 2.4% 0.0% 5.0% 0.0% 0.3% 0.0% 0.3% 0.0% 0.3% 0.0% 0.3% 0.0%	MENT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.3% 3 - Average 2.3% 3 - Average 2.5.5% 3 - Average 2.5.5% 3 - Average 2.5.5% 3 - Average 2.5.5% 3 - Average 1.8% 3 - Average 1.2% 3 - Average 1.2% 3 - Average 5.4% 3 - Average 5.4% 3 - Average 5.4% 3 - Average 5.4% 5 - Average 5.5% 3 - Average 1.2% 5 - Average 5.5% 5 - Average 5.5% 3 - Average 5.5% 3 - Average 5.5% 3 - Average 6.0 - Conceptual SUBTOTAL (A + B + C + D AVG % EFFORT 5.2% 3 - Average 0 - Conceptual	Adjusted—> (% of A) (% of CBI)	% of (A) 2.42% 5.95% 0.33% 4.30% 16.56% 20.00% 0.77% 0.00% 0.33% 53.74% 153.74% ** of CBI 6.00% 3.00% 0.11% 167.81% ** of CI 10.95% 9.50% 20.45% Indirect ** of CI 5.16% 0.00% 0.00% 12.00% 0.00% 19.62%	Cost \$9,849 \$24,217 \$1,343 \$17,501 \$12,536 \$67,399 \$81,400 \$0 \$3,134 \$0 \$1,343 \$219,000 \$626,000 Cost \$37,560 \$18,780 \$884 \$0 \$50 \$574,789 \$64,885 \$140,000 \$628,000 \$683,000	% of (A) 2.42% 5.95% 4.30% 4.30% 18.56% 20.00% 0.77% 0.00% 0.33% 53.74% 153.74% 153.74% 167.76% % of CBI 10.95% 9.50% 20.45% Indirect 9 % of CI 2.00% 0.00% 1.75% 0.00% 0.00% 1.75% 0.00% 0.00% 1.75% 0.00%	Cost \$19,965 \$49,088 \$2,723 \$35,475 \$25,410 \$136,820 \$150,000 \$0 \$6,353 \$0 \$0 \$2,723 \$3443,000 \$1,268,000 \$1,364,000 \$1,3	67.1% of Base Cost 73.2% of Base Cost 11.8% of Base Cost 110.0% of Base Cost

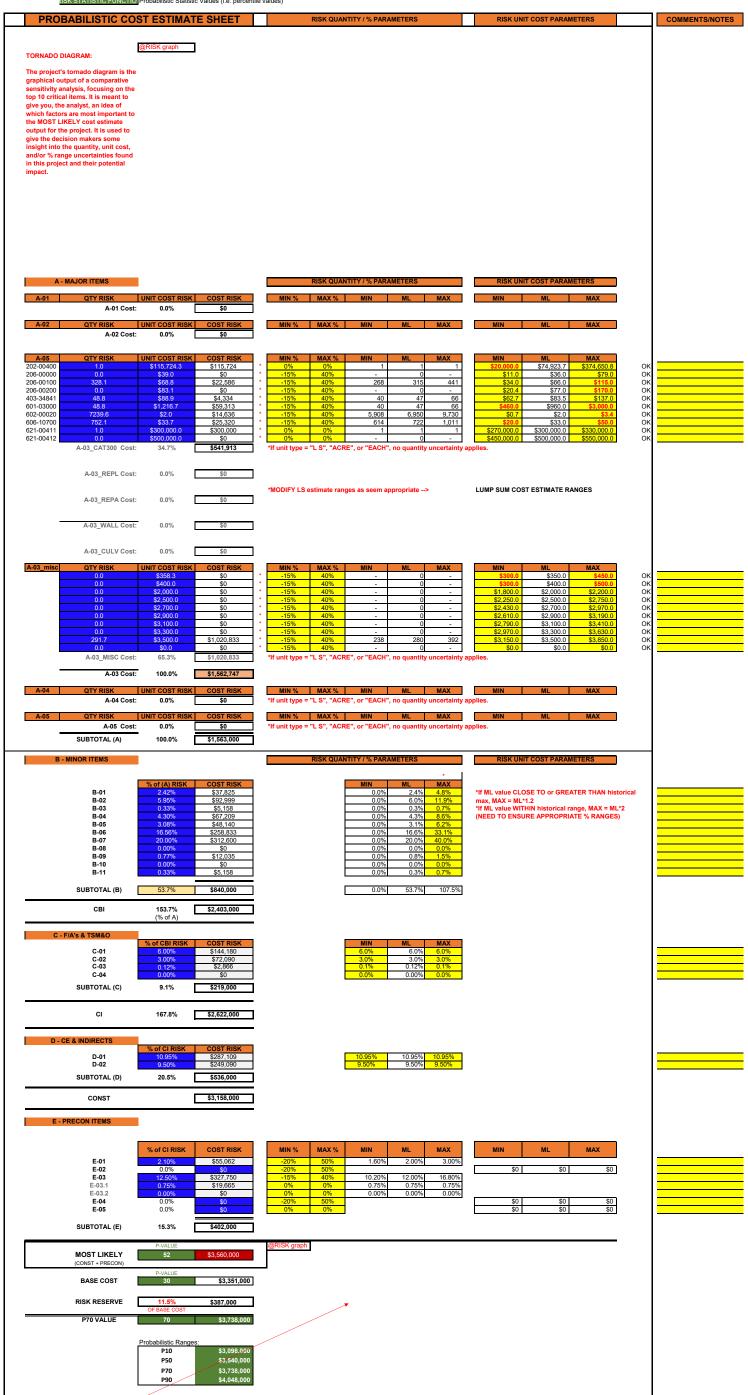
Key:

Model Version 3 Rev 04 Last Update: 22-Oct-18



- EXECUTIVE SUMN	MARY SHEET					
CT PROFILE					Model Version 3 Rev	
Project Name	R2 BUNDLE]	Lasi Opdate.	22-001-16
Project Number Sub-Account Number	M-21-B XXXXX					
Project Description	M-21-B					
Project Work Type	BRIDGE REPLACEMEN	UT				
Project Work Type						
Estimator:	E.A.	Date: 11/6/2018				
CT LOCATION & CHARACTERIS	TICS					
Route:	350A	Begin MP: 47.1	End MP:	69.8	Length:	22.7
CDOT Region:	2	FIPS City: NONE	FIPS County:	Otero Co	Lengui.	22.1
		FIPS City: 00000	FIPS County:			
Segment Mid-point	RefPt 58.450	Latitude: 37.8382	Longitude:	-103.7489	<u>G</u>	OOGLE MAP LINK
Functional Classification	4 Minor Arterial U	rban-Rural Class: 1 Rural	Terrain:	2	Rolling	I
AADT:	340	Truck ADT: 10	Tier Class:	Tier 4	Primary Surface:	1 Asphalt
Design Maturity:	0 - Conceptual	NEPA Action: Cat/Ex		NEPA Status:	In Progress	
-				'		1
Project Delivery Method	I: Design-Bid-Build	Construction Start (MMM-YY) Sep-22	Cons	truction Duration (mo)	24.0	I
					REGION'S E	STIMATE
CT CONSTRUCTION COSTS						
MAJOR CONSTRUCTI						
CAT ITEM DESCRIPTION			QTY	UNIT	PERCENTAGE	COST
1 Earthwork 2 Pavement & Bases			0 N/A	CY SY	0.0% 0.0%	\$0 \$0
AT300 Itemized Structure			N/A	N/A	33.0%	\$482,000
repl Bridge Replacement repa Bridge Repair			0	DECK AREA (SF) DECK AREA (SF)	0.0% 0.0%	\$0 \$0
wall Walls culv Major Culverts	-		0	SF LF	0.0%	\$0 \$0
misc Miscellaneous Structures			280	LS	67.0%	\$980,000
O4 Traffic / ITS O5 Other Major Items			N/A N/A	N/A N/A	0.0% 0.0%	\$0 \$0
MINOR CONSTRUCTION	ON ITEMS		SUBTOTAL (A)		100.0%	\$1,462,000
CAT ITEM DESCRIPTION 01 Removals / Resets			EFFORT 3 - Average	UNIT % OF A	PERCENTAGE 2.4%	COST \$35,380
2 Environmental 3 Structural			3 - Average 3 - Average	% OF A % OF A	6.0% 0.3%	\$86,989 \$4,825
04 Drainage / Utilities			3 - Average	% OF A	4.3%	\$62,866
Roadway Appurtenances Mobilization			3 - Average 3 - Average	% OF A % OF A	3.1% 16.6%	\$45,030 \$242,107
7 Construction Traffic Contri 8 Lighting & Electrical	ol / Detour		3 - Average	% OF A	20.0%	\$292,400
Permanent Signing & Strip			3 - Average 3 - Average	% OF A % OF A	0.0% 0.8%	\$0 \$11,257
Traffic Signalization & ITS Miscellaneous			3 - Average 3 - Average	% OF A % OF A	0.0% 0.3%	\$0 \$4,825
		<u>l</u>	SUBTOTAL (B)	% OF A	53.7%	\$786,000
		CONTRICTION DID ITEMS (* -	. ,			· · · · · · · · · · · · · · · · · · ·
TOROE 4000::::=:	TOMOC	CONTRUCTION BID ITEMS (A + B)	СВІ	% OF A	153.8%	\$2,248,000
FORCE ACCOUNTS &	ISM&O				DEBOSHE: 5	222-
AT ITEM DESCRIPTION F/A - General				WNIT % OF CBI	PERCENTAGE 6.0%	COST \$134,880
F/A - Minor Contract Revis F/A - Project Communicat				% OF CBI % OF CBI	3.0% 0.1%	\$67,440 \$2,681
F/A - Project Communicat TSM&O Traffic & Operation				% OF CBI	0.0%	\$2,081
			SUBTOTAL (C)	% OF CBI	9.1%	\$205,000
		CONSTRUCTION ITEMS (A + B + C)	CI	% OF A	167.8%	\$2,453,000
CONSTRUCTION ENG	INEERING & INDIRECTS					
CAT ITEM DESCRIPTION				UNIT	PERCENTAGE	COST
1 Construction Engineering				% OF CI % OF CI	11.0%	\$268,604
2 Construction Indirects			01:		9.5%	\$233,035
			SUBTOTAL (D)	% OF CI	20.5%	\$502,000
		PROJECT CONSTRUCTION BUDG	ET (A + B + C + D)			\$2,955,000
CT PRECONSTRUCTION CO	STS:					
PRECONSTRUCTION						
CAT ITEM DESCRIPTION				UNIT	PERCENTAGE	COST
01 Right-of-Way [Phase R] 02 Utilities + Railroad Work [I	Phase III			% OF CI % OF CI	2.0% 0.0%	\$53,721 \$0
Design & Engineering [Ph	ase D]			% OF CI	12.0%	\$322,324
3.1 Subsurface Utility Engin3.2 Transportation Systems	eering (SUE) Budget Management & Operation (TS	SM&O) Budget		% OF CI % OF CI	0.8% 0.0%	\$20,145 \$0
4 Environmental (NEPA) [Pl		-, y		% OF CI	0.0%	\$0
5 Miscellaneous [Phase M]			CLIDTOTAL (C)	% OF CI	0.0%	\$396,000
			SUBTOTAL (E)	% OF CI	16.1%	\$396,000
		PROJECT BASE COST ESTIMATE	(CONSTRUCTION	+ PRECONSTRUCTION	ON)	\$3,351,000
SERVE						
PROBABILISTIC COST E	STIMATE RISK RESERVE	DATE: 11/6/2018		RISK RESERVE	11.5% OF BASE COST	\$387,000
			тот	TAL PROJECT COST		\$3,738,000
TION						
TION Construction Start	Sep-22	Escalation from Estimate Date: Nov-18		ESCALATION	14.1%	\$527,000
		Escalation from Estimate Date: Nov-18 o Construction Mid-Point Date: Sep-23		ESCALATION	14.1% OF BASE COST	\$527,000 \$4,265,000

PROJECT P	POEII E	1									
PROJECT	Project Name	R2 BUNDLE	<u> </u>			Ĭ					
	Project Number Sub-Account Number Project Description	M-21-B XXXXX M-21-B							Ī		
	Project Work Type Estimator:	BRIDGE REPLACE E.A.		11/6/2018							
PROJECT L	OCATION & CHARACTERI										
	Route: CDOT Region:	350A 2	Begin MP: City:	47.1 NONE	End MP: County:	69.8 Otero Co		Length:	22.7		
	-		FIPS City:	00000	FIPS County:	089				_	
	Segment Mid-point Functional Classification:	RefPt 58.450	Latitude: Urban-Rural Class:	37.8382 1 Rura	Longitude:	-103.7489		<u>Gi</u> Terrain:	OOGLE MAP LIN	K T	
	AADT:	340	Truck ADT:		Tier Class:	Tier 4		Primary Surface:			
-	Design Maturity:	0 - Conceptual		NEPA Action:	Cat/Ex		NEPA Statu	s: In Progress			
	Project Delivery Method:		Construction S	Start (MMM-YY)		Construct	ion Duration (m				
A - MAJOR (CONSTRUCTION ITEMS						Mod	el Estimate	Regio	on Estimate	
A-01	EARTHWORK				Unit	Qty	Unit Cost	Cost	Unit Cost	Cost	
A 02	DAVEMENT & DAGEC				Unit	A-01 Cost:	0.0%	\$0	0.0%	\$0	
A-02 A-03	PAVEMENT & BASES MAJOR STRUCTURES (CAT 300 ITEMS)			Unit	Qty A-02 Cost:	Unit Cost 0.0%	Cost \$0	Unit Cost 0.0%	Cost \$0	
A-03_CAT30	00 PAYITEM GROUP CATE	GORY	CAT 300 STRUCTURA		Unit	Qty	Unit Cost	Cost	Unit Cost	Cost	
A-03 CAT30	00 202 - Removal of Structur 00 206 - Structure Excavation 00 206 - Structure Excavation	n & Backfill, Cofferdam an	202-00400 - Removal of 206-00000 - Structure E 206-00100 - Structure E	Excavation	EACH CY CY	1 0 315	\$74,923.7 \$21.6 \$45.3	\$74,924 \$0 \$14,268	\$74,923.7 \$36.0 \$66.0	\$74,924 \$0 \$20,790	
A-03 CAT30 A-03 CAT30	200 206 - Structure Excavation 20 403 - Hot Bituminous Pav	n & Backfill, Cofferdam an ement	206-00200 - Structure E 403-34841 - Hot Mix As	Backfill (Class 2)	CY (100) (PG TON	0 47	\$48.2 \$83.5	\$0 \$3,906	\$77.0 \$83.5	\$0 \$3,906	
A-03_CAT30	00 601 - Structural Concrete 00 602 - Reinforcing Steel		601-03000 - Concrete 0 602-00020 - Reinforcing	g Steel (Epoxy Coate	CY LB	47 6,950	\$960.0 \$1.0	\$44,928 \$6,993	\$960.0 \$2.0	\$44,928 \$13,900	
A-03_CAT30	00 606 - Guardrail and Bridge 00 621 - Detour 00 621 - Detour	e Kali	606-10700 - Bridge Rai 621-00411 - Structure 7 621-00412 - Structure 7	Temporary Access Ro		722 1 0	\$95.5 \$65,000.0 \$50,000.0	\$68,936 \$65,000 \$0	\$33.0 \$300,000.0 \$500.000.0	\$23,826 \$300,000 \$0	
			J. I.Z Oli dotture	many roocess Ri		3_CAT300 Cost:	22.2%	\$279,000	33.0%	\$482,000	
A-03_repl	BRIDGE REPLACEMEN	Т				A-03_REPL Cost:	0.0%	\$0	0.0%	\$0	
A-03_repa	BRIDGE REPAIR					A-03 DEDA C	0.0%	\$0	0.0%	\$0	
A-03_wall	WALLS				,	A-03_REPA Cost:	U.U%	ÞU	0.0%	ÞU	
					,	A-03_WALL Cost:	0.0%	\$0	0.0%	\$0	
A-03_culv	MAJOR CULVERTS					A-03_CULV Cost:	R2 0.0%	\$0	0.0%	\$0	
A-03_misc A-03 misc	MISCELLANEOUS STRU				Unit LF	Qty 0	Unit Cost \$350.0	Cost \$0	Unit Cost \$350.0	Cost \$0	
A-03 misc A-03 misc	72 Inch Reinforced Concr	ete Pipe			LF LF	0	\$400.0 \$2,000.0	\$0 \$0	\$400.0 \$2,000.0	\$0 \$0	
	12x10 Foot Concrete Box 14x6 Foot Concrete Box 0				LF LF	0	\$2,500.0 \$2,700.0	\$0 \$0	\$2,500.0 \$2,700.0	\$0 \$0	
A-03_misc		Culvert (Precast)			LF LF	0	\$2,900.0 \$3,100.0	\$0 \$0	\$2,900.0 \$3,100.0	\$0 \$0	
A-03 misc A-03 misc A-03 misc	20x8 Foot Concrete Box 0				LF LF	0 280 0	\$3,300.0 \$3,500.0 \$0.0	\$0 \$980,000 \$0	\$3,300.0 \$3,500.0 \$0.0	\$0 \$980,000 \$0	
A-03 IIIISC	, 10					A-03_MISC Cost:	77.8%	\$980,000	67.0%	\$980,000	
						A-03 Cost:	100.0%	\$1,259,000	100.0%	\$1,462,000	
A-04	TRAFFIC/ITS				Unit	Qty A-04 Cost:	Unit Cost 0.0%	Cost \$0	Unit Cost 0.0%	Cost \$0	
	OTHER CATEGORY										
A-05	OTHER CATEGORY		OTHER MAJOR ITEM	S	Unit	Qty	Unit Cost	Cost	Unit Cost	Cost	
A-05 A	MAJOR CONSTRUCTION		OTHER MAJOR ITEMS	S	Unit SUBTOTAL (A)				Unit Cost 0.0% 100.0%	\$0 \$1,462,000	43.6%
А			OTHER MAJOR ITEMS	S		Qty A-05 Cost:	Unit Cost 0.0%	Cost \$0	0.0%	\$0	43.6% of Base Cos
А	MAJOR CONSTRUCTION	N ITEMS	/ork Type: BRII	DGE REPLACEMEN	SUBTOTAL (A)	Qty A-05 Cost:	Unit Cost 0.0% 100.0%	Cost \$0 \$1,259,000	0.0%	\$0 \$1,462,000	
А	MAJOR CONSTRUCTION	N ITEMS		DGE REPLACEMEN MEAN % N 2.4%	SUBTOTAL (A)	Qty A-05 Cost:	Unit Cost 0.0%	Cost \$0	0.0%	\$0	
B-01 B-02 B-03 B-04	MAJOR CONSTRUCTION CONSTRUCTION ITEMS Removals / Resets Environmental Structural Drainage / Utilities	N ITEMS	Vork Type: BRII MIN % 0.0% 0.0% 0.0% 0.0% 0.0%	DGE REPLACEMEN MEAN % N 2.4% 6.0% 1 0.3% 4.3% 1	SUBTOTAL (A) IT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 2.5% 3 - Average 4.49% 3 - Average	Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—>	Unit Cost 0.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30%	Cost \$0 \$1,259,000 Cost \$30,468 \$74,911 \$4,155 \$54,137	0.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30%	\$0 \$1,462,000 \$1,462,000 \$0,53,00 \$86,989 \$4,825 \$62,866	
B-01 B-02 B-03 B-04 B-05 B-05	MAJOR CONSTRUCTION Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance Mobilization	N ITEMS W	Jork Type: BRI MIN % 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.	DGE REPLACEMEN MEAN % N 2.4% 6.0% 1 0.3% 4.3% 1 3.1% 16.6% 2	SUBTOTAL (A) IT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 14.9% 3 - Average 14.9% 3 - Average 5.5% 3 - Average	Adjusted>	Unit Cost 0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.55%	Cost \$0 \$1,259,000 \$1,259,000 \$30,468 \$74,911 \$4,155 \$54,137 \$39,777 \$208,490	0.0% 100.0% % of (A) 2.42% 0.33% 4.30% 16.56%	\$0 \$1,462,000 \$1,462,000 \$35,380 \$86,989 \$4,825 \$62,866 \$45,000 \$242,107	
B-01 B-02 B-03 B-04 B-05	MAJOR CONSTRUCTION CONSTRUCTION ITEMS Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance	N ITEMS W ss	/ork Type: BRII MIN % 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0	DGE REPLACEMEN MEAN % N 2.4% 6.0% 1 0.3% 4 4.3% 1 3.1% 16.6% 2 0.0% 2	SUBTOTAL (A) IT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 14.3% 3 - Average 14.3% 3 - Average	Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—>	Unit Cost 0.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 3.08%	Cost \$0 \$1,259,000 \$1,259,000 \$30,468 \$74,911 \$4,155 \$54,137 \$38,777	0.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 3.08%	\$0 \$1,462,000 Cost \$35,380 \$86,989 \$4,825 \$62,866 \$45,030	
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-07	MAJOR CONSTRUCTION Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance Mobilization Construction Traffic Col Lighting & Electrical	N ITEMS W ss ntrol / Detour	Jork Type: MIN % 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.	DGE REPLACEMEN MEAN % N 2.4% 6.0% 1 0.3% 4.3% 1 3.1% 16.6% 2 0.0% 2 0.0% 0.8% 0.0%	SUBTOTAL (A) MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 14.9% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 24.1% 3 - Average 25.1% 3 - Average	Adjusted—>	Unit Cost 0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 10.56% 20.00%	Cost \$0 \$1,259,000 \$1,259,000 \$30,468 \$74,911 \$4,155 \$54,137 \$33,777 \$208,490 \$251,800 \$0	0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 16.56% 20.00%	\$0 \$1,462,000 \$1,462,000 \$35,380 \$86,999 \$4,825 \$62,866 \$45,030 \$242,107 \$292,400 \$0	
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10	MAJOR CONSTRUCTION Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance Mobilization Construction Traffic Co. Lighting & Electrical Permanent Signalization & ITraffic Signalization & ITraf	N ITEMS W s ntrol / Detour triping TS	/ork Type: MN % 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0	DGE REPLACEMEN MEAN % N 2.4% 6.0% 1.3% 4.3% 1.1% 16.6% 20.0% 0.0% 0.8% 0.0%	SUBTOTAL (A) IT MAX % EFFORT 6.0% 3 - Average 2.3% 3 - Average 14.3% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 32.5% 3 - Average 32.5% 3 - Average 3.2% 3 - Average 1.3% 3 - Average	Adjusted—>	Unit Cost 0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 0.00% 0.77% 0.00%	Cost \$0 \$1,259,000 \$1,259,000 \$1,259,000 \$30,468 \$74,911 \$4,155 \$54,137 \$208,490 \$251,800 \$0 \$9,694 \$0	0.0% 100.0% % of (A) 2.42% 5.95% 4.33% 4.33% 4.30% 16.56% 0.00% 0.00%	\$0 \$1,462,000 \$1,462,000 \$35,380 \$86,989 \$4,825 \$62,866 \$45,030 \$242,107 \$292,400 \$0 \$11,257 \$0	
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11	MAJOR CONSTRUCTION Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance Mobilization Construction Traffic Col Lighting & Electrical Permanent Signing & St Traffic Signalization & IT Miscellaneous	N ITEMS W IS Introl / Detour Triping TS N ITEMS	/ork Type: MN % 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0	DGE REPLACEMEN MEAN % N 2.4% 6.0% 1.3% 4.3% 1.1% 16.6% 20.0% 0.0% 0.8% 0.0%	SUBTOTAL (A) IT MAX % EFFORT 6.0% 3 - Average 2.3% 3 - Average 14.9% 3 - Average 14.9% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 3.2% 3 - Average 3.2% 3 - Average 3.2% 3 - Average 3.2% 3 - Average 1.2% 3 - Average	Adjusted>	Unit Cost 0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 20.00% 0.00% 0.00% 0.33%	Cost \$0 \$1,259,000 \$1,259,000 Cost \$30,468 \$74,911 \$4,155 \$54,137 \$38,777 \$208,490 \$251,800 \$0 \$0 \$4,155	0.0% 100.0% % of (A) 2.42% 0.33% 4.30% 4.30% 20.00% 0.00% 0.00% 0.00% 0.33%	\$0 \$1,462,000 \$1,462,000 \$35,380 \$86,989 \$4,825 \$62,866 \$45,030 \$242,107 \$9 \$0 \$11,257 \$0 \$4,825	of Base Cor
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-11 B	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance Mobilization Construction Traffic Cot Lighting & Electrical Permanent Signing & St Traffic Signalization & II Miscellaneous MINOR CONSTRUCTION	N ITEMS W IS Introl / Detour Triping TS N ITEMS	/ork Type: MN % 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0	DGE REPLACEMEN MEAN % N 2.4% 6.0% 1.3% 4.3% 1.1% 16.6% 20.0% 0.0% 0.8% 0.0%	SUBTOTAL (A) MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 14.9% 3 - Average 23.5% 3 - Average 22.5% 3 - Average 25.5% 3 - Average 26.1% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 3.4% 3 - Average	Adjusted—>	Unit Cost 0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 10.56% 20.00% 0.00% 0.77% 0.00% 0.33%	Cost \$0 \$1,259,000 \$1,259,000 \$30,468 \$74,911 \$4,155 \$54,137 \$38,777 \$208,490 \$251,800 \$0 \$9,694 \$9,694 \$4,155 \$4,155 \$677,000	0.0% 100.0% % of (A) 2.42% 5.95% 4.30% 4.30% 16.56% 20.00% 0.77% 0.00% 0.33% 53.74%	\$0 \$1,462,000 \$1,462,000 \$35,380 \$86,989 \$4,825 \$62,866 \$45,030 \$242,107 \$292,400 \$0 \$11,257 \$0 \$4,825	of Base Co.
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-11 B	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance Mobilization Construction Traffic Cot Lighting & Electrical Permanent Signing & St Traffic Signalization & I Miscellaneous MINOR CONSTRUCTION	N ITEMS W IS Introl / Detour Triping TS N ITEMS	/ork Type: MN % 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0	DGE REPLACEMEN MEAN % N 2.4% 6.0% 1.3% 4.3% 1.1% 16.6% 20.0% 0.0% 0.8% 0.0%	SUBTOTAL (A) MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 14.9% 3 - Average 23.5% 3 - Average 22.5% 3 - Average 25.5% 3 - Average 26.1% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 3.4% 3 - Average	Adjusted—>	Unit Cost 0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 10.56% 20.00% 0.00% 0.77% 0.00% 0.33%	Cost \$0 \$1,259,000 \$1,259,000 \$30,468 \$74,911 \$4,155 \$54,137 \$38,777 \$208,490 \$251,800 \$0 \$9,694 \$9,694 \$4,155 \$4,155 \$677,000	0.0% 100.0% % of (A) 2.42% 5.95% 4.30% 4.30% 16.56% 20.00% 0.77% 0.00% 0.33% 53.74%	\$0 \$1,462,000 \$1,462,000 \$35,380 \$86,989 \$4,825 \$62,866 \$45,030 \$242,107 \$292,400 \$0 \$11,257 \$0 \$4,825	of Base Co.
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B	MAJOR CONSTRUCTION Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance Mobilization Construction Traffic Col Lighting & Electrical Permanent Signing & St Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITE ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Ref/A - Project Communic	N ITEMS W IS Introl / Detour Itriping ITS N ITEMS MS	Vork Type: BRIII MIN % 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.	DGE REPLACEMEN MEAN % N 2.4% 6.0% 1 0.3% 4.3% 3.1% 16.6% 2 0.0% 0.8% 0.0% 0.3%	SUBTOTAL (A) MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 14.9% 3 - Average 23.5% 3 - Average 22.5% 3 - Average 25.5% 3 - Average 26.1% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 1.8% 3 - Average 3.4% 3 - Average	Adjusted—>	Unit Cost 0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 20.00% 0.77% 0.00% 0.33% 53.74% 153.74%	Cost \$0 \$1,259,000 \$1,259,000 \$1,259,000 Cost \$30,468 \$74,911 \$4,155 \$54,137 \$38,777 \$208,490 \$251,800 \$0 \$4,155 \$677,000 \$1,936,000 \$1,936,000 Cost \$116,160 \$58,080 \$2,309	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 4.30% 20.00% 0.00% 0.00% 0.33% 53.74% 153.74% % of CBI 6.00% 3.00% 3.00% 0.00%	\$0 \$1,462,000 \$1,462,000 \$1,462,000 \$35,390 \$86,989 \$4,825 \$62,866 \$45,030 \$242,107 \$292,400 \$0 \$11,257 \$0 \$4,825 \$786,000 \$2,248,000 \$2,248,000	of Base Cor
B - MINOR C B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C - FORCE A C-01	MAJOR CONSTRUCTION CONSTRUCTION ITEMS Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance Mobilization Construction Traffic Cor Lighting & Electrical Permanent Signing & St Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITE ACCOUNTS & TSM&O F/A - General F/A - General F/A - General F/A - General	N ITEMS W IS Introl / Detour Itriping ITS N ITEMS MS	Vork Type: BRIII MIN % 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.	DGE REPLACEMEN MEAN % N 2.4% 6.0% 1 0.3% 4.3% 3.1% 16.6% 2 0.0% 0.8% 0.0% 0.3%	SUBTOTAL (A) TT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 14.9% 3 - Average 23.5% 3 - Average 22.5.1% 3 - Average 23.5% 3 - Average 1.2% 3 - Average 1.2% 3 - Average 1.2% 3 - Average SUBTOTAL (B) SUBTOTAL (B)	Adjusted—>	Unit Cost 0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 20.00% 0.77% 0.00% 0.33% 153.74% 153.74%	Cost \$0 \$1,259,000 \$1,259,000 \$1,259,000 \$1,259,000 \$30,468 \$74,911 \$4,155 \$54,137 \$208,490 \$251,800 \$0 \$9,694 \$0 \$4,155 \$677,000 \$1,936,000 \$1,936,000	0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 20.00% 0.00% 0.77% 0.00% 0.33% 153.74% % of CBI 6.00% 3.00%	\$0 \$1,462,000 \$1,462,000 Cost \$35,380 \$35,380 \$88,989 \$4,825 \$62,866 \$45,030 \$242,107 \$0 \$11,257 \$0 \$11,257 \$0 \$4,825 \$786,000 \$2,248,000	of Base Co.
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-01 C-02 C-03 C-04 C	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance Mobilization Construction Traffic Col Lighting & Electrical Permanent Signing & St Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITE ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Ret F/A - Froject Communic TSM&O Traffic & Operat F/A's & TSM&O	N ITEMS W IS Introl / Detour Itriping TS N ITEMS MS Wisions (MCR's) ations tions (for Reconstruction	Vork Type: BRIII MIN % 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.	DGE REPLACEMEN MEAN % N 2.4% 6.0% 1.3% 3.1% 16.6% 2.0.0% 0.3% 0.3% 0.3% 0.3% 0.3% 0.3% 0.0% 0.3% 0.0% 0.3%	SUBTOTAL (A) IT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 14.9% 3 - Average 14.9% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 3.2% 3 - Average 3.2% 3 - Average 3.2% 3 - Average SUBTOTAL (B) SUBTOTAL (A + B)	Adjusted>	Unit Cost 0.0% 100.0% 100.0% % of (A) 2.42% 5.59% 0.33% 4.50% 3.08% 16.56% 0.00% 0.00% 0.33% 53.74% 153.74% 153.74% 9.12%	Cost \$0 \$1,259,000 \$1,259,000 Cost \$30,468 \$74,911 \$4,155 \$54,137 \$208,490 \$50,000 \$1,936,000 \$1,936,000 Cost \$116,160 \$53,080 \$2,309 \$0 \$0 \$1,77,000	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.00% 0.00% 0.00% 0.00% 0.33% 53.74% 153.74% % of CBI 6.00% 3.00% 3.00% 0.12% 0.00% 9.12%	\$0 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$1,500,000 \$4,825 \$62,866 \$45,030 \$242,107 \$0 \$0 \$4,825 \$112,57 \$0 \$4,825 \$786,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$3,4825 \$3,4825 \$3,5836 \$3,4825 \$3,5836 \$3,4825 \$3,5836 \$3,4825	67.1% of Base Cod
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-01 C-02 C-03 C-04	MAJOR CONSTRUCTION Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance Mobilization Construction Traffic Cor Lighting & Electrical Permanent Signing & St Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITE ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Ret F/A - Froject Communic TSM&O Traffic & Operat	N ITEMS W IS Introl / Detour Itriping TS N ITEMS MS Wisions (MCR's) ations tions (for Reconstruction	Vork Type: BRIII MIN % 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.	DGE REPLACEMEN MEAN % N 2.4% 6.0% 1.3% 3.1% 16.6% 2.0.0% 0.3% 0.3% 0.3% 0.3% 0.3% 0.3% 0.0% 0.3% 0.0% 0.3%	SUBTOTAL (A) IT MAX %	Adjusted>	Unit Cost 0.0% 100.0% 100.0% % of (A) 2.42% 5.59% 0.33% 4.30% 4.30% 0.00% 0.00% 0.33% 53.74% 153.74% % of CBI 6.00% 3.00% 3.00% 0.12% 0.00%	Cost \$0 \$1,259,000 \$1,259,000 \$1,259,000 Cost \$30,468 \$74,911 \$4,155 \$54,137 \$208,490 \$50 \$50,694 \$50 \$4,155 \$677,000 \$1,936,000 Cost \$116,160 \$580,800 \$2,209,900 \$50,000 \$50,000 \$50,000 \$50,000 \$50,000 \$50,000 \$50,000 \$50,000 \$50,000 \$50,000 \$50,000 \$50,000 \$50,000 \$50,000 \$50,000 \$50,000 \$50,000	0.0% 100.0% 100.0% % of (A) 2.42% 5.96% 0.33% 4.30% 3.06% 0.00% 0.00% 0.77% 0.00% 153.74% 153.74% % of CBI 6.00% 3.00% 0.00%	\$0 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$25,380 \$4,825 \$62,866 \$45,030 \$242,107 \$0 \$0 \$4,825 \$786,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000	67.1% of Base Cod
B - MINOR 6 B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-10 B-11 B CBI C-FORCE 6 C-01 C-02 C-03 C-04 C	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance Mobilization Construction Traffic Col Lighting & Electrical Permanent Signing & St Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITE ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Ret F/A - Froject Communic TSM&O Traffic & Operat F/A's & TSM&O	N ITEMS W s Introl / Detour Itriping ITS N ITEMS MS Wisions (MCR's) ations itions (for Reconstructions)	Vork Type: BRIII MIN % 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.	DGE REPLACEMEN MEAN % N 2.4% 6.0% 1.3% 3.1% 16.6% 2.0.0% 0.3% 0.3% 0.3% 0.3% 0.3% 0.3% 0.0% 0.3% 0.0% 0.3%	SUBTOTAL (A) IT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 14.9% 3 - Average 14.9% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 3.2% 3 - Average 3.2% 3 - Average 3.2% 3 - Average SUBTOTAL (B) SUBTOTAL (A + B)	Adjusted>	Unit Cost 0.0% 100.0% 100.0% % of (A) 2.42% 5.59% 0.33% 4.50% 3.08% 16.56% 0.00% 0.00% 0.33% 53.74% 153.74% 153.74% 9.12%	Cost \$0 \$1,259,000 \$1,259,000 Cost \$30,468 \$74,911 \$4,155 \$54,137 \$208,490 \$50,000 \$1,936,000 \$1,936,000 Cost \$116,160 \$53,080 \$2,309 \$0 \$0 \$1,77,000	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.00% 0.00% 0.00% 0.00% 0.33% 53.74% 153.74% % of CBI 6.00% 3.00% 3.00% 0.12% 0.00% 9.12%	\$0 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$1,500,000 \$4,825 \$62,866 \$45,030 \$242,107 \$0 \$0 \$4,825 \$112,57 \$0 \$4,825 \$786,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$3,4825 \$3,4825 \$3,5836 \$3,4825 \$3,5836 \$3,4825 \$3,5836 \$3,4825	67.1% of Base Cod
B - MINOR 6 B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-10 B-11 B CBI C-FORCE 6 C-01 C-02 C-03 C-04 C	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance Mobilization Construction Traffic Col Lighting & Electrical Permanent Signing & St Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITE ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Re F/A - Project Communic TSM&O Traffic & Operat F/A's & TSM&O CONSTRUCTION ITEMS	N ITEMS W s Introl / Detour triping TS N ITEMS MS wisions (MCR's) ations tions (for Reconstruction in the second of the	/ork Type: BRII MIN % 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0	DGE REPLACEMEN MEAN % N 2.4% 6.0% 1.3% 3.1% 16.6% 2.0.0% 0.3% 0.3% 0.3% 0.3% 0.3% 0.3% 0.0% 0.3% 0.0% 0.3%	SUBTOTAL (A) IT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 14.9% 3 - Average 14.9% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 3.2% 3 - Average 3.2% 3 - Average 3.2% 3 - Average SUBTOTAL (B) SUBTOTAL (A + B)	Adjusted>	Unit Cost 0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 20.00% 0.77% 0.00% 0.33% 153.74% 153.74% % of CBI 6.00% 3.00% 0.12% 9.12%	Cost \$0 \$1,259,000 \$1,259,000 \$1,259,000 Cost \$30,468 \$74,911 \$4,155 \$54,137 \$208,490 \$251,800 \$0 \$9,694 \$0 \$4,155 \$677,000 \$1,936,000 Cost \$116,160 \$56,080 \$2,309 \$0 \$1777,000	0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 4.30% 2.0.0% 0.00% 0.00% 0.33% 53.74% 153.74% % of CBI 6.00% 0.12% 0.00% 9.12%	\$0 \$1,462,000 \$1,462,000 Cost \$35,380 \$36,380 \$84,825 \$62,866 \$45,030 \$242,107 \$0 \$11,257 \$0 \$11,257 \$0 \$4,825 \$786,000 \$2,248,000 Cost \$134,880 \$2,681 \$0 \$0 \$2,453,000	67.1% of Base Cod
B - MINOR C B - MINOR C B - MINOR C B - 01 B - 02 B - 03 B - 04 B - 05 B - 06 B - 07 B - 08 B - 09 B - 10 B - 11 B CBI C - FORCE / C - 03 C - 04 C CI D - CONSTR	MAJOR CONSTRUCTION CONSTRUCTION ITEMS Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance Mobilization Construction Traffic Cor Lighting & Electrical Permanent Signing & St Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITE ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Ret F/A - Project Communic TSM&O Traffic & Operat F/A's & TSM&O CONSTRUCTION ITEMS CONSTRUCTION ITEMS RUCTION ENGINEERING & CONSTRUCTION ENGINEERING & CONSTR	N ITEMS W IS IN ITEMS W W IS INDIRECTS IN ITEMS W W INDIRECTS IN ITEMS W INDIRECTS IN ITEMS W INDIRECTS	/ork Type: BRII MIN % 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0	DGE REPLACEMEN MEAN % N 2.4% 6.0% 0.3% 4.3% 1.16.6% 2.0.0% 0.8% 0.0% 0.3% 0.3% 5.20.0% 0.3% 0.3% 0.3% 0.3% 0.3% 0.3%	SUBTOTAL (A) IT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 14.9% 3 - Average 14.9% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 3.2% 3 - Average 3.2% 3 - Average 3.2% 3 - Average SUBTOTAL (B) SUBTOTAL (A + B)	Adjusted>	Unit Cost 0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 20.00% 0.77% 0.00% 0.33% 53.74% 153.74% % of CBI 6.00% 3.00% 0.12% 9.12%	Cost \$0 \$1,259,000 \$1,259,000 \$1,259,000 \$1,259,000 \$30,468 \$74,911 \$4,155 \$54,137 \$208,490 \$251,800 \$0 \$9,694 \$0 \$4,155 \$677,000 \$1,936,000 \$1,936,000 \$2,309 \$0 \$1,77,000 \$2,113,000	0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 4.30% 4.30% 6.00% 0.00% 0.33% 16.56% 0.77% 0.00% 0.33% 53.74% 153.74% 167.78%	\$0 \$1,462,000 \$1,462,000 \$1,462,000 \$253,300 \$88,989 \$4,825 \$62,868 \$45,030 \$242,107 \$0 \$11,257 \$0 \$4,825 \$786,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000	67.1% of Base Cod
B - MINOR C B - MINOR C B - MINOR C B - 02 B - 03 B - 04 B - 05 B - 06 B - 07 B - 08 B - 09 B - 10 B - 11 B CBI C - FORCE / C - 02 C - 03 C - 04 C CI D - CONSTR	MAJOR CONSTRUCTION CONSTRUCTION ITEMS Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance Mobilization Construction Traffic Cor Lighting & Electrical Permanent Signing & St Traffic Signalization & II Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITE ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Ret F/A - Project Communic TSM&O Traffic & Operat F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & CONSTRUCTION Engineering Construction Engineering Construction Engineering Construction Indirects	N ITEMS W S Introl / Detour Itriping TS N ITEMS MS Wisions (MCR's) ations Itions (for Reconstruction INDIRECTS INDIRECTS INDIRECTS INDIRECTS	/ork Type: BRII MIN % 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0	DGE REPLACEMEN MEAN % N 2.4% 6.0% 1.3% 3.1% 16.6% 2.0.0% 2.0.0% 0.3% 0.3% 0.3% 0.3% 0.0% 0.3% 0.0% 0.0	SUBTOTAL (A) TT	Adjusted> (% of A) (% of A)	Unit Cost 0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 20.00% 0.77% 0.00% 0.33% 53.74% 153.74% % of CBI 6.00% 3.00% 0.12% 0.00% 9.12%	Cost \$0 \$1,259,000 \$1,259,000 \$1,259,000 \$1,259,000 \$30,468 \$74,911 \$4,155 \$64,137 \$208,490 \$251,800 \$0 \$9,694 \$0 \$4,155 \$677,000 \$1,936,000 Cost \$116,160 \$58,080 \$2,309 \$0 \$1777,000 \$2,113,000	0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 4.30% 4.30% 20.00% 0.00% 0.33% 53.74% 153.74% \$\$\frac{6}{1}\$\$ of CBI 6.00% 3.00% 0.12% 9.12% \$\$\frac{1}{2}\$\$ of CI 10.95% 9.50%	\$0 \$1,462,000 \$1,462,000 \$1,462,000 \$235,380 \$36,989 \$4,825 \$62,866 \$45,030 \$242,107 \$0 \$11,257 \$0 \$11,257 \$0 \$4,825 \$786,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000	67.1% of Base Cod
B - MINOR C B - MINOR C B - 01 B - 02 B - 03 B - 04 B - 05 B - 06 B - 07 B - 08 B - 09 B - 10 B - 11 B CBI C - FORCE / C - 03 C - 04 C C CI D - CONSTR D - 01 D - 02 D	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance Mobilization Construction Traffic Cor Lighting & Electrical Permanent Signing & St Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITE ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Ret F/A - Project Communic TSM&O Traffic & Operat F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & Construction Engineeric Construction Engineeric Construction Engineeric	N ITEMS W S Introl / Detour Itriping TS N ITEMS MS Wisions (MCR's) ations Itions (for Reconstruction INDIRECTS INDIRECTS INDIRECTS INDIRECTS	/ork Type: BRII MIN % 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0	DGE REPLACEMEN MEAN % N 2.4% 6.0% 1.3% 3.1% 16.6% 2.0.0% 2.0.0% 0.3% 0.3% 0.3% 0.3% 0.0% 0.3% 0.0% 0.0	SUBTOTAL (A) IT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 14.9% 3 - Average 14.9% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 3.25% 3 - Average 3.25% 3 - Average 3.24% 3 - Average 3.24% 3 - Average 3.4% 3 - Average SUBTOTAL (B) SUBTOTAL (A + B) X 0.12% SUBTOTAL (C)	Adjusted> (% of A) (% of A)	Unit Cost 0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 20.00% 0.77% 0.00% 0.77% 0.00% 0.33% 15.56% 20.00% 16.56% 20.00% 16.56% 20.00% 16.56% 20.00% 16.56% 20.00% 16.56% 20.00% 16.56% 20.00% 16.56% 20.00% 16.56% 20.00% 16.56% 20.00% 16.56% 20.00% 16.56% 20.00% 16.56% 20.00% 16.56% 20.00% 16.56% 20.00% 16.56% 20.00% 16.56% 20.00%	Cost \$0 \$1,259,000 \$1,259,000 \$1,259,000 \$1,259,000 \$30,468 \$74,911 \$4,155 \$54,137 \$208,490 \$251,800 \$0 \$9,694 \$0 \$4,155 \$677,000 \$1,936,000 \$1,936,000 \$2,309 \$0 \$177,000 \$2,113,000 \$2,113,000 \$2,113,000	0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 20.00% 0.00% 0.77% 0.00% 0.33% 153.74% 153.74% 167.78% 167.78%	\$0 \$1,462,000 \$1,462,000 \$1,462,000 \$2,35,380 \$86,889 \$4,825 \$62,866 \$45,030 \$242,107 \$0 \$11,257 \$0 \$11,257 \$0 \$4,825 \$786,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,255,000	67.1% of Base Cod
B - MINOR C B - MINOR C B - 01 B - 02 B - 03 B - 04 B - 05 B - 06 B - 07 B - 08 B - 09 B - 10 B - 11 B CBI C - FORCE / C - 03 C - 04 C C CI D - CONSTR D - 01 D - 02 D	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance Mobilization Construction Traffic Col Lighting & Electrical Permanent Signing & St Traffic Signalization & II Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITE ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Ret F/A - Project Communic TSM&O Traffic & Operat F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & Construction Engineerin Construction Engineerin Construction Engineerin Construction Indirects CONSTRUCTION ENGINEERING & CONSTRU	N ITEMS W S Introl / Detour Itriping TS N ITEMS MS Wisions (MCR's) ations Itions (for Reconstruction INDIRECTS INDIRECTS INDIRECTS INDIRECTS	/ork Type: BRII MIN % 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0	DGE REPLACEMEN MEAN % N 2.4% 6.0% 1.0.3% 4.3% 1.16.6% 2.0.0% 0.0% 0.3% 0.0% 0.3% 0.0% 0.3% 0.0% 0.3% 0.0% 0.3% 0.0% 0.3% 0.0% 0.3% 0.0% 0.3% Construction of the control of	SUBTOTAL (A) IT	Adjusted> (% of A) (% of A)	Unit Cost 0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 6.00% 0.77% 0.00% 0.33% 53.74% 153.74% 167.83% % of CBI 10.95% 9.12% 167.83%	Cost \$0 \$1,259,000 \$1,259,000 \$1,259,000 \$1,259,000 \$1,259,000 \$30,481 \$4,155 \$54,137 \$208,490 \$50,000 \$1,936,000 \$1,936,000 \$1,936,000 \$1,936,000 \$1,936,000 \$2,113,000 \$2,113,000 \$2,113,000 \$2,113,000 \$2,113,000 \$2,113,000	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 16.56% 0.00% 0.00% 0.77% 0.77% 0.00% 0.33% 153.74% 153.74% 167.78% % of CBI 10.95% 9.12% 167.78%	\$0 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$1,500,000 \$2,42,107 \$0 \$0,500 \$4,825 \$786,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000	67.1% of Base Cod
A B - MINOR C B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C - FORCE / C - O1 C - O2 C - C0 C	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance Mobilization Construction Traffic Cor Lighting & Electrical Permanent Signing & St Traffic Signalization & I Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITE ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Ref F/A - Project Communic TSM&O Traffic & Operat F/A - STSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & CONSTRUCTION Engineerin Construction Engineerin Construction Engineerin Construction Engineerin Construction Engineerin Construction Indirects CONSTRUCTION ENGINEERING & RUCTION ENGINEERING & CONSTRUCTION ENGINEERING & CONSTRUCTION ENGINEERING & CONSTRUCTION ENGINEERING & RIGHT-OF-Way [Phase R] Right-of-Way [Phase R]	N ITEMS W Introl / Detour Iriping ITS N ITEMS MS Wisions (MCR's) ations Itions (for Reconstruction INDIRECTS INDIRECTS INDIRECTS INDIRECTS ION BUDGET	/ork Type: BRII MIN % 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0	DGE REPLACEMEN MEAN % N 2.4% 6.0% 9.3% 4.3% 16.6% 20.0% 20.0% 0.3% 0.3% 0.3% 0.3% 0.0% 0.3% 0.3%	SUBTOTAL (A) IT MAX % EFFORT 6.0% 3 - Average 13.4% 3 - Average 14.9% 3 - Average 14.9% 3 - Average 23.5% 3 - Average 23.5% 3 - Average 3.25% 3 - Average 3.25% 3 - Average 3.24% 3 - Average 3.24% 3 - Average 3.4% 3 - Average SUBTOTAL (B) SUBTOTAL (A + B) X 0.12% SUBTOTAL (C)	Adjusted> (% of A) (% of A)	Unit Cost 0.0% 100.0% 100.0% % of (A) 2.42% 5.59% 0.33% 4.30% 4.30% 0.00% 0.00% 0.33% 53.74% 153.74% 167.83% % of CBI 6.00% 3.00% 9.12% 167.83%	Cost \$0 \$1,259,000 \$1,259,000 \$1,259,000 Cost \$30,468 \$74,911 \$4,155 \$54,137 \$38,777 \$208,490 \$50 \$54,155 \$677,000 \$1,936,000 Cost \$116,160 \$58,080 \$2,213,974 \$208,490 \$2,213,974 \$208,490 \$30 \$4,155 \$677,000 Cost \$119,36,000 \$1,936,000 Cost \$117,000 \$2,113,000 \$2,113,000 \$2,113,000 \$2,113,000 \$2,113,000	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 4.30% 0.00% 0.00% 0.00% 0.33% 53.74% 153.74% 153.74% 167.78% 467.78% 167.78% Indirect \$ w of CI 10.95% 20.45%	\$0 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$25,363,000 \$4,825 \$4,825 \$52,240 \$0 \$0 \$4,825 \$786,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,453,000 \$2,453,000 \$2,453,000 \$2,453,000 \$2,453,000 \$2,453,000 \$2,453,000 \$2,453,000 \$2,453,000 \$2,453,000 \$2,453,000 \$2,453,000 \$2,453,000 \$2,453,000 \$2,453,000	67.1% of Base Cod
A B - MINOR C B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C - FORCE C-01 C-02 C-03 C-04 C CI D - CONSTR D-01 D-02 D E - PRECON	MAJOR CONSTRUCTION CONSTRUCTION ITEMS Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance Mobilization Construction Traffic Coi Lighting & Electrical Permanent Signing & St Traffic Signalization & I' Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITE ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Ree F/A - Project Communic TSM&O Traffic & Operat F/A - STSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & CONSTRUCTION Engineerin Construction Engineerin Construction Indirects CONSTRUCTION ITEMS RIGHT-Of-Way [Phase R] Utilities + Railroad Work Design & Engineering IF Right-of-Way [Phase R] Utilities + Railroad Work Design & Engineering IF Right-of-Way [Phase R] Utilities + Railroad Work Design & Engineering IF Right-of-Way [Phase R] Utilities + Railroad Work Design & Engineering IF Right-of-Way [Phase R] Utilities - Railroad Work Design & Engineering IF Right-of-Way [Phase R] Utilities - Railroad Work Design & Engineering IF Right-of-Way [Phase R] Utilities - Railroad Work Design & Engineering IF Right-of-Way [Phase R]	N ITEMS W ITEMS INTERIOR OF THE TOTAL OF	Min % 0.0%	DGE REPLACEMEN MEAN % N 2.4% 6.0% 9.3% 4.3% 16.6% 20.0% 20.0% 0.3% 0.3% 0.3% 0.3% 0.0% 0.3% 0.3%	SUBTOTAL (A) IT	Adjusted> (% of A)	Unit Cost 0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 20.00% 0.77% 0.00% 0.33% 16.56% 20.00% 0.77% 0.00% 0.33% 153.74% 167.83% % of CBI 6.00% 0.12% 0.00% 9.12% 167.83%	Cost \$0 \$1,259,000 \$1,259,000 \$1,259,000 \$1,259,000 \$30,468 \$74,911 \$4,155 \$54,137 \$208,490 \$251,800 \$0 \$9,694 \$0 \$4,155 \$677,000 \$1,936,000 \$1,936,000 \$2,309 \$2,309 \$177,000 \$22,113,000 \$22,113,000 \$22,113,000 \$22,113,000	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 16.56% 20.00% 0.00% 0.33% 153.74% 153.74% 153.74% 167.78% 4 30% 9.12% 167.78%	\$0 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$35,390 \$86,989 \$4,825 \$62,866 \$45,030 \$242,107 \$90 \$11,257 \$90 \$11,257 \$90 \$4,825 \$786,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,453,000 \$2,453,000 \$2,453,000 \$2,453,000 \$2,955,000 \$2,955,000	67.1% of Base Cod
B-MINOR C B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-03 C-04 C CI D-CONSTR D-01 D-02 D E-PRECON	MAJOR CONSTRUCTION CONSTRUCTION ITEMS Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance Mobilization Construction Traffic Cor Lighting & Electrical Permanent Signing & St Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITE ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Ret F/A - Project Communic TSM&O Traffic & Operat F/A - Sama Operat F/A - Reneral F/A - Sama Operat F/A - Sama Operat F/A - Sama Operat F/A - Reneral F/A - Reneral F/A - Minor Contract Ret F/A - Project Communic TSM&O Traffic & Operat F/A - Sama Operat F/A - Sama Operat F/A - Reneral F/	N ITEMS W S Introl / Detour Iriping TS N ITEMS MS Wisions (MCR's) ations Itions (for Reconstruction INDIRECTS INDIRECTS ION BUDGET ION BUD		DGE REPLACEMEN MEAN % N 2.4% 6.0% 1.0.3% 4.3% 3.1% 16.6% 2.0.0% 0.0% 0.3% 0.0% 0.3% 0.0% 0.3% CONSTRU	SUBTOTAL (A) IT	Adjusted> (% of A)	Unit Cost 0.0% 100.0% 100.0% % of (A) 2.42% 6.03% 4.30% 6.55% 0.33% 4.30% 6.56% 0.00% 0.00% 0.33% 53.74% 153.74% 153.74% 167.83% % of CBI 6.00% 9.12% 167.83% Indirect % of CI 10.95% 9.50% 20.45%	Cost \$0 \$1,259,000 \$1,259,000 \$1,259,000 \$1,259,000 \$1,259,000 \$30,481 \$4,155 \$54,137 \$208,490 \$50,694 \$0 \$51,936,000 \$1,936,000 \$1,936,000 \$1,936,000 \$1,936,000 \$1,936,000 \$2,113,000	0.0% 100.0% 100.0% % of (A) 2.42% 5.96% 0.33% 4.30% 3.00% 0.00% 0.07% 0.00% 153.74% 153.74% 167.78% Mof CI 10.95% 0.00% 20.45% Indirect 9 Indirect 9 w of CI 2.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00%	\$0 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$2,42,107 \$0 \$0,50 \$4,825 \$786,000 \$2,248,000	67.1% of Base Co
B - MINOR C B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-101 C-03 C-04 C CI D-CONSTR D-01 D-02 D E-01 E-02 E-03 E-03.2 E-04 E-05	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance Mobilization Construction Traffic Coi Lighting & Electrical Permanent Signing & St Traffic Signalization & I Miscellaneous Minor Construction CONTRUCTION BID ITE ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Ree F/A - Project Communic TSM&O Traffic & Operat F/A - STSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & CONSTRUCTION Engineering Construction Engineering Construction Indirects CONSTRUCTION ENGINEERING & CONSTRUCTION ITEMS RIGHT-Of-Way [Phase R] Utilities * Railroad Work Dosign & Engineering [I Subsurface Utility Transportation Sys Environmental (NEPA) [I Miscellaneous [Phase M]	N ITEMS W ITEMS W ITEMS ITIPING I		DGE REPLACEMEN MEAN % N 2.4% 6.0% 1.0.3% 4.3% 3.1% 16.6% 2.0.0% 0.0% 0.3% 0.0% 0.3% 0.0% 0.3% CONSTRU	SUBTOTAL (A) TT	Adjusted—> (% of A) (% of A) (% of A)	Unit Cost 0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 20.00% 0.77% 0.00% 0.33% 16.56% 20.00% 0.77% 0.00% 0.33% 153.74% 153.74% 167.83% % of CBI 6.00% 3.00% 0.12% 9.12% 167.83% Indirect % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.18% 0.00% 0.75% 0.00% 0.00% 0.00% 0.00%	Cost \$0 \$1,259,000 \$1,259,000 \$1,259,000 \$1,259,000 \$30,468 \$74,911 \$4,155 \$54,137 \$208,490 \$251,800 \$0 \$9,694 \$0 \$4,155 \$677,000 \$1,936,000 \$1,936,000 \$2,309 \$0 \$1777,000 \$22,113,000 \$22,113,000 \$22,113,000 \$22,113,000 \$22,113,000 \$22,113,000 \$22,113,000 \$22,113,000	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 16.56% 0.03% 16.56% 0.00% 0.00% 0.33% 153.74% 153.74% 153.74% 167.78% Mof CI 10.95% 9.12% 167.78% Indirect \$ % of CI 2.00% 0.00% 0.00% 0.00% 0.00% 0.00%	\$0 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$35,380 \$86,989 \$4,825 \$4,825 \$45,030 \$242,107 \$9 \$0 \$11,257 \$0 \$4,825 \$786,000 \$2,248,000 \$2,245,000 \$2,245,000 \$2,955,000 \$2,955,000	67.1% of Base Co
B-MINOR C B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-03 C-04 C CI D-CONSTR D-01 D-02 D E-PRECON	MAJOR CONSTRUCTION CONSTRUCTION ITEMS Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance Mobilization Construction Traffic Cor Lighting & Electrical Permanent Signing & St Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITE ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Ret F/A - Project Communic TSM&O Traffic & Operat F/A - Sama Construction TSM&O Traffic & Operat F/A - Sama Construction Indirects CONSTRUCTION Engineerin Construction Engineerin Construction Engineerin Construction Indirects CONSTRUCTION Engineerin Construction Indirects CONSTRUCTION Engineerin Construction E	N ITEMS W ITEMS W ITEMS ITIPING I		DGE REPLACEMEN MEAN % N 2.4% 6.0% 1.0.3% 4.3% 3.1% 16.6% 2.0.0% 0.0% 0.3% 0.0% 0.3% 0.0% 0.3% CONSTRU	SUBTOTAL (A) IT	Adjusted> (% of A)	Unit Cost 0.0% 100.0% 100.0% % of (A) 2.42% 6.03% 4.30% 6.55% 0.33% 4.30% 6.56% 0.00% 0.00% 0.33% 53.74% 153.74% 153.74% 167.83% % of CBI 6.00% 9.12% 167.83% Indirect % of CI 10.95% 9.50% 20.45%	Cost \$0 \$1,259,000 \$1,259,000 \$1,259,000 \$1,259,000 \$1,259,000 \$30,481 \$4,155 \$54,137 \$208,490 \$50,694 \$0 \$51,936,000 \$1,936,000 \$1,936,000 \$1,936,000 \$1,936,000 \$1,936,000 \$2,113,000	0.0% 100.0% 100.0% % of (A) 2.42% 5.99% 0.33% 4.30% 3.00% 0.00% 0.00% 53.74% 153.74% 153.74% 167.78% Mof CI 10.95% 9.12% 167.78% Indirect 9 w of CI 2.00% 0.00% 0.00% 12.00% 0.00% 12.00% 0.00% 12.00% 0.00% 12.00% 0.00% 12.00% 0.00% 12.00% 0.00% 0.00%	\$0 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$2,42,107 \$0 \$0,50 \$4,825 \$786,000 \$2,248,000	67.1% of Base Co
B - MINOR C B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-101 C-03 C-04 C CI D-CONSTR D-01 D-02 D E-01 E-02 E-03 E-03.2 E-04 E-05	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance Mobilization Construction Traffic Coi Lighting & Electrical Permanent Signing & St Traffic Signalization & I Miscellaneous Minor Construction CONTRUCTION BID ITE ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Ree F/A - Project Communic TSM&O Traffic & Operat F/A - STSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & CONSTRUCTION Engineering Construction Engineering Construction Indirects CONSTRUCTION ENGINEERING & CONSTRUCTION ITEMS RIGHT-Of-Way [Phase R] Utilities * Railroad Work Dosign & Engineering [I Subsurface Utility Transportation Sys Environmental (NEPA) [I Miscellaneous [Phase M]	N ITEMS W ITEMS INTERIS N ITEMS MS Visions (MCR's) ations ations itions (for Reconstruction itio	Min % 0.0%	DGE REPLACEMEN MEAN % N 2.4% 6.0% 1 0.3% 4.3% 3.1% 16.5% 2 0.0% 0.8% 0.0% 0.3% \$2,248,000 \$52,248,000 \$conly) (Default: 10.95%) CONSTRU	SUBTOTAL (A) TT	Adjusted—> (% of A) (% of A) (% of A)	Unit Cost 0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 20.00% 0.77% 0.00% 0.33% 16.56% 20.00% 0.77% 0.00% 0.33% 153.74% 153.74% 167.83% % of CBI 6.00% 3.00% 0.12% 9.12% 167.83% Indirect % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.18% 0.00% 0.75% 0.00% 0.00% 0.00% 0.00%	Cost \$0 \$1,259,000 \$1,259,000 \$1,259,000 \$1,259,000 \$30,468 \$74,911 \$4,155 \$54,137 \$208,490 \$251,800 \$0 \$9,694 \$0 \$4,155 \$677,000 \$1,936,000 \$1,936,000 \$2,309 \$0 \$1777,000 \$22,113,000 \$22,113,000 \$22,113,000 \$22,113,000 \$22,113,000 \$22,113,000 \$22,113,000 \$22,113,000	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 16.56% 0.03% 16.56% 0.00% 0.00% 0.33% 153.74% 153.74% 153.74% 167.78% Mof CI 10.95% 9.12% 167.78% Indirect \$ % of CI 2.00% 0.00% 0.00% 0.00% 0.00% 0.00%	\$0 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$35,380 \$86,989 \$4,825 \$4,825 \$45,030 \$242,107 \$9 \$0 \$11,257 \$0 \$4,825 \$786,000 \$2,248,000 \$2,245,000 \$2,245,000 \$2,955,000 \$2,955,000	67.1% of Base Co
B - MINOR C B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-101 C-03 C-04 C CI D-CONSTR D-01 D-02 D E-01 E-02 E-03 E-03.2 E-04 E-05	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance Mobilization Construction Traffic Coi Lighting & Electrical Permanent Signing & St Traffic Signalization & I Miscellaneous Minor Construction CONTRUCTION BID ITE ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Ref F/A - Project Communic TSM&O Traffic & Operat F/A - STSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & Construction Engineering Construction Engineering Construction Indirects CONSTRUCTION ITEMS RIGHT-Of-Way [Phase R] Utilities + Railroad Work Design & Engineering [I Subsurface Utility Transportation Sys Environmental (NEPA) [I Miscellaneous [Phase M] PRECONSTRUCTION IT	N ITEMS W ITEMS INTERIS N ITEMS MS Visions (MCR's) ations ations itions (for Reconstruction itio	Min % 0.0%	DGE REPLACEMEN MEAN % N 2.4% 6.0% 1 0.3% 4.3% 3.1% 16.5% 2 0.0% 0.8% 0.0% 0.3% \$2,248,000 \$52,248,000 \$conly) (Default: 10.95%) CONSTRU	SUBTOTAL (A) IT MAX %	Adjusted—> (% of A) (% of A) (% of A)	Unit Cost 0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 20.00% 0.77% 0.00% 0.33% 16.56% 20.00% 0.77% 0.00% 0.33% 153.74% 153.74% 167.83% % of CBI 6.00% 3.00% 0.12% 9.12% 167.83% Indirect % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.18% 0.00% 0.75% 0.00% 0.00% 0.00% 0.00%	Cost \$0 \$1,259,000 \$1,259,000 \$1,259,000 \$1,259,000 \$30,468 \$74,911 \$4,155 \$54,137 \$208,490 \$251,800 \$0 \$9,694 \$0 \$4,155 \$677,000 \$1,936,000 \$1,936,000 \$1,936,000 \$2,309 \$30 \$4,155 \$677,000 \$2,309 \$2,309 \$30 \$27,700 \$2,113,000	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 16.56% 0.03% 16.56% 0.00% 0.00% 0.33% 153.74% 153.74% 153.74% 167.78% Mof CI 10.95% 9.12% 167.78% Indirect \$ % of CI 2.00% 0.00% 0.00% 0.00% 0.00% 0.00%	\$0 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$25,380 \$88,989 \$4,825 \$62,866 \$45,030 \$242,107 \$0 \$11,257 \$0 \$4,825 \$786,000 \$2,48,000 \$2,248,000 \$2,248,000 \$2,483,000 \$2,453,000 \$2,453,000 \$2,453,000 \$2,955,000 \$2,955,000 \$2,955,000 \$3,2955,000 \$3,2955,000 \$3,2955,000 \$3,2955,000 \$3,2955,000 \$3,2955,000 \$3,2955,000 \$3,2955,000 \$3,2955,000 \$3,2955,000 \$3,2955,000 \$3,2955,000 \$3,2955,000 \$3,2955,000	67.1% of Base Co
B - MINOR C B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-101 C-03 C-04 C CI D-CONSTR D-01 D-02 D E-01 E-02 E-03 E-03.2 E-04 E-05	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance Mobilization Construction Traffic Coi Lighting & Electrical Permanent Signing & St Traffic Signalization & I Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITE ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Ret F/A - Project Communic TSM&O Traffic & Operat F/A - Sa TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & Construction Indirects CONSTRUCTION ENGIN PROJECT CONSTRUCT ASTRUCTION ITEMS Right-of-Way [Phase R] Utilities * Railroad Work Design & Engineering [F Subsurface Utility Transportation Sys Environmental (NEPA) [Miscellaneous [Phase M PRECONSTRUCTION IT PROJECT BASE COS RVE	IN ITEMS Wissons (MCR's) atlons (for Reconstruction of Reconstruc	/ork Type: BRII MIN % 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0	DGE REPLACEMEN MEAN % N 2.4% 6.0% 1.0.3% 4.3% 1.6.6% 2.0.0% 2.0.0% 0.3% 0.0% 0.3% 0.0% 0.3% 0.0% 0.3% CONSTRUCTION + P	SUBTOTAL (A) T	Adjusted—> (% of A) (% of A) (% of A)	Unit Cost 0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 20.00% 0.77% 0.00% 0.33% 16.56% 20.00% 0.77% 0.00% 0.33% 153.74% 153.74% 167.83% % of CBI 6.00% 3.00% 0.12% 9.12% 167.83% Indirect % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.18% 0.00% 0.75% 0.00% 0.00% 0.00% 0.00%	Cost \$0 \$1,259,000 \$1,259,000 \$1,259,000 \$1,259,000 \$1,259,000 \$30,468 \$74,911 \$4,155 \$54,137 \$208,490 \$50,594 \$0 \$9,694 \$0 \$0,994 \$0 \$1,936,000 \$1,936,000 \$1,936,000 \$2,115,000 \$1,936,000 \$2,111,000	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 16.56% 0.00% 0.00% 0.00% 0.33% 53.74% 153.74% 153.74% 167.78% 167.78% Indirect \$ % of CI 10.95% 9.50% 20.45% Indirect \$ % of CI 2.00% 0.00% 1.	\$0 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$25,380 \$4,825 \$62,866 \$45,030 \$242,107 \$0 \$0 \$11,257 \$0 \$4,825 \$786,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,483,000 \$2,483,000 \$2,483,000 \$2,483,000 \$2,483,000 \$2,985,000	67.1% of Base Co
A B - MINOR 6 B-01 B-02 B-03 B-04 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE / C-01 C-02 C-03 C-04 C C D - CONSTR D-01 D-02 D E-03.1 E-03.2 E-03.2 E-04 E-05 E	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance Mobilization Construction Traffic Coi Lighting & Electrical Permanent Signing & St Traffic Signalization & I Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITE ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Re F/A - Project Communic TSM&O Traffic & Operat F/A - Sama Construction Indirects CONSTRUCTION ITEMS RUCTION ENGINEERING & Construction Indirects CONSTRUCTION ENGIN PROJECT CONSTRUCT ASTRUCTION ITEMS Right-of-Way [Phase R] Utilities * Railroad Work Design & Engineering [F Subsurface Utility] Transportation Sys Environmental (NEPA) [Miscellaneous [Phase M PRECONSTRUCTION IT	IN ITEMS Wissons (MCR's) atlons (for Reconstruction of Reconstruc	/ork Type: BRII MIN % 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0	DGE REPLACEMEN MEAN % N 2.4% 6.0% 1.0.3% 4.3% 1.6.6% 2.0.0% 2.0.0% 0.3% 0.0% 0.3% 0.0% 0.3% 0.0% 0.3% CONSTRUCTION + P	SUBTOTAL (A) IT MAX %	Adjusted—> (% of A) (% of A) (% of A)	Unit Cost 0.0% 100.0% 100.0% % of (A) 2.42% 5.58% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.33% 53.74% 153.74% 167.83% 167.83% Indirect % of CI 10.95% 9.50% 20.45% Indirect % of CI 10.95% 12.00%	Cost \$0 \$1,259,000 Cost \$30,468 \$74,911 \$4,155 \$54,137 \$208,490 \$52,1800 \$9,694 \$0 \$1,936,000 \$1,936,000 \$1,936,000 Cost \$116,160 \$58,080 \$2,309 \$0 \$177,000 \$1,936,000 \$2,113,000 \$2,113,000 \$2,113,000 \$2,113,000 \$2,113,000 \$2,113,000 \$2,113,000 \$3,113,000 \$3,113,000 \$3,113,000 \$4,155 \$1,13,000 \$1,936,000 \$1,936,000 \$1,936,000 \$1,936,000 \$2,113,000 \$2,113,000 \$2,113,000 \$3,11	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 4.30% 4.30% 4.30% 6.00% 0.00% 0.00% 0.33% 53.74% 153.74% 153.74% 167.78% % of CBI 10.95% 9.12% 167.78% indirect \$\frac{1}{2}\$ % of CI 10.95% 9.50% 20.45% Indirect \$\frac{1}{2}\$ % of CI 10.95% 9.50% 20.45%	\$0 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$1,50,500 \$1,50,500 \$2,42,107 \$0 \$1,1257 \$0 \$4,825 \$786,000 \$2,248,000	67.1% of Base Cor 73.2% of Base Cor 11.8% of Base Cor 100.0% of Base Cor
B - MINOR 6 B-01 B-02 B-03 B-04 B-06 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE / C-01 C-02 C-03 C-04 C C CI D-CONSTR D-01 D-02 D E-PRECON E-03.1 E-03.2 E-04 E-05 E	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance Mobilization Construction Traffic Coi Lighting & Electrical Permanent Signing & St Traffic Signalization & II Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITE ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Ret F/A - Project Communic TSM&O Traffic & Operat F/A - Sa TSM&O CONSTRUCTION ITEMS CONSTRUCTION ITEMS RUCTION ENGINEERING & CONSTRUCTION ITEMS RUCTION ENGINEERING & CONSTRUCTION ITEMS RIGHT-Of-Way [Phase R] Utilities + Railroad Work Design & Engineering [F Subsurface Utility Transportation Sys Environmental (NEPA) [Miscellaneous [Phase M] PRECONSTRUCTION IT PROJECT BASE COS RVE PROBABILISTIC COST E	IN ITEMS Wissons (MCR's) atlons (for Reconstruction of Reconstruc	/ork Type: BRII MIN % 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0	DGE REPLACEMEN MEAN % N 2.4% 6.0% 1.0.3% 4.3% 1.6.6% 2.0.0% 2.0.0% 0.3% 0.0% 0.3% 0.0% 0.3% 0.0% 0.3% CONSTRUCTION + P	SUBTOTAL (A) T	Adjusted—> (% of A) (% of A) (% of A)	Unit Cost 0.0% 100.0% 100.0% % of (A) 2.42% 5.58% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.33% 53.74% 153.74% 167.83% 167.83% Indirect % of CI 10.95% 9.50% 20.45% Indirect % of CI 10.95% 12.00%	Cost \$0 \$1,259,000 \$1,259,000 \$1,259,000 \$1,259,000 \$1,259,000 \$30,468 \$74,911 \$4,155 \$54,137 \$208,490 \$50,594 \$0 \$9,694 \$0 \$0,994 \$0 \$1,936,000 \$1,936,000 \$1,936,000 \$2,115,000 \$1,936,000 \$2,111,000	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.88% 16.56% 0.00% 0.00% 0.33% 53.74% 153.74% 153.74% 167.78% % of CBI 6.00% 3.00% 9.12% 167.78% indirect \$ % of CI 10.95% 20.45% Indirect \$ % of CI 10.95% 0.00% 1.20% 0.00% 1.20% 0.00% 1.20% 0.00% 1.20% 0.00% 1.20% 0.00% 1.20% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00% 0.00%	\$0 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$25,380 \$4,825 \$62,866 \$45,030 \$242,107 \$0 \$0 \$11,257 \$0 \$4,825 \$786,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,483,000 \$2,483,000 \$2,483,000 \$2,483,000 \$2,483,000 \$2,985,000	67.1% of Base Cod 73.2% of Base Cod 11.8% of Base Cod 110.0% of Base Cod
A B - MINOR 6 B-01 B-02 B-03 B-04 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE / C-01 C-02 C-03 C-04 C C D - CONSTR D-01 D-02 D E-03.1 E-03.2 E-03.2 E-04 E-05 E	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenance Mobilization Construction Traffic Coi Lighting & Electrical Permanent Signing & St Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITE ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Ret F/A - Project Communic TSM&O Traffic & Operat F/A - Sama CONSTRUCTION ITEMS RUCTION ENGINEERING & CONSTRUCTION ENGINE PROJECT CONSTRUCT STRUCTION ITEMS RIGHT-Of-Way [Phase R] Utilities + Railroad Work Design & Engineering [F Subsurface Utility Transportation Sys Environmental (NEPA) [Miscellaneous (Phase M) PRECONSTRUCTION IT PROJECT BASE COS RVE PROBABILISTIC COST E	N ITEMS Wisions (MCR's) Introl / Detour Irriping ITS N ITEMS MS MS INDIRECTS INDIRECTS INDIRECTS ION BUDGET IC (Phase U) Phase D) Phase E) ID BUDGET IT ESTIMATE ESTIMATE ESTIMATE Sep-22	/ork Type: BRII MIN % 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0	DGE REPLACEMEN MEAN % N 2.4% 6.0% 1.0.3% 4.3% 3.1% 16.6% 2.0.0% 0.3% 0.0% 0.3% 0.0% 0.3% 0.0% 0.3% S2.248,000 conly) (Default: 10.95%) (Default: 9.5%) CONSTRU	SUBTOTAL (A) IT	Adjusted—> (% of A) (% of A) (% of A)	Unit Cost 0.0% 100.0% 100.0% % of (A) 2.42% 5.58% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.33% 53.74% 153.74% 167.83% 167.83% Indirect % of CI 10.95% 9.50% 20.45% Indirect % of CI 10.95% 12.00%	Cost \$0 \$1,259,000 Cost \$30,468 \$74,911 \$4,155 \$54,137 \$208,490 \$52,1800 \$9,694 \$0 \$1,936,000 \$1,936,000 \$1,936,000 Cost \$116,160 \$58,080 \$2,309 \$0 \$177,000 \$1,936,000 \$2,113,000 \$2,113,000 \$2,113,000 \$2,113,000 \$2,113,000 \$2,113,000 \$2,113,000 \$3,113,000 \$3,113,000 \$3,113,000 \$4,155 \$1,13,000 \$1,936,000 \$1,936,000 \$1,936,000 \$1,936,000 \$2,113,000 \$2,113,000 \$2,113,000 \$3,11	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 16.565% 0.00% 0.00% 0.00% 0.33% 153.74% 153.74% 153.74% 153.74% 167.78% 167.78% Indirect 9 % of CI 10.95% 9.50% 20.45% Indirect 9 % of CI 10.95% 10.00% 10.00% 10.00% 10.00% 10.00% 10.00% 10.00% 10.00% 10.00% 10.00% 10.00% 10.00% 10.00% 11.5%	\$0 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$1,50,500 \$1,50,500 \$2,42,107 \$0 \$1,1257 \$0 \$4,825 \$786,000 \$2,248,000	67.1% of Base Cod 73.2% of Base Cod 11.8% of Base Cod 110.0% of Base Cod
B - MINOR 6 B-01 B-02 B-03 B-04 B-06 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE / C-01 C-02 C-03 C-04 C C CI D-CONSTR D-01 D-02 D E-PRECON E-03.1 E-03.2 E-04 E-05 E	Removals / Resets Environmental Structural Drainage / Utilities Readway Appurtenance Mobilization Construction Traffic Col Lighting & Electrical Permanent Signing & Si Traffic Signalization & I Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITE ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Ree F/A - Project Communic TSM&O Traffic & Operat F/A - Sa TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & Construction Engineerin Construction Engineerin Construction Indirects CONSTRUCTION ENGINE PROJECT CONSTRUCT ISTRUCTION ITEMS Right-of-Way [Phase R] Utilities + Railroad Work Design & Engineering [Subsurface Utility Transportation Sys Environmental (NEPA)] Miscellaneous [Phase M] PRECONSTRUCTION IT PROJECT BASE COS RVE PROBABILISTIC COST 6 RVE PROBABILISTIC COST 6 RVE	N ITEMS IN ITEM		DGE REPLACEMEN MEAN % N 2.4% 6.0% 1.0.3% 4.3% 3.1% 16.6% 2.0.0% 0.3% 0.0% 0.3% 0.0% 0.3% 0.0% 0.3% S2.248,000 conly) (Default: 10.95%) (Default: 9.5%) CONSTRU	SUBTOTAL (A) IT	Adjusted—> (% of A) (% of A) (% of A)	Unit Cost 0.0% 100.0% 100.0% % of (A) 2.42% 5.58% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.33% 53.74% 153.74% 167.83% 167.83% Indirect % of CI 10.95% 9.50% 20.45% Indirect % of CI 10.95% 12.00%	Cost \$0 \$1,259,000 \$1,259,000 \$1,259,000 \$1,259,000 \$1,259,000 \$30,488 \$74,911 \$4,155 \$54,137 \$38,777 \$208,490 \$50 \$54,155 \$677,000 \$1,936,000 \$1,936,000 \$1,936,000 \$1,936,000 \$2,113,000 \$2,113,000 \$2,113,000 \$2,113,000 \$2,713,000	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 4.30% 5.59% 0.00% 0.00% 0.00% 153.74% 153.74% 153.74% 153.74% 167.78% w of CBI 6.00% 3.00% 9.12% 167.78% indirect \$ % of CI 10.95% 20.45% Indirect \$ % of CI 10.95% 0.00% 1.20% 0.00% 1.20% 0.00% 1.20% 0.00% 1.20% 0.00% 1.20% 0.00% 0.00% 0.75% 0.00%	\$0 \$1,462,000 \$1,462,000 \$1,462,000 \$1,462,000 \$25,35,300 \$4,825 \$62,866 \$45,030 \$242,107 \$0 \$0 \$4,825 \$786,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,248,000 \$2,453,000 \$2,453,000 \$2,453,000 \$2,453,000 \$2,453,000 \$2,453,000 \$2,453,000 \$2,453,000 \$2,453,000 \$2,453,000 \$2,453,000 \$2,453,000 \$2,453,000 \$2,453,000 \$2,955,000 \$2,955,000 \$2,955,000 \$2,955,000 \$2,955,000 \$2,955,000 \$2,955,000 \$2,955,000	67.1% of Base Cos 73.2% of Base Cos



PCPT - MODEL & REGION ESTIMATE FORM PROJECT PROFILE Project Name Project Number Sub-Account Number **Project Description** Project Work Type BRIDGE REPLACEMENT E.A. Date: 11/6/2018 PROJECT LOCATION & CHARACTERISTICS Begin MP: 47.1 City: NONE Route: CDOT Region: End MP: 69.8 Length: 22.7 Otero Co FIPS City: FIPS County RefPt 58.450 Latitude: 37.8382 Longitude: -103.7489 **GOOGLE MAP LINK** Seament Mid-point Terrain: 2 Functional Classification: 4 Minor Arterial Urban-Rural Class: 1 Rural 340 Truck ADT: 10 Tier Class: Tier 4 Primary Surface: 1 Asphalt AADT: 0 - Conceptual NEPA Action: Cat/Ex NEPA Status: In Progress Design Maturity: Project Delivery Method: Design-Bid-Build Construction Start (MMM-YY) Sep-22 Construction Duration (mo) 24.0 A - MAJOR CONSTRUCTION ITEMS Unit Cost A-01 Cost: 0.0% 0.0% A-02 PAVEMENT & BASES Unit Cost Unit Cost A-02 Cost A-03 MAJOR STRUCTURES (CAT 300 ITEMS Unit Cost \$180,000 A-03 REPL Cost 0.0% A-03_repa BRIDGE REPAIR A-03_REPA Cost: A-03_WALL Cost 0.0% R2 A-03_CULV Cost A-03 misc 72 Inch Reinforced Concrete Pipe
A-03 misc 10x8 Foot Concrete Box Culvert (Precast) A-03_misc 12x10 Foot Concrete Box Culvert (Precast) A-03_misc 14x6 Foot Concrete Box Culvert (Precast) \$435,000 A-03_misc 18x6 Foot Concrete Box Culvert (Precast) A-03 misc 20x6 Foot Concrete Box Culvert (Precast)
A-03 misc 20x8 Foot Concrete Box Culvert (Precast) A-03 MISC Cost A-03 Cost: 100.0% \$615,000 100.0% \$584,000 Unit Cost A-04 Cost: 0.0% 0.0% A-05 OTHER CATEGORY OTHER MAJOR ITEMS Qty Unit Cost Unit Cost Cost Cost A-05 Cost: MAJOR CONSTRUCTION ITEMS SUBTOTAL (A) (% of A) \$615,00 \$584,000 Work Type: BRIDGE REPLACEMENT
MIN % MEAN % MAX % EFFORT
3 - Average
3 - Average
3 - Average % of (A) MAX % Cost B-01 B-02 B-03 B-04 B-05 B-06 B-07 Removals / Resets Environmental \$14,133 \$34,748 6.0% 13.4% Adjusted--> \$36,593 13.4% 2.3% 14.9% 5.5% 23.5% 26.1% 3.2% 1.8% 3.4% 1.2% Structural Adjusted-> \$1,927 \$25,112 Drainage / Utilities \$26,445 adway Appurtenances \$18,942 \$101,844 Construction Traffic Control / Detour Lighting & Electrical \$116,800 B-08 B-09 B-10 B-11 \$0 \$4,736 Permanent Signing & Striping
Traffic Signalization & ITS \$4,497 \$0 \$2,030 \$0 \$1,927 \$331.000 В MINOR CONSTRUCTION ITEMS SUBTOTAL (B) (% of A) 53.74% 53.74% \$314,000 153.74% 153.74% \$898,000 CBI CONTRUCTION BID ITEMS SUBTOTAL (A + B) (% of A) \$946,000 67.1% % of CBI F/A - General
F/A - Minor Contract Revisions (MCR's)
F/A - Project Communications F/A - Minor Contract Revisions (MCR's)
F/A - Project Communications

[Level 4 \$8
TSM&O Traffic & Operations (for Reconstruction/Resurfacing projects only) \$898,000 X 0.11%] \$86,000 \$82,000 F/A's & TSM&O SUBTOTAL (C) (% of CBI) 9.11% Е CI CONSTRUCTION ITEMS SUBTOTAL (A + B + C) (% of A) 167.80% \$1,032,000 167.81% \$980,000 73.2% of Base Cos D - CONSTRUCTION ENGINEERING & INDIRECTS % of CI Cost \$113,004 \$98,040 % of CI Cost \$107,310 \$93,100 (Default: 10.95%) CONSTRUCTION ENGINEERING & INDIRECTS SUBTOTAL (D) (% of CI) \$211,000 20.45% \$200,000 PROJECT CONSTRUCTION BUDGET \$1,180,000 CONSTRUCTION (A + B + C + D) \$1,243,000 88.2% of Base Cost Indirect % Indirect % AVG % EFFORT % of CI % of CI (% CI + Indirect (% CI + Indire Right-of-Way [Phase R]

Utilities + Railroad Work [Phase U]

Design & Engineering [Phase D]

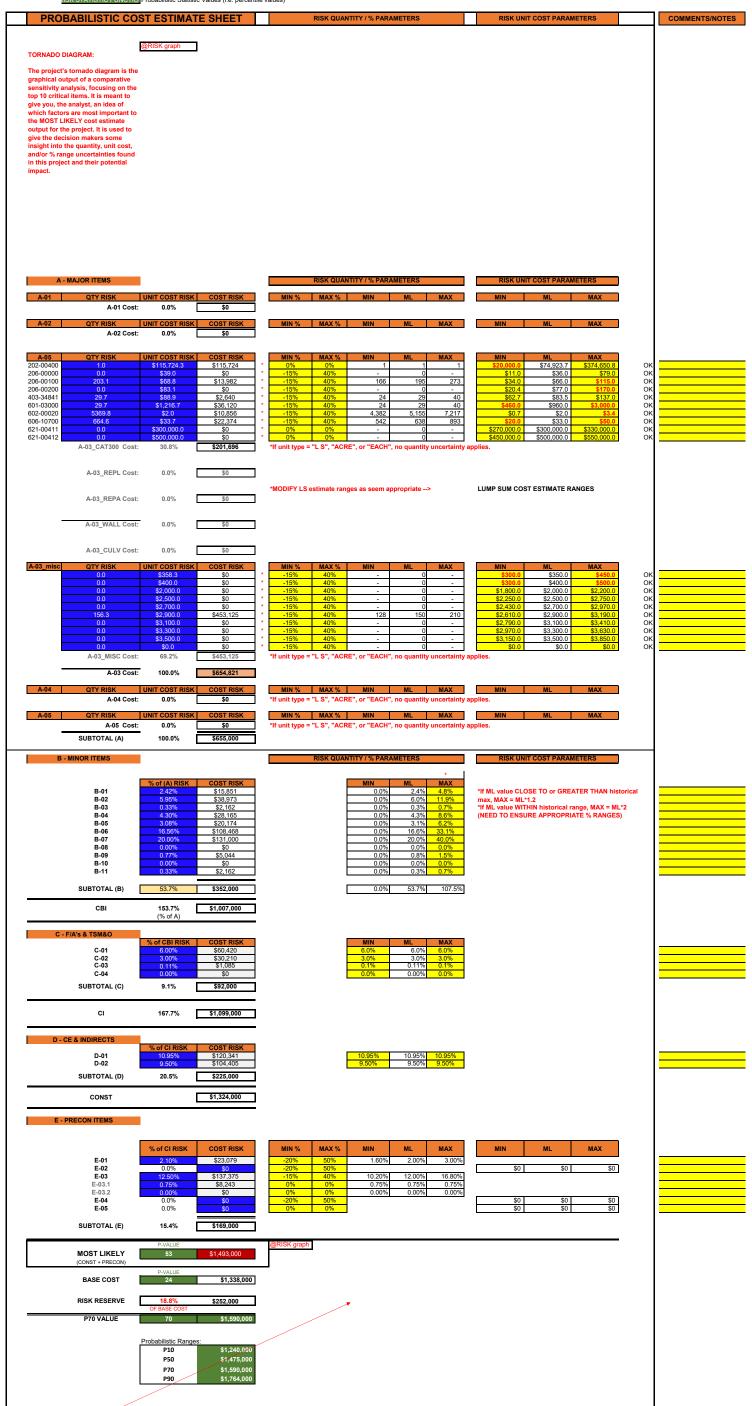
Subsurface Utility Engineering (SUE) Budget

Transportation Systems Management & Operation (TSM&O) Budget

Environmental (NEPA) [Phase E] E-01 E-02 E-03 E-03.1 Design Maturity: 0 - Conceptual E-03.2 0.00% 0.00% 0.00% Е SUBTOTAL (E) (% of CI) 19.57% \$202,000 16.12% PRECONSTRUCTION ITEMS 11.8% PROJECT BASE COST ESTIMATE (CONSTRUCTION + PRECONSTRUCTION) RE/ME Ratio: RISK RESERVE PROBABILISTIC COST ESTIMATE RISK RESERVE DATE: 11/6/2018 RISK RESERVE 18.8% TOTAL PROJECT COST (P70) ESCALATION Escalation from Estimate Date: Nov-18 \$224,000 Construction Start **ESCALATION** Duration (mo) to Construction Mid-Point Date: Sep-23 ESCALATED COST \$1,814,000 135.6%

Model Version 3 Rev 04

Last Update: 22-Oct-18

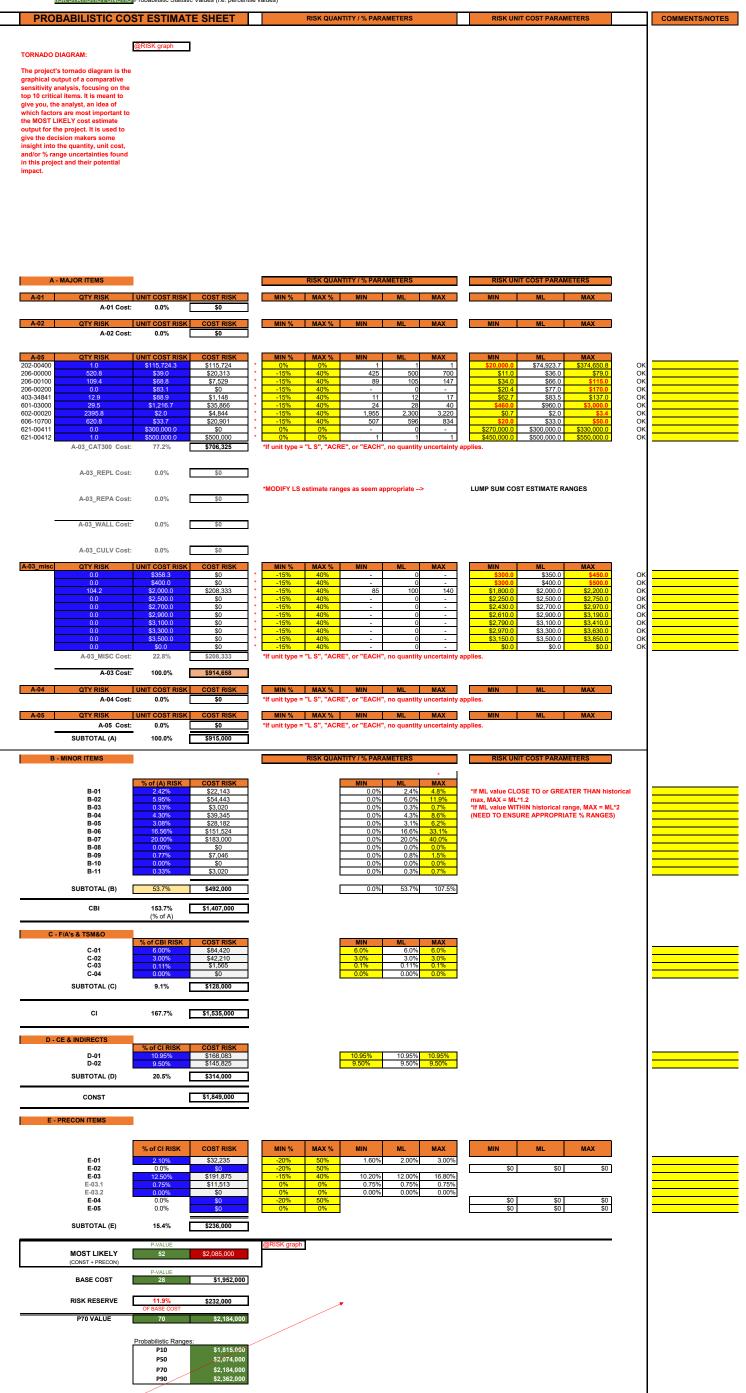


- EXECUTIVE SUMMARY SHEE	T				
CT PROFILE				Model Version 3 Rev (Last Update:	
Project Name R2 BUNDLE			1	Last Opuate.	22-001-10
Project Number I-15-T Sub-Account Number XXXXX					
Project Description I-15-T					
Project Work Type BRIDGE REP	N ACEMENT				
	<u></u>				
Estimator: E.	A. Date: 11/6/2018				
CT LOCATION & CHARACTERISTICS					
Route: 024A	Begin MP: 271.9	End MP:	278.0	Length:	6.1
CDOT Region: 2	FIPS City: NONE	FIPS County:	Teller Co		0.1
<u> </u>	<u> </u>	·		1	
	950 Latitude: 38.9330	Longitude:	-105.2285	<u>G</u>	OOGLE MAP LINK
Functional Classification: 4 Minor Arteri	Urban-Rural Class: 1 Rural	Terrain	3	Mountainous	I
AADT : 5,300	Truck ADT: 160	Tier Class:	Tier 2	Primary Surface:	1 Asphalt
Design Maturity: 0 - Conceptua	al NEPA Action: Cat/Ex	ī	NEPA Status:	In Progress	 T
		I I 0			I T
Project Delivery Method: Design-Bid-Bu	ild Construction Start (MMM-YY) Sep-22	Cons	struction Duration (mo)	24.0	I
				REGION'S E	STIMATE
ECT CONSTRUCTION COSTS:					
MAJOR CONSTRUCTION ITEMS					
CAT ITEM DESCRIPTION		QTY	UNIT	PERCENTAGE	COST
1 Earthwork 2 Pavement & Bases		0 N/A	CY SY	0.0% 0.0%	\$0 \$0
T300 Itemized Structure repl Bridge Replacement		N/A 0	N/A DECK AREA (SF)	76.5% 0.0%	\$652,000 \$0
epa Bridge Repair		0	DECK AREA (SF)	0.0%	\$0
vall Walls culv Major Culverts		0	SF LF	0.0% 0.0%	\$0 \$0
misc Miscellaneous Structures 14 Traffic / ITS		100 N/A	LS N/A	23.5% 0.0%	\$200,000 \$0
05 Other Major Items		N/A	N/A	0.0%	\$0
MINOR CONSTRUCTION ITEMS		SUBTOTAL (A))	100.0%	\$852,000
CAT ITEM DESCRIPTION Removals / Resets		EFFORT 3 - Average	WNIT % OF A	PERCENTAGE 2.4%	\$20,618
2 Environmental 3 Structural		3 - Average 3 - Average	% OF A % OF A	6.0% 0.3%	\$50,694 \$2,812
Drainage / Utilities Roadway Appurtenances		3 - Average 3 - Average	% OF A % OF A	4.3% 3.1%	\$36,636 \$26,242
6 Mobilization		3 - Average	% OF A	16.6%	\$141,091
Lighting & Electrical		3 - Average 3 - Average	% OF A % OF A	20.0% 0.0%	\$170,400 \$0
Permanent Signing & Striping Traffic Signalization & ITS		3 - Average	% OF A % OF A	0.8% 0.0%	\$6,560
Traffic Signalization & ITS Miscellaneous		3 - Average 3 - Average	% OF A	0.0%	\$0 \$2,812
		SUBTOTAL (B)	% OF A	53.7%	\$458,000
	CONTRUCTION BID ITEMS (A + B)	СВІ	% OF A	153.8%	\$1,310,000
FORCE ACCOUNTS & TSM&O					
AT ITEM DESCRIPTION		<u> </u>	UNIT	PERCENTAGE	COST
F/A - General F/A - Minor Contract Revisions (MCR's)			% OF CBI % OF CBI	6.0% 3.0%	\$78,600 \$39,300
F/A - Project Communications			% OF CBI	0.1%	\$1,457
TSM&O Traffic & Operations		SUBTOTAL (O)	% OF CBI	0.0%	\$110,000
	Г	SUBTOTAL (C)	% OF CBI	9.1%	\$119,000
	CONSTRUCTION ITEMS (A + B + C)	CI	% OF A	167.7%	\$1,429,000
CONSTRUCTION ENGINEERING & IND	IRECTS				
CAT ITEM DESCRIPTION 1 Construction Engineering			UNIT % OF CI	PERCENTAGE 11.0%	COST \$156,476
2 Construction Indirects			% OF CI	9.5%	\$135,755
		SUBTOTAL (D)	% OF CI	20.4%	\$292,000
	PROJECT CONSTRUCTION BUDG	SET (A + B + C + D)			\$1,721,000
		,			. , -,
CT PRECONSTRUCTION COSTS:					
PRECONSTRUCTION ITEMS			115000	DEBOSTA	2007
CAT ITEM DESCRIPTION 1 Right-of-Way [Phase R]			WNIT % OF CI	PERCENTAGE 2.0%	COST \$31,295
2 Utilities + Railroad Work [Phase U] 3 Design & Engineering [Phase D]			% OF CI % OF CI	0.0% 12.0%	\$0 \$187,771
.1 Subsurface Utility Engineering (SUE) Budge			% OF CI	0.8%	\$11,736
.2 Transportation Systems Management & Op4 Environmental (NEPA) [Phase E]	eration (TSM&O) Budget		% OF CI % OF CI	0.0% 0.0%	\$0 \$0
Miscellaneous [Phase M]			% OF CI	0.0%	\$0
		SUBTOTAL (E)	% OF CI	16.2%	\$231,000
	PROJECT BASE COST ESTIMATE	(CONSTRUCTION	+ PRECONSTRUCTION	ON)	\$1,952,000
ESERVE DOOR FOR MATERIAL DISK DE	DATE WAR		DION DECES:		4000 222
PROBABILISTIC COST ESTIMATE RISK RE	DATE: 11/6/2018		RISK RESERVE	OF BASE COST	\$232,000
		TO	TAL PROJECT COST		\$2,184,000
ATION					
Construction Start Sep-22	Escalation from Estimate Date: Nov-18	Ţ	ESCALATION		\$308,000
Duration (mo) 24.0	to Construction Mid-Point Date: Sep-23	ESCALAT	TED PROJECT COST	OF BASE COST	\$2,492,000
		LUCALA			ψ <u>~</u> , ~ 0 <u>~</u> ,000

	PROFILE										
. 11002011		R2 BUNDLE I-15-T									
	Sub-Account Number	XXXXX I-15-T									
	Project Work Type	BRIDGE REPLACEM	IENT								
	Estimator:	E.A.	Date: 11/6/201	8							
PROJECT L	OCATION & CHARACTERIS			_	5					-	
	Route: CDOT Region:	024A 2	Begin MP: 271.9 City: NONE FIPS City: 00000		End MP: County: IPS County:	278.0 Teller Co 119		Length:	6.1		
	Segment Mid-point	RefPt 274.950	Latitude: 38.9330		Longitude:	-105.2285		GO	OOGLE MAP LINE	2	
	Functional Classification:		Urban-Rural Class: 1	Rural				Terrain:	3	1	
	AADT:	5,300	Truck ADT: 160		Tier Class:	Tier 2		Primary Surface:	1 Asphalt		
	Design Maturity: Project Delivery Method:	0 - Conceptual Design-Bid-Build	NEPA Act	ion: Cat/Ex -YY) Sep-22		Constructi	NEPA Statu				
A MAIOR	CONSTRUCTION ITEMS							el Estimate	Pagia	on Estimate	1
A-01	EARTHWORK				Unit	Qty	Unit Cost	Cost	Unit Cost	Cost	
A-02	PAVEMENT & BASES				Unit	A-01 Cost: Qty	0.0% Unit Cost	\$0 Cost	0.0% Unit Cost	\$0 Cost	
A-03	MAJOR STRUCTURES (C	CAT 300 ITEMS)			Oint	A-02 Cost:	0.0%	\$0	0.0%	\$0	
A-03_CAT30	DO PAYITEM GROUP CATEO	GORY C es and Obstructions 20	CAT 300 STRUCTURAL PAYITEM 02-00400 - Removal of Bridge		Unit EACH	Qty 1	Unit Cost \$74,923.7	Cost \$74,924	Unit Cost \$74,923,7	Cost \$74,924	
A-03 CAT30 A-03 CAT30		& Backfill, Cofferdam an 20 & Backfill, Cofferdam an 20	06-00000 - Structure Excavation 06-00100 - Structure Backfill (Clas 06-00200 - Structure Backfill (Clas		CY CY CY	500 105 0	\$21.6 \$45.3 \$48.2	\$10,777 \$4,756 \$0	\$36.0 \$66.0 \$77.0	\$18,000 \$6,930 \$0	
A-03 CAT30 A-03 CAT30	00 403 - Hot Bituminous Pave 00 601 - Structural Concrete	ement 40	03-34841 - Hot Mix Asphalt (Grad 01-03000 - Concrete Class D	ing SX) (100) (PG	TON CY	12 28	\$83.5 \$960.0	\$1,035 \$27,168	\$83.5 \$960.0	\$1,035 \$27,168	
A-03_CAT30	00 602 - Reinforcing Steel 00 606 - Guardrail and Bridge 00 621 - Detour	Rail 60	02-00020 - Reinforcing Steel (Epo 06-10700 - Bridge Rail Type 7 21-00411 - Structure Temporary A		LB LF L S	2,300 596 0	\$1.0 \$95.5 \$65,000.0	\$2,314 \$56,906 \$0	\$2.0 \$33.0 \$300,000.0	\$4,600 \$19,668 \$0	
	00 621 - Detour		21-00412 - Structure Temporary A		LS	1 B_CAT300 Cost:	\$50,000.0 53.3%	\$50,000 \$228,000	\$500,000.0 76.5%	\$500,000 \$652,000	
A-03_repl	BRIDGE REPLACEMENT				Δ	-03_REPL Cost:	0.0%	\$0	0.0%	\$0	
A-03_repa	BRIDGE REPAIR					_					
A-03_wall	WALLS				Ā	-03_REPA Cost:	0.0%	\$0	0.0%	\$0	
	MAJOR CULVERTS				A	-03_WALL Cost:	0.0% P2	\$0	0.0%	\$0	
					A	-03_CULV Cost:	R2 0.0%	\$0	0.0%	\$0	
A-03_misc		ete Pipe			Unit LF LF	Qty 0 0	Unit Cost \$350.0 \$400.0	\$0 \$0	\$350.0	\$0 \$0	
A-03 misc A-03 misc A-03 misc	10x8 Foot Concrete Box C 12x10 Foot Concrete Box	ulvert (Precast) Culvert (Precast)			LF LF	100 0	\$2,000.0 \$2,500.0	\$200,000 \$0	\$400.0 \$2,000.0 \$2,500.0	\$200,000 \$0	
	: 14x6 Foot Concrete Box C : 14x10 Foot Concrete Box C : 18x6 Foot Concrete Box C	Culvert (Precast)*			LF LF LF	0 0 0	\$2,700.0 \$2,900.0 \$3,100.0	\$0 \$0 \$0	\$2,700.0 \$2,900.0 \$3,100.0	\$0 \$0 \$0	
A-03 misc A-03 misc	20x6 Foot Concrete Box C 20x8 Foot Concrete Box C	ulvert (Precast)			LF LF	0	\$3,300.0 \$3,500.0	\$0 \$0	\$3,300.0 \$3,500.0	\$0 \$0	
A-03 misc	: [0				LF /	0 A-03_MISC Cost:	\$0.0 46.7%	\$0 \$200,000	\$0.0 23.5%	\$0 \$200,000	
0.04	TDAFFIO (ITO				11	A-03 Cost:	100.0%	\$428,000	100.0%	\$852,000	
A-04	TRAFFIC/ITS				Unit	Qty A-04 Cost:	Unit Cost 0.0%	Cost \$0	Unit Cost 0.0%	Cost \$0	
A-05	OTHER CATEGORY	0	THER MAJOR ITEMS		Unit	^-				• •	
					Ollit	Qty A-05 Cost:	Unit Cost 0.0%	Cost \$0	Unit Cost 0.0%	Cost \$0	
A	MAJOR CONSTRUCTION	ITEMS		SUE	BTOTAL (A)						43.6% of Base Cos
	MAJOR CONSTRUCTION CONSTRUCTION ITEMS		rk Type: BRIDGE REPLA		_	A-05 Cost:	0.0%	\$0	0.0%	\$0	
B - MINOR (CONSTRUCTION ITEMS Removals / Resets		rk Type: BRIDGE REPL MIN % MEAN 9 0.0% 2.4% 0.0% 6.0%	ACEMENT 6.0% 3	BTOTAL (A) EFFORT 3 - Average	A-05 Cost: (% of A) Adjusted—>	0.0% 100.0% % of (A) 2.42%	\$0 \$428,000 Cost \$10,358	0.0% 100.0% % of (A) 2.42%	\$0 \$852,000 Cost \$20,618	
B-01 B-02 B-03 B-04	Removals / Resets Environmental Structural Drainage / Utilities	Wor	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 0.3% 0.0% 4.3%	ACEMENT 6 MAX % 6.0% 3 13.4% 3 2.3% 3 14.9% 3	BTOTAL (A) EFFORT 3 - Average 3 - Average 3 - Average 3 - Average	A-05 Cost: (% of A) Adjusted> Adjusted> Adjusted> Adjusted>	0.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30%	\$0 \$428,000 \$10,358 \$25,466 \$1,412 \$18,404	0.0% 100.0% * of (A) 2.42% 5.95% 0.33% 4.30%	\$0 \$852,000 \$852,000 \$20,618 \$50,694 \$2,812 \$36,636	
B-01 B-02 B-03	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con	Wot	MIN % MEAN % 0.0% 2.4% 0.0% 6.0% 0.0% 0.3%	ACEMENT 6 MAX % 6.0% 3 13.4% 3 2.3% 3 14.9% 3 5.5% 3 23.5% 3	EFFORT 3 - Average 3 - Average 3 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—>	0.0% 100.0% * of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 20.00%	\$0 \$428,000 Cost \$10,358 \$25,466 \$1,412	0.0% 100.0% % of (A) 2.42% 5.95% 0.33%	\$0 \$852,000 Cost \$20,618 \$50,694 \$2,812	
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical	Working to the state of the sta	MIN % MEAN y 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 1.3% 0.0% 3.1% 0.0% 13.6% 0.0% 15.6% 0.0% 10.0% 0.0% 10.0% 0.0% 10.0%	ACEMENT 6 MAX % 6.0% 3 13.4% 3 2.3% 3 14.9% 3 5.5% 3 23.5% 3 26.1% 3 3.2% 3	EFFORT 3 - Average	A-05 Cost: (% of A) Adjusted>	0.0% 100.0% ** of (A) 2.42% 5.95% 4.30% 3.08% 4.30% 20.00% 0.00% 0.77%	\$0 \$428,000 \$10,358 \$25,466 \$1,412 \$18,404 \$13,182 \$70,877 \$85,600 \$0 \$3,296	0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 3.03% 4.30% 3.08% 20.00% 0.00%	\$0 \$852,000 \$852,000 \$20,618 \$50,694 \$2,812 \$36,636 \$26,242 \$141,091 \$170,400 \$0 \$6,660	
B-MINOR 6 B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous	World / Detour	MIN % MEAN 9 0.0% 2.4% 0.0% 6.0% 0.0% 0.3% 0.0% 0.3% 0.0% 3.1% 0.0% 16.6% 0.0% 16.6% 0.0% 0.0% 0.0% 10.0%	ACEMENT 6 MAX % 6.0% \$ 13.4% \$ 2.3% \$ 14.9% \$ 2.5.5% \$ 2.5.1% \$ 3.2% \$ 3.2% \$ 3.4% \$ 3	EFFORT 3 - Average	A-05 Cost: (% of A) Adjusted—>	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.07% 0.00%	\$0 \$428,000 \$428,000 \$10,359 \$25,466 \$1,412 \$18,404 \$13,182 \$70,877 \$86,600 \$0 \$3,296 \$0 \$1,412	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.00% 0.33%	\$0 \$852,000 \$852,000 \$2,0018 \$20,618 \$50,694 \$2,812 \$36,636 \$26,242 \$141,091 \$170,400 \$0 \$6,560 \$0 \$2,812	
B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellameous MINOR CONSTRUCTION	Working Stroit / Detour Stroit	MIN % MEAN 9 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0%	ACEMENT 6 MAX % 6.0% 3 13.4% 3 2.3% 3 14.9% 3 23.5% 3 23.5% 3 1.8% 3 3.4% 3 1.2% 3	EFFORT 3 - Average 8 - Average 8 - Average 9 - Average 9 - Average	A-05 Cost: (% of A) Adjusted> (% of A)	0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 20.00% 0.00% 0.77% 0.00% 0.33% 53.74%	\$0 \$428,000 \$10,358 \$25,466 \$1,412 \$13,182 \$70,877 \$85,600 \$0 \$3,296 \$0 \$1,412 \$13,182 \$13,182 \$70,877 \$85,600 \$1,412 \$13,2000	0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 20.00% 0.77% 0.00% 0.33% 53.74%	\$0 \$852,000 \$852,000 \$20,618 \$20,618 \$50,694 \$2,812 \$36,636 \$170,400 \$170,400 \$0 \$6,560 \$0 \$2,812 \$458,000	of Base Cos
B-MINOR 6 B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous	Working Stroit / Detour Stroit	MIN % MEAN 9 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0%	ACEMENT 6 MAX % 6.0% 3 13.4% 3 2.3% 3 14.9% 3 23.5% 3 23.5% 3 1.8% 3 3.4% 3 1.2% 3	EFFORT 3 - Average	A-05 Cost: (% of A) Adjusted—>	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.07% 0.00%	\$0 \$428,000 \$428,000 \$10,359 \$25,466 \$1,412 \$18,404 \$13,182 \$70,877 \$86,600 \$0 \$3,296 \$0 \$1,412	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.00% 0.33%	\$0 \$852,000 \$852,000 \$2,0018 \$20,618 \$50,694 \$2,812 \$36,636 \$26,242 \$141,091 \$170,400 \$0 \$6,560 \$0 \$2,812	of Base Cos
B-MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O	Working Stroit / Detour Stroit	MIN % MEAN 9 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0%	ACEMENT 6 MAX % 6.0% 3 13.4% 3 2.3% 3 14.9% 3 23.5% 3 23.5% 3 1.8% 3 3.4% 3 1.2% 3	EFFORT 3 - Average 8 - Average 8 - Average 9 - Average 9 - Average	A-05 Cost: (% of A) Adjusted> (% of A)	0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 20.00% 0.77% 0.00% 0.33% 53.74% 153.74%	\$0 \$428,000 Cost \$10.358 \$25,466 \$1,412 \$18,404 \$13,182 \$70.877 \$85,600 \$0 \$1,412 \$230,000 \$658,000	0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 20.00% 0.07% 0.00% 0.77% 0.00% 0.33% 153.74%	\$0 \$852,000 \$852,000 \$20,618 \$20,618 \$50,694 \$2,812 \$36,836 \$26,242 \$141,091 \$170,400 \$0 \$6,560 \$0 \$2,812 \$458,000 \$1,310,000	of Base Cos
B-MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-01 C-02 C-03	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica	Work trol / Detour iping S ITEMS AS	MIN % MEAN y 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 3.3% 0.0% 3.1% 0.0% 10.0% 0.0% 10.0% 0.0% 10.0% 0.0% 20.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	ACEMENT 5 MAX % 6.0% 3 13.4% 5 14.9% 3 2.3% 3 25.5% 3 2.3.5% 3 2.3.2% 5 1.8% 3 3.2% 5 1.2% 3	EFFORT 3 - Average 8 - Average 8 - Average 9 - Average 9 - Average	A-05 Cost: (% of A) Adjusted> (% of A)	0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 10.56% 20.00% 0.07% 0.00% 153.74% 153.74% % of CBI 6.00% 3.00% 3.00%	\$0 \$428,000 \$428,000 Cost \$10,359 \$25,466 \$1,412 \$18,804 \$13,182 \$70,877 \$85,600 \$0 \$1,412 \$230,000 \$428,000 \$50 \$50 \$50 \$1,412 \$50,400 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$50 \$	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.077% 0.00% 153.74% 153.74% % of CBI 6.00% 3.00% 3.00%	\$0 \$852,000 \$852,000 \$000 \$000 \$000 \$000 \$000 \$000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000	of Base Cos
B-MINOR 0 B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-10 B-11 B CBI C-FORCE C-02	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica	Work trol / Detour iping S ITEMS AS	MIN % MEAN 9 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 1.3% 0.0% 3.1% 0.0% 3.1% 0.0% 20.0% 0.0% 20.0% 0.0% 20.0% 0.0% 20.0% 0.0% 0.0% 0.0% 3.1%	ACEMENT 6 MAX % 6.0% 3 13.4% 3 2.3% 3 14.9% 3 5.5% 3 26.1% 3 1.8% 3 1.2% 3 SUBTO	EFFORT 3 - Average 8 - Average 9 - Average	A-05 Cost: (% of A) Adjusted> (% of A)	0.0% 100.0% 100.0% % of (A) 2.42% 5.55% 0.33% 4.30% 20.00% 0.77% 0.00% 0.33% 53.74% 153.74% % of CBI 6.00% 3.00%	\$0 \$428,000 Cost \$10,358 \$25,466 \$1,412 \$18,404 \$13,182 \$70,877 \$85,600 \$3,296 \$0 \$1,412 \$230,000 \$658,000	0.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 20.00% 0.00% 0.77% 0.00% 0.33% 53.74% 153.74%	\$0 \$852,000 Cost \$20,618 \$20,618 \$55,694 \$2,812 \$36,636 \$26,242 \$141,091 \$170,400 \$0 \$6,560 \$0 \$2,812 \$4458,000 \$1,310,000 Cost \$78,600 \$39,300	of Base Cos
B-MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-10 B-11 B CBI C-FORCE C-01 C-02 C-03 C-04	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operati	Work trol / Detour iping S ITEMS AS	MIN % MEAN y 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 3.3% 0.0% 3.1% 0.0% 10.0% 0.0% 10.0% 0.0% 10.0% 0.0% 20.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	ACEMENT 6 MAX % 6.0% 3 13.4% 3 2.3% 3 14.9% 3 5.5% 3 26.1% 3 1.8% 3 1.2% 3 SUBTO	EFFORT 3 - Average 4 - Average 4 - Average 5 - Average 5 - Average 6 - Average 7 - Average 8 - Average 9 - Average 9 - Average 1 - Average 8 - Average 8 - Average 8 - Average 9 - Average 9 - Average 1 - Average 1 - Average 8 - Average 8 - Average 9 - Average 1 - Average 8 - Average 8 - Average 8 - Average 9 - Average 1 - Average 8 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A)	0.0% 100.0% 100.0% % of (A) 2.42% 5.55% 0.33% 4.30% 3.08% 16.55% 20.00% 0.077% 153.74% 153.74% 153.74%	\$0 \$428,000 \$428,000 Cost \$10,358 \$25,466 \$1,412 \$18,404 \$13,182 \$70,877 \$85,600 \$0 \$1,412 \$230,000 \$5,412 \$230,000 Cost \$33,480 \$13,740 \$13,740 \$732 \$50	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.33% 53.74% 153.74%	\$0 \$852,000 \$852,000 \$0 \$852,000 Cost \$20,618 \$50,694 \$2,812 \$36,636 \$26,242 \$141,091 \$170,400 \$0 \$0 \$5,650 \$0 \$2,812 \$458,000 \$1,310,000 Cost \$78,600 \$39,300 \$31,457 \$0	of Base Cos
B-MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-10 B-11 B CBI C-FORCE C-01 C-03 C-04 C	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operati F/A S TSM&O CONSTRUCTION ITEMS	Work trol / Detour iping S ITEMS AS isions (MCR's) titions ons (for Reconstruction/	MIN % MEAN y 0.0% 2.4% 0.0% 6.0% 0.0% 6.0% 0.0% 3.3% 0.0% 3.1% 0.0% 10.0% 0.0% 10.0% 0.0% 10.0% 0.0% 20.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%	ACEMENT 6 MAX % 6.0% 3 13.4% 3 2.3% 3 14.9% 3 5.5% 3 26.1% 3 3.2% 3 1.6% 3 3.2% 3 SUBTO	EFFORT 3 - Average 4 - Average 4 - Average 5 - Average 5 - Average 6 - Average 7 - Average 8 - Average 9 - Average 9 - Average 1 - Average 8 - Average 8 - Average 8 - Average 9 - Average 9 - Average 1 - Average 1 - Average 8 - Average 8 - Average 9 - Average 1 - Average 8 - Average 8 - Average 8 - Average 9 - Average 1 - Average 8 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A)	0.0% 100.0% 100.0% % of (A) 2.42% 5.55% 0.33% 4.30% 3.00% 16.55% 0.00% 0.077% 153.74% 153.74% % of CBI % of	\$0 \$428,000 \$428,000 Cost \$10,359 \$25,466 \$1,412 \$18,404 \$13,182 \$70,877 \$85,600 \$0 \$1,412 \$230,000 \$658,000 Cost \$39,480 \$19,740 \$732 \$0 \$0 \$60,000	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.33% 53.74% 153.74% % of CBI 6.00% 3.00% 3.00% 9.11%	\$0 \$852,000 \$852,000 \$0 \$852,000 \$20,618 \$20,618 \$50,694 \$2,812 \$36,636 \$22,242 \$141,091 \$170,400 \$0 \$0 \$2,812 \$458,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000	of Base Cos 67.1% of Base Cos
B-MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-10 B-10 B-10 C-FORCE C-01 C-02 C-03 C-04 C C D-CONSTF	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operati F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & CONSTRUCTION ITEMS	Work trol / Detour iping S ITEMS AS isions (MCR's) titions ons (for Reconstruction/s	MIN % MEAN	ACEMENT 6 MAX % 6 0.0% 3 13.4% 3 2.3% 3 2.3% 3 2.3.5% 3 2.3.5% 3 2.3.5% 3 2.3.2% 3 1.2% 3 3.2% 3 1.2% 3 SUBTOTAL	EFFORT 3 - Average 4 - Average 4 - Average 5 - Average 5 - Average 6 - Average 7 - Average 8 - Average 9 - Average 9 - Average 1 - Average 8 - Average 8 - Average 8 - Average 9 - Average 9 - Average 1 - Average 1 - Average 8 - Average 8 - Average 9 - Average 1 - Average 8 - Average 8 - Average 8 - Average 9 - Average 1 - Average 8 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A)	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.33% 53.74% 153.74% 153.74% 167.76%	\$0 \$428,000 Cost \$10,358 \$25,468 \$1,412 \$18,404 \$13,182 \$70,877 \$85,600 \$0 \$1,412 \$230,000 \$658,000 Cost \$39,480 \$19,740 \$732 \$0 \$60,000 \$718,000	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.77% 0.00% 0.33% 53.74% 153.74% % of CBI 6.00% 3.00% 0.11% 167.72%	\$0 \$852,000 \$852,000 \$0 \$20,618 \$20,618 \$50,634 \$2,812 \$36,536 \$141,091 \$170,400 \$0 \$6,560 \$0 \$2,812 \$458,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,429,000 \$1,429,000	of Base Cos 67.1% of Base Cos
B-MINOR 1 B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 C-FORCE C-01 C-02 C-03 C-04 C	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O FIA - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operati F/A's & TSM&O CONSTRUCTION ITEMS	word / Detour iping S ITEMS AS ISIONS (MCR's) Itions ons (for Reconstruction/s INDIRECTS	MIN % MEAN	ACEMENT 5 MAX % 6.0% 3 13.4% 3 13.4% 3 2.3% 3 14.9% 3 25.5% 3 23.5% 3 1.2% 3 1.2% 3 SUBTOTAL SUBTOTAL	EFFORT 3 - Average 4 - Average 4 - Average 5 - Average 5 - Average 6 - Average 7 - Average 8 - Average 9 - Average 9 - Average 1 - Average 8 - Average 8 - Average 8 - Average 9 - Average 9 - Average 1 - Average 1 - Average 8 - Average 8 - Average 9 - Average 1 - Average 8 - Average 8 - Average 8 - Average 9 - Average 1 - Average 8 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A)	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.55% 0.33% 4.30% 3.08% 16.56% 20.00% 0.077% 0.00% 153.74% 153.74% 153.74% **of CBI 6.00% 3.00% 9.11% 167.76%	\$0 \$428,000 \$428,000 \$428,000 \$10,358 \$25,466 \$1,412 \$18,404 \$113,182 \$70,877 \$85,600 \$0 \$1,412 \$230,000 \$53,296 \$0,1412 \$230,000 \$658,000 \$658,000 \$718,000	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.33% 53.74% 153.74% 167.72%	\$0 \$852,000 \$852,000 Cost \$20,618 \$50,694 \$2,812 \$36,636 \$26,242 \$141,091 \$170,400 \$0 \$0 \$5,550 \$0 \$1,310,000 \$1,310,000 Cost \$78,600 \$39,300 \$1,457 \$0 \$119,000	of Base Cos 67.1% of Base Cos
B-MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-10 B-11 B CBI C-FORCE C-02 C-03 C-04 C CI D-CONSTE	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operati F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & I CONSTRUCTION ITEMS RUCTION ENGINEERING & I CONSTRUCTION ENGINEERING	Work trol / Detour iping S ITEMS AS isions (MCR's) titions ons (for Reconstruction/s INDIRECTS 9 EERING & INDIRECTS	MIN % MEAN	ACEMENT 5 MAX % 6.0% 3 13.4% 3 13.4% 3 2.3% 3 14.9% 3 25.5% 3 23.5% 3 1.2% 3 1.2% 3 SUBTOTAL SUBTOTAL	EFFORT 3 - Average 4 - Average 5 - Average 6 - Average 7 - Average 8 - Average 8 - Average 9 - Average 1 - Average 2 - Average 2 - Average 3 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A)	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 0.00% 0.77% 0.00% 0.33% 53.74% 153.74% % of CBI 6.00% 3.00% 0.11% 167.76%	\$0 \$428,000 Cost \$10,358 \$25,468 \$14,12 \$18,404 \$13,182 \$70,877 \$85,600 \$0 \$3,296 \$0 \$1,412 \$230,000 \$658,000 Cost \$39,480 \$19,740 \$732 \$0 \$60,000 \$718,000	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.59% 0.33% 4.30% 2.00% 0.77% 0.00% 0.33% 53.74% 153.74% % of CBI 6.00% 3.00% 0.11% 9.11% 167.72% % of CI 10.95% 9.50%	\$0 \$852,000 \$852,000 \$0 \$852,000 \$20,618 \$20,618 \$50,634 \$2,812 \$36,636 \$26,242 \$141,091 \$170,400 \$0 \$0 \$6,560 \$2,812 \$458,000 \$1,310,000 \$1,310,000 \$1,429,000 \$1,429,000 \$1,429,000	67.1% of Base Cos
B-MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-10 B-10 B-10 C-FORCE C-01 C-02 C-03 C-04 C C D-CONSTF	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O FIA - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operati F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & I Construction Engineerin Construction Engineerin Construction Engineerin Construction Engineerin Construction Engineerin	Work trol / Detour iping S ITEMS AS isions (MCR's) titions ons (for Reconstruction/s INDIRECTS 9 EERING & INDIRECTS	MIN % MEAN	ACEMENT 6 MAX % 6.0% 3 13.4% 3 2.3% 3 14.9% 3 25.5% 3 26.1% 3 3.2% 3 1.2% 3 SUBTOTAL SUBTOTAL	EFFORT 3 - Average 4 - Average 5 - Average 6 - Average 7 - Average 8 - Average 8 - Average 9 - Average 1 - Average 2 - Average 2 - Average 3 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A)	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 10.56% 20.00% 0.00% 0.33% 53.74% 153.74% 167.76% % of CBI 6.00% 3.00% 9.11% 167.76% % of CI 10.95% 9.55% 20.45%	\$0 \$428,000 \$428,000 Cost \$10,358 \$25,466 \$1,412 \$18,404 \$13,182 \$70,877 \$85,600 \$3,296 \$0 \$1,412 \$230,000 Cost \$33,480 \$19,740 \$732 \$0 \$60,000 \$718,000 \$718,000 \$147,000	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.07% 0.00% 0.33% 153.74% 153.74% 167.72% % of CBI 6.00% 3.00% 9.11% 167.72%	\$0 \$852,000 \$852,000 \$0 \$2,011 \$20,6118 \$20,618 \$2,812 \$141,091 \$170,400 \$0 \$0,500 \$0,500 \$1,310,000 \$1,310,000 \$1,310,000 \$1,429,000 \$1,429,000 \$1,429,000 \$1,429,000 \$1,429,000 \$1,721,000	67.1% of Base Cos
B-MINOR (B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-10 B-10 B-10 C-FORCE C-01 C-02 C-03 C-04 C C D-CONSTF	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operati F/A'S & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & Construction Engineerin Construction Engineerin Construction Engineerin CONSTRUCTION ENGINE	Work trol / Detour iping S ITEMS AS isions (MCR's) titions ons (for Reconstruction/s INDIRECTS 9 EERING & INDIRECTS	MIN % MEAN	SUBTOTAL	EFFORT 3 - Average 4 - Average 5 - Average 5 - Average 5 - Average 6 - Average 7 - Average 8 - Average 8 - Average 9 - Average 9 - Average 1 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A)	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 6.59% 0.33% 4.30% 3.08% 16.56% 0.00% 0.07% 0.33% 53.74% 153.74% 167.76% % of CBI 10.95% 9.50% 20.45%	\$0 \$428,000 \$428,000 \$428,000 \$10,358 \$10,358 \$25,466 \$1,412 \$13,182 \$70,877 \$85,600 \$0 \$1,412 \$230,000 \$658,000 \$658,000 \$718,000 \$718,000 \$718,000 \$147,000	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 0.33% 16.56% 0.00% 0.00% 0.77% 0.00% 0.33% 53.74% 153.74% 167.72% % of CBI 10.95% 9.50% 20.45%	\$0 \$852,000 \$852,000 \$0 \$2,011 \$20,6118 \$20,618 \$2,812 \$141,091 \$170,400 \$0 \$0,500 \$0,500 \$1,310,000 \$1,310,000 \$1,310,000 \$1,429,000 \$1,429,000 \$1,429,000 \$1,429,000 \$1,429,000 \$1,721,000	67.1% of Base Cos
B-MINOR 1 B-02 B-02 B-03 B-04 B-05 B-06 B-07 B-10 B-11 B CBI C-FORCE C-02 C-03 C-04 C CI D-CONSTE D-02 D E-01 E-PRECON	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operati F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & CONSTRUCTION Engineerin Construction Indirects CONSTRUCTION ENGINEERING & USA STRUCTION ENGINEERING & STRUCTION ENGINEERING & STRUCTION ENGINEERING & STRUCTION ENGINEERING & STRUCTION ITEMS	Word for Indiana was a second for the second for th	MIN % MEAN	SUBTOTAL ACEMENT MAX % 6.0% 3 13.4% 3 2.3% 3 14.9% 3 2.5.5% 3 2.3.5% 3 2.1.2% 3 3.2% 3 3.2% 3 1.8% 5 SUBTOTAL SUBTOTAL	EFFORT 3 - Average 4 - Average 5 - Average 6 - Average 7 - Average 8 - Average 8 - Average 9 - Average 1 - Average 2 - Average 2 - Average 3 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A)	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.59% 0.33% 16.56% 20.00% 0.00% 0.077% 0.00% 153.74% 153.74% 153.74% 167.76% % of CBI 10.95% 9.50% 20.45%	\$0 \$428,000 \$428,000 \$428,000 \$10,358 \$25,466 \$11,412 \$18,004 \$13,182 \$70,877 \$85,600 \$0 \$1,412 \$230,000 \$658,000 \$1,412 \$230,000 \$658,000 \$718,000 \$718,000 \$718,000 \$718,000 \$78,621 \$865,000 \$147,000 \$865,000	0.0% 100.0% 100.0% % of (A) 2.42% 0.33% 1.559% 0.33% 2.0.00% 0.00% 0.00% 0.33% 53.74% 153.74% 153.74% 167.72% % of CBI 10.95% 0.00% 9.11% 167.72% % of CI 10.95% 9.50% 20.45%	\$0 \$852,000 \$852,000 \$852,000 \$2,011 \$20,6118 \$50,694 \$2,812 \$36,36 \$26,242 \$141,091 \$170,400 \$0 \$0,50 \$3,500 \$4,550 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,429,000 \$1,429,000 \$1,429,000 \$1,429,000 \$1,429,000 \$1,429,000	67.1% of Base Cos
B-MINOR (B-01 B-02 B-03 B-04 B-05 B-07 B-08 B-09 B-10 B-11 B CBI C-FORCE C-01 C-02 C-03 C-04 C CI D-CONSTE D-01 D-02 D D-02 D E-PRECON	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operati F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & CONSTRUCTION ENGINE RUCTION ENGINEERING & STRUCTION ENGINEERING & Utilities + Railroad Work Design & Engineering P Subsurface Utility E	isions (MCR's) Isions	MIN % MEAN	SUBTOTAL ACEMENT MAX % 6.0% 3 13.4% 3 2.3% 3 14.9% 3 2.5.5% 3 2.3.5% 3 2.1.2% 3 3.2% 3 3.2% 3 1.8% 5 SUBTOTAL SUBTOTAL	EFFORT 3 - Average 5 - Average 5 - Average 5 - Average 6 - Average 7 - Average 8 - Average 8 - Average 9 - Average 9 - Average 9 - Average 1 - Average 9 - Average 1 - Average 1 - Average 1 - Average 8 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A) (% of A) (% of CB)	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.55% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.33% 53.74% 153.74% 153.74% 167.76% % of CI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 12.00%	\$0 \$428,000 \$428,000 \$428,000 \$10,358 \$25,466 \$1,412 \$18,404 \$13,182 \$70,877 \$86,600 \$0 \$3,296 \$0 \$1,412 \$230,000 \$658,000 \$658,000 \$718,000 \$718,000 \$78,621 \$68,210 \$147,000 \$865,000 \$865,000	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.33% 53.74% 153.74% 153.74% 167.72% % of CBI 10.95% 9.50% 20.45% indirect 9 % of CI 2.00% 0.00% 1.20% 0.00% 1.20% 0.00%	\$0 \$852,000 \$852,000 \$852,000 \$20,618 \$20,618 \$50,694 \$2,812 \$36,636 \$2,812 \$170,400 \$0 \$0 \$2,812 \$170,400 \$0 \$0 \$2,812 \$445,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,429,000 \$1,429,000 \$1,429,000 \$1,429,000 \$1,429,000 \$1,429,000 \$1,429,000 \$1,429,000 \$1,429,000 \$1,429,000	67.1% of Base Cos
B-MINOR (B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 B CBI C-11 C-02 C-03 C-04 C CI D-CONSTF D-01 D-02 D E-01 E-02 E-03 E-03.1 E-03.2 E-04.1	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operati F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & CONSTRUCTION Engineerin Construction Engineerin Construction Engineerin Construction Engineerin Construction Engineerin Construction Indirects RUCTION Engineering IP Subsurface Utilg Transportation Syst Environmental (NEPA) F Transportation Syst Environmental (NEPA) F Tarnsportation Syst Environmental (NEPA)	isions (MCR's) isions (MCR's) itions ons (for Reconstruction/l itions ons (for Reconstruction/l itions ON BUDGET [Phase U] hase D] ingineering (SUE) Budget tems Management & Operhase E) hase E)	MIN % MEAN	SUBTOTAL SUBSTOTAL AVG % 5.2% 13.4% 2.3% 14.9% 2.5.5% 2.5.5% 3.2% 3.2% 3.2% 3.2% 3.3.4%	EFFORT 3 - Average 5 - Average 5 - Average 5 - Average 6 - Average 7 - Average 8 - Average 8 - Average 9 - Average 9 - Average 9 - Average 1 - Average 9 - Average 1 - Average 1 - Average 1 - Average 8 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A) (% of A) (% of CB)	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.55% 0.33% 4.30% 3.08% 16.55% 20.00% 0.00% 0.33% 53.74% 153.74% 153.74% 167.76% % of CBI 10.95% 9.50% 20.45% Indirect % of CI 10.95% 9.50% 20.45%	\$0 \$428,000 \$428,000 \$428,000 \$10,358 \$25,466 \$11,412 \$18,404 \$13,182 \$70,877 \$85,600 \$0 \$1,412 \$230,000 \$658,000 \$1,412 \$230,000 \$658,000 \$1,412 \$230,000 \$658,000 \$718,000	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.33% 153.74% 153.74% 153.74% 167.72% % of CBI 10.95% 0.00% 20.45% Indirect 9 % of CI 10.95% 9.50% 20.45%	\$0 \$852,000 \$852,000 \$852,000 \$20,618 \$20,618 \$50,694 \$2,812 \$36,636 \$36,560 \$0 \$0 \$1,41,000 \$1,310,000 \$1,429,000	67.1% of Base Cos
B-MINOR (1 B-02) B-02 B-03 B-04 B-05 B-08 B-09 B-10 C-02 C-03 C-04 C C CI D-CONSTE D-01 D-02 D E-PRECON	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operati F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & I Construction Engineerin Construction Engineerin Construction Indirects CONSTRUCTION ENGINE PROJECT CONSTRUCTION ISTRUCTION ITEMS RIGHL-Of-Way [Phase R] Utilities + Railroad Work Dosign & Engineering [P Subsurface Utility E Transportation Systems Transportatin Systems Transportation Systems Transportation Systems Transport	Woo itrol / Detour iping S ITEMS AS ISIONS (MCR's) ISION	MIN % MEAN	SUBTOTAL SUBSTOTAL AVG % AVG	EFFORT 3 - Average 5 - Average 5 - Average 5 - Average 6 - Average 7 - Average 8 - Average 8 - Average 9 - Average 9 - Average 9 - Average 1 - Average 9 - Average 1 - Average 1 - Average 1 - Average 8 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A) (% of A) (% of CB)	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.33% 53.74% 153.74% 153.74% 167.76% % of CBI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 12.00% 0.75% 0.00%	\$0 \$428,000 \$428,000 Cost \$10,358 \$25,468 \$1,412 \$18,404 \$13,182 \$70,877 \$85,600 \$0 \$3,296 \$0 \$1,412 \$230,000 \$658,000 \$658,000 \$718,000 \$718,000 \$718,000 \$718,000 \$718,000 \$73,621	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 0.00% 0.77% 0.00% 0.33% 53.74% 153.74% ** of CBI 6.00% 3.00% 0.11% 167.72% ** of CI 10.95% 9.50% 20.45% Indirect 9 % of CI 2.00% 0.00% 12.00% 12.00% 0.75%	\$0 \$852,000 \$852,000 \$0 \$852,000 \$20,6118 \$50,6304 \$2,812 \$36,636 \$26,242 \$141,091 \$170,400 \$0 \$0 \$0,500 \$1,41,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,457 \$0 \$1,457 \$0 \$1,457,755 \$292,000 \$1,721,000 \$1,721,000 \$1,771 \$11,736 \$0 \$0 \$1,771 \$11,736 \$0 \$0 \$0 \$1,771 \$11,736	67.1% of Base Cos 73.2% of Base Cos 88.2% of Base Cos
B-MINOR (1 B-02) B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-09 B-10 C-FORCE C-02 C-03 C-04 C CI D-CONSTE D-01 B-02 D E-01 E-02 E-03 E-03 E-03 E-03 E-04 E-05	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operati F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & I Construction Indirects CONSTRUCTION Engineering (P PROJECT CONSTRUCTION ISTRUCTION ITEMS RIGHT-OF-Way (Phase R) Utilities + Railroad Work Dosign & Engineering (P Subsurface Utility E Transportation Syst Environmental (NEPA) [P Miscellaneous (Phase M) PRECONSTRUCTION ITE	Woo itrol / Detour iping S ITEMS AS ISIONS (MCR's) ISION	MIN % MEAN	SUBTOTAL SUBTOTAL SUBTOTAL AVG % AVG % SUBTOTAL AVG % SUBTOTAL SUBTO	EFFORT 3 - Average 4 - Average 5 - Average 5 - Average 6 - Average 7 - Average 8 - Average 8 - Average 8 - Average 8 - Average 9 - Average 9 - Average 8 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A) (% of CBI)	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 20.00% 0.00% 0.33% 53.74% 153.74% 167.76% % of CBI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 1.00% 0.00% 0.00% 0.00% 0.00%	\$0 \$428,000 \$428,000 \$428,000 \$10,358 \$10,358 \$25,466 \$1,412 \$18,404 \$13,182 \$70,877 \$85,600 \$0 \$3,296 \$0 \$1,412 \$230,000 \$658,000 \$658,000 \$718,000 \$718,000 \$718,000 \$718,000 \$718,000 \$718,000 \$718,000 \$718,000 \$718,000	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 20.00% 0.00% 0.33% 53.74% 153.74% 153.74% 167.72% % of CBI 6.00% 3.00% 9.11% 167.72% % of CI 10.95% 9.50% 20.45% Indirect 9 % of CI 2.00% 0.00% 0.00% 0.00% 0.00%	\$0 \$852,000 \$852,000 \$0 \$20,6118 \$20,6118 \$50,694 \$2,812 \$36,636 \$36,636 \$36,636 \$37,000 \$1,110,000 \$1,310,00	67.1% of Base Cod
B-MINOR (1 B-02) B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-09 B-10 C-FORCE C-02 C-03 C-04 C CI D-CONSTE D-01 B-02 D E-01 E-02 E-03 E-03 E-03 E-03 E-04 E-05	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operati F/A's & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & I CONSTRUCTION ENGINEERING & I CONSTR	Woo itrol / Detour iping S ITEMS AS ISIONS (MCR's) ISION	MIN % MEAN	SUBTOTAL SUBSTOTAL AVG % AVG	EFFORT 3 - Average 4 - Average 5 - Average 5 - Average 6 - Average 7 - Average 8 - Average 8 - Average 8 - Average 8 - Average 9 - Average 9 - Average 8 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A) (% of CBI)	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 20.00% 0.00% 0.33% 53.74% 153.74% 167.76% % of CBI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 1.00% 0.00% 0.00% 0.00% 0.00%	\$0 \$428,000 \$428,000 \$428,000 \$10,358 \$25,466 \$1,412 \$13,182 \$70,877 \$85,600 \$0 \$3,296 \$50 \$1,412 \$230,000 \$658,000 \$658,000 \$718,000 \$718,000 \$718,000 \$718,000 \$718,000 \$718,000 \$718,000 \$718,000 \$718,000	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 3.08% 16.56% 20.00% 0.00% 0.33% 53.74% 153.74% 153.74% 167.72% % of CBI 6.00% 3.00% 9.11% 167.72% % of CI 10.95% 9.50% 20.45% Indirect 9 % of CI 2.00% 0.00% 0.00% 0.00% 0.00%	\$0 \$852,000 \$852,000 \$0 \$20,6118 \$20,6118 \$50,694 \$2,812 \$36,636 \$36,636 \$36,636 \$37,000 \$1,110,000 \$1,310,00	67.1% of Base Cos 73.2% of Base Cos 11.8% of Base Cos
B-MINOR (1 B-02) B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-09 B-10 C-FORCE C-02 C-03 C-04 C CI D-CONSTE D-01 B-02 D E-01 E-02 E-03 E-03 E-03 E-03 E-04 E-05	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operati F/A'S & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & CONSTRUCTION ENGINEERING & CONSTRUCTION ENGINE PROJECT CONSTRUCTION STRUCTION ITEMS RIGHT-Of-Way [Phase R] Utilities * Railroad Work Design & Engineering [P Subsurface Utility E Transportation Syst Environmental (NEPA) [P Miscellaneous [Phase M] PRECONSTRUCTION ITE PROJECT BASE COST	isions (MCR's) isions (MCR's) isions (MCR's) itions isions (MCR's) itions ition	MIN % MEAN 2	SUBTOTAL SUBTOTAL SUBTOTAL AVG % AVG % SUBTOTAL AVG % SUBTOTAL SUBTO	EFFORT 3 - Average 4 - Average 5 - Average 5 - Average 6 - Average 7 - Average 8 - Average 8 - Average 8 - Average 8 - Average 9 - Average 9 - Average 8 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A) (% of CBI)	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 5.95% 0.33% 4.30% 3.08% 16.56% 20.00% 0.00% 0.33% 53.74% 153.74% 167.76% % of CBI 10.95% 9.50% 20.45% Indirect % of CI 5.16% 0.00% 1.00% 0.00% 0.00% 0.00% 0.00%	\$0 \$428,000 \$428,000 \$428,000 \$10,358 \$10,358 \$25,466 \$1,412 \$18,404 \$13,182 \$70,877 \$85,600 \$0 \$3,296 \$0 \$1,412 \$230,000 \$658,000 \$658,000 \$718,000 \$718,000 \$718,000 \$718,000 \$718,000 \$718,000 \$718,000 \$718,000 \$718,000	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 2.00% 0.00% 0.00% 0.33% 53.74% 153.74% 153.74% 167.72% % of CI 10.95% 9.50% 20.45% Indirect 9 % of CI 2.00% 0.00% 12.00% 0.00% 12.00% 0.00% 1.75% 0.00% 1.75% 0.00%	\$0 \$852,000 \$852,000 \$0 \$852,000 \$20,618 \$20,618 \$25,634 \$2,812 \$35,636 \$26,242 \$141,091 \$170,400 \$0 \$0 \$2,812 \$458,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,457 \$0 \$119,000 \$1,429,000 \$1,429,000 \$1,429,000 \$1,429,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000	67.1% of Base Cos 73.2% of Base Cos 11.8% of Base Cos
B - MINOR (1 B-02 B-03 B-04 B-05 B-07 B-08 B-09 B-09 B-09 B-09 B-09 B-09 B-09 B-09	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operati F/A'S & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & CONSTRUCTION ENGINEERING & CONSTRUCTION ENGINE PROJECT CONSTRUCTION STRUCTION ITEMS RIGHT-Of-Way [Phase R] Utilities * Railroad Work Design & Engineering [P Subsurface Utility E Transportation Syst Environmental (NEPA) [P Miscellaneous [Phase M] PRECONSTRUCTION ITE PROJECT BASE COST	Woo itrol / Detour iping S ITEMS AS ISIONS (MCR's) ISION	MIN % MEAN	SUBTOTAL SUBTOTAL SUBTOTAL AVG % AVG % SUBTOTAL AVG % SUBTOTAL SUBTO	EFFORT 3 - Average 4 - Average 5 - Average 5 - Average 6 - Average 7 - Average 8 - Average 8 - Average 8 - Average 8 - Average 9 - Average 9 - Average 8 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A) (% of CBI)	0.0% 100.0% 100.0% 100.0% 100.0% % of (A) 2.42% 6.55% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.33% 153.74% 153.74% 153.74% 167.76% % of CI 10.95% 9.50% 20.45% Indirect % of CI 10.95% 0.00% 12.00% 0.00% 12.00% 12.00% 0.00% 19.64%	\$0 \$428,000 \$428,000 \$10,358 \$25,466 \$11,412 \$18,404 \$113,182 \$70,877 \$85,600 \$0 \$1,412 \$230,000 \$658,000 \$658,000 \$658,000 \$718,000 \$718,000 \$73,621 \$68,210 \$1417,000 \$665,000 \$1417,000 \$665,000 \$1417,000 \$1417,000 \$150,000 \$1417,000 \$150,000 \$1417,000 \$150,000 \$1417,000 \$150,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 0.33% 4.30% 2.00% 0.00% 0.00% 0.33% 53.74% 153.74% 153.74% 167.72% % of CI 10.95% 9.50% 20.45% Indirect 9 % of CI 2.00% 0.00% 12.00% 0.00% 12.00% 0.00% 1.75% 0.00% 1.75% 0.00%	\$0 \$852,000 \$852,000 \$852,000 \$20,618 \$20,618 \$50,694 \$2,812 \$36,636 \$2,812 \$170,400 \$0 \$0 \$2,812 \$45,650 \$0 \$2,812 \$458,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,429,000	67.1% of Base Cos 73.2% of Base Cos 11.8% of Base Cos 100.0% of Base Cos
B - MINOR (B - 02 B - 03 B - 04 B - 05 B - 06 B - 07 B - 08 B - 09 B - 10 B - 10 C - FORCE C - 01 C - 02 C - 03 C - 04 C C C I D - CONSTF D - 02 E - PRECON E - 03 E - 04 E - 05 E - 04 E - 05 E	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operati F/A'S & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & I CONSTRUCTION ENGINE PROJECT CONSTRUCTION PROJECT CONSTRUCTION UIIITIES RIGHT-Of-Way [Phase R] UIIITIES UIIITIES RIGHT-OF-Way [Phase R] UIIITIES RIGHT-OF-Way [Phase R] UIIITIES RIGHT-OF-Way [Phase M] PRECONSTRUCTION ITEMS RIGHT-OF-WAY [Phase M] PROBABILISTIC COST E	isions (MCR's) isions (MCR's) isions (MCR's) itions isions (MCR's) itions ition	MIN % MEAN	SUBTOTAL SUBTOTAL SUBTOTAL SUBTOTAL AVG % 5.2% 3.2% 2.3,1% 3.2% 3.2% 3.2% 3.2% 3.2% 3.3.4	EFFORT 3 - Average 4 - Average 5 - Average 5 - Average 6 - Average 7 - Average 8 - Average 8 - Average 8 - Average 8 - Average 9 - Average 9 - Average 8 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A) (% of CBI)	0.0% 100.0% 100.0% 100.0% 100.0% % of (A) 2.42% 6.55% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.33% 153.74% 153.74% 153.74% 167.76% % of CI 10.95% 9.50% 20.45% Indirect % of CI 10.95% 0.00% 12.00% 0.00% 12.00% 12.00% 0.00% 19.64%	\$0 \$428,000 \$428,000 \$428,000 \$10,358 \$25,466 \$1,412 \$18,404 \$13,182 \$70,877 \$85,600 \$0 \$3,296 \$3,296 \$3,296 \$3,296 \$1,412 \$230,000 \$658,000 \$658,000 \$718,000 \$718,000 \$78,821 \$60,000 \$78,821 \$60,210 \$147,000 \$865,000 \$865,000 \$141,000 \$865,000	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 0.33% 16.55% 0.33% 16.56% 10.00% 0.00% 0.00% 0.33% 153.74% 153.74% 167.72% % of CBI 10.05% 9.11% 167.72% % of CI 10.95% 9.55% 20.45% Indirect 9 % of CI 2.00% 0.00% 1.17% RE/ME Ratio	\$0 \$852,000 \$852,000 \$0 \$20,618 \$20,618 \$50,694 \$2,812 \$36,636 \$56,560 \$0 \$0,500 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,457 \$0 \$1,457 \$0 \$119,000 \$1,429,000 \$1,429,000 \$1,429,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000 \$1,721,000	67.1% of Base Cos 73.2% of Base Cos 88.2% of Base Cos 110.0% of Base Cos
B - MINOR (1 B-02 B-03 B-04 B-05 B-07 B-08 B-09 B-09 B-09 B-09 B-09 B-09 B-09 B-09	Removals / Resets Environmental Structural Drainage / Utilities Roadway Appurtenances Mobilization Construction Traffic Con Lighting & Electrical Permanent Signing & Str Traffic Signalization & IT Miscellaneous MINOR CONSTRUCTION CONTRUCTION BID ITEM ACCOUNTS & TSM&O F/A - General F/A - Minor Contract Rev F/A - Project Communica TSM&O Traffic & Operati F/A'S & TSM&O CONSTRUCTION ITEMS RUCTION ENGINEERING & I CONSTRUCTION ENGINE PROJECT CONSTRUCTION PROJECT CONSTRUCTION UIIITIES RIGHT-Of-Way [Phase R] UIIITIES UIIITIES RIGHT-OF-Way [Phase R] UIIITIES RIGHT-OF-Way [Phase R] UIIITIES RIGHT-OF-Way [Phase M] PRECONSTRUCTION ITEMS RIGHT-OF-WAY [Phase M] PROBABILISTIC COST E	isions (MCR's) isions (MCR's) isions (MCR's) itions isions (MCR's) itions ition	MIN % MEAN	SUBTOTAL SUBTOTAL AVG % 5.2% 2.3% 2.3% 2.3% 3.2% 3.2% 3.2% 3.1.8% 3.1.2% SUBTOTAL SUBTOTAL SUBTOTAL AVG % 5.2% 3.2% 3.3.4% 3.4% 3.4% 3.4% 3.4% 3.4% 3.4% 3.4% 3.4% 3.4% 3.4% 3.4%	EFFORT 3 - Average 4 - Average 5 - Average 5 - Average 6 - Average 7 - Average 8 - Average 8 - Average 8 - Average 8 - Average 9 - Average 9 - Average 8 - Average	A-05 Cost: (% of A) Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> Adjusted—> (% of A) (% of A) (% of A) (% of CBI)	0.0% 100.0% 100.0% 100.0% 100.0% % of (A) 2.42% 6.55% 0.33% 4.30% 3.08% 16.56% 0.00% 0.00% 0.33% 153.74% 153.74% 153.74% 167.76% % of CI 10.95% 9.50% 20.45% Indirect % of CI 10.95% 0.00% 12.00% 0.00% 12.00% 12.00% 0.00% 19.64%	\$0 \$428,000 \$428,000 \$10,358 \$25,466 \$11,412 \$18,404 \$113,182 \$70,877 \$85,600 \$0 \$1,412 \$230,000 \$658,000 \$658,000 \$658,000 \$718,000 \$718,000 \$73,621 \$68,210 \$1417,000 \$665,000 \$1417,000 \$665,000 \$1417,000 \$1417,000 \$150,000 \$1417,000 \$150,000 \$1417,000 \$150,000 \$1417,000 \$150,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000 \$1417,000	0.0% 100.0% 100.0% 100.0% % of (A) 2.42% 0.33% 16.55% 0.33% 16.56% 10.00% 0.00% 0.00% 0.33% 153.74% 153.74% 167.72% % of CBI 10.05% 9.11% 167.72% % of CI 10.95% 9.55% 20.45% Indirect 9 % of CI 2.00% 0.00% 1.17% RE/ME Ratio	\$0 \$852,000 \$852,000 \$852,000 \$20,618 \$20,618 \$50,694 \$2,812 \$36,636 \$2,812 \$170,400 \$0 \$0 \$2,812 \$45,650 \$0 \$2,812 \$458,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,310,000 \$1,429,000	67.1% 67.1% of Base Cos 73.2% of Base Cos

Model Version 3 Rev 04

Last Update: 22-Oct-18



of Base Cost

PCPT - MODEL & REGION ESTIMATE FORM PROJECT PROFILE Project Name Project Number Sub-Account Number **Project Description** Project Work Type BRIDGE REPLACEMENT E.A. Date: 11/6/2018 PROJECT LOCATION & CHARACTERISTICS Begin MP: 271.9 City: NONE Route: CDOT Region: End MP: 278.0 Length: 6.1 Teller Co FIPS City: RefPt 274.950 Latitude: 38.9330 Longitude: -105.2285 **GOOGLE MAP LINK** Seament Mid-point Functional Classification: 4 Minor Arterial Urban-Rural Class: 1 Rural Terrain: 3 5.300 Primary Surface: 1 Asphalt Truck ADT: 160 Tier Class: Tier 2 AADT: NEPA Action: Cat/Ex 0 - Conceptual NEPA Status: In Progress Design Maturity: Project Delivery Method: Design-Bid-Build Construction Start (MMM-YY) Sep-22 Construction Duration (mo) 24.0 A - MAJOR CONSTRUCTION ITEMS Unit Cost A-01 Cost: 0.0% 0.0% A-02 PAVEMENT & BASES Unit Cost Unit Cost A-02 Cost A-03 MAJOR STRUCTURES (CAT 300 ITEMS \$74,924 \$13,147 \$5,662 Unit Cost A-03 REPL Cost 0.0% A-03_repa BRIDGE REPAIR A-03_REPA Cost: A-03_WALL Cost 0.0% R2 A-03_CULV Cost A-03 misc 72 Inch Reinforced Concrete Pipe
A-03 misc 10x8 Foot Concrete Box Culvert (Precast) A-03_misc 12x10 Foot Concrete Box Culvert (Precast) A-03_misc 14x6 Foot Concrete Box Culvert (Precast) A-03_misc 18x6 Foot Concrete Box Culvert (Precast) A-03 misc 20x6 Foot Concrete Box Culvert (Precast)
A-03 misc 20x8 Foot Concrete Box Culvert (Precast) A-03 MISC Cost A-03 Cost: 100.0% \$662,000 100.0% \$964,000 Unit Cost A-04 Cost: 0.0% 0.0% A-05 OTHER CATEGORY OTHER MAJOR ITEMS Qty Unit Cost Unit Cost Cost Cost MAJOR CONSTRUCTION ITEMS SUBTOTAL (A) (% of A) \$662,00 \$964,000 Work Type: BRIDGE REPLACEMENT
MIN % MEAN % MAX % EFFORT
3 - Average
3 - Average
3 - Average % of (A) Cost Cost B-01 B-02 B-03 B-04 B-05 B-06 B-07 Removals / Resets Environmental 6.0% 13.4% \$57,358 Adjusted--> \$39,389 13.4% 2.3% 14.9% 5.5% 23.5% 26.1% 3.2% 1.8% 3.4% 1.2% Structural Adjusted-> \$3,181 Drainage / Utilities \$28,466 \$41,452 adway Appurtenances \$20,390 \$109,627 Construction Traffic Control / Detour Lighting & Electrical \$132,400 B-08 B-09 B-10 B-11 Permanent Signing & Striping
Traffic Signalization & ITS \$5,097 \$7,423 \$0 \$2,185 \$0 \$3,181 В MINOR CONSTRUCTION ITEMS SUBTOTAL (B) (% of A) 53.74% \$356,000 53.74% \$518,000 153.74% \$1,018,000 153.74% \$1,482,000 CBI CONTRUCTION BID ITEMS SUBTOTAL (A + B) (% of A) 67.1% % of CBI F/A - General
F/A - Minor Contract Revisions (MCR's)
F/A - Project Communications FIA - Minor Contract Revisions (MCRS)
FIA - Project Communications

[Level 4 \$1,482,000 X 0.11%]
TSM&O Traffic & Operations (for Reconstruction/Resurfacing projects only) \$135,000 \$93,000 F/A's & TSM&O SUBTOTAL (C) (% of CBI) 9.11% CI CONSTRUCTION ITEMS SUBTOTAL (A + B + C) (% of A) 167.82% \$1,111,000 167.74% \$1,617,000 D - CONSTRUCTION ENGINEERING & INDIRECTS % of CI Cost \$121,655 \$105,545 % of CI Cost \$177,062 \$153,615 (Default: 10.95%) CONSTRUCTION ENGINEERING & INDIRECTS SUBTOTAL (D) (% of CI) \$227,000 20.45% \$331,000 PROJECT CONSTRUCTION BUDGET \$1,948,000 CONSTRUCTION (A + B + C + D) \$1,338,000 88.2% of Base Cost Indirect % Indirect % AVG % EFFORT % of CI % of CI (% CI + Indirect % (% CI + Indirect %) Right-of-Way [Phase R]

Utilities + Railroad Work [Phase U]

Design & Engineering [Phase D]

Subsurface Utility Engineering (SUE) Budget

Transportation Systems Management & Operation (TSM&O) Budget

Environmental (NEPA) [Phase E] E-01 E-02 E-03 E-03.1 3 - Average Design Maturity: 0 - Conceptual E-03.2 0.00% 0.00% 0.00% E SUBTOTAL (E) (% of CI) 19.62% \$218,000 16.14% PRECONSTRUCTION ITEMS 11.8% PROJECT BASE COST ESTIMATE (CONSTRUCTION + PRECONSTRUCTION) RE/ME Ratio: RISK RESERVE PROBABILISTIC COST ESTIMATE RISK RESERVE DATE: 11/6/2018 RISK RESERVE 11.5% TOTAL PROJECT COST (P70) \$2,462,000 111.5% ESCALATION Escalation from Estimate Date: Nov-18 Construction Start \$347,000 **ESCALATION** Duration (mo) 24.0 to Construction Mid-Point Date: Sep-23 ESCALATED COST \$2,809,000 127.2%

Model Version 3 Rev 04

Last Update: 22-Oct-18

Key:

PROBABILISTIC COST ESTIMATE SHEET RISK QUANTITY / % PARAMETERS COMMENTS/NOTES graphical output of a comparative sensitivity analysis, focusing on the top 10 critical items. It is meant to give you, the analyst, an idea of which factors are most important to the MOST LIKELY cost estimate RISK QUANTITY / % PARAMETERS RISK UNIT COST PARAMETERS A - MAJOR ITEMS MIN % MAX % MIN ML MAX MIN ML MAX A-01 QTY RISK UNIT COST RISK COST RISK A-01 Cost: 0.0% QTY RISK UNIT COST RISK COST RISK MIN % MAX % MIN ML MAX MIN ML MAX MIN % MAX % \$74,923.7 \$36.0 \$66.0 \$77.0 \$83.5 \$960.0 \$2.0 \$33.0 \$300,000.0 202-00400 206-00000 206-00100 206-00200 403-34841 601-03000 602-00020 606-10700 621-00411 621-00412 854 175 \$0 \$500,000 **\$782,367** A-03_CAT300 Cost: 75.8% A-03_REPL Cost: 0.0% \$0 *MODIFY LS estimate ranges as seem appropriate --> LUMP SUM COST ESTIMATE RANGES A-03_REPA Cost: 0.0% \$0 A-03 WALL Cost: 0.0% \$350.0 \$400.0 168 \$2,000.0 \$2,500.0 \$2,700.0 \$2,900.0 \$3,100.0 \$3,300.0 A-03_MISC Cost: 24.2% *If unit type = "L S", "ACRE", or "EACH", no quantity A-03 Cost: 100.0% \$1,032,367 A-04 QTY RISK MIN % MAX % MIN ML MAX MIN ML MAX A-04 Cost: *If unit type = "L S", "ACRE", or "EACH", no quantity uncertainty applies. 0.0% MIN % | MAX % | MIN | ML | MAX | MIN | ML | MAX A-05 QTY RISK UNIT COST RISK A-05 Cost: SUBTOTAL (A) \$1,032,000 B - MINOR ITEMS % of (A) RISK *If ML value CLOSE TO or GREATER THAN historical max, MAX = ML*1.2 *If ML value WITHIN historical range, MAX = ML*2 (NEED TO ENSURE APPROPRIATE % RANGES) 2.4% 6.0% 0.3% 4.8% 11.9% 0.7% B-01 B-02 B-03 B-04 B-05 B-06 B-07 B-08 B-09 B-10 B-11 \$24,974 \$61,404 0.0% 4.39 3.19 16.69 \$44,376 \$206,400 \$0 \$7,946 0.89 \$0 \$3,406 53.7% \$555,000 0.0% 53.7% 107.5% SUBTOTAL (B) 153.7% \$1,587,000 CBI C-01 C-02 C-03 C-04 SUBTOTAL (C) \$145,000 9.1% CI 167.7% \$1,732,000 D - CE & INDIRECTS \$189,654 \$164,540 SUBTOTAL (D) 20.5% \$354,000 \$2,086,000 **COST RISK** MIN ML MAX E-01 E-02 E-03 E-03.1 E-03.2 \$0 E-04 E-05 0.0% 0.0% SUBTOTAL (E) 15.4% \$266,000 MOST LIKELY BASE COST \$2,209,000 RISK RESERVE P70 VALUE P50

	Project Name R2 BUNDLE Project Number N-21-F			1	Model Version 3 Rev 0 Last Update: :	
S	Sub-Account Number XXXXX Project Description N-21-F					
-	N 2 1 1					
	Project Work Type BRIDGE REPLACEMENT					
	estimator: E.A.	Date: 11/6/2018				
CT LOCA	ATION & CHARACTERISTICS					
	Route: 350A CDOT Region: 2	Begin MP: 47.1 FIPS City: NONE	End MP: FIPS County:	69.8 Otero Co	Length:	22.7
J		FIPS City: 00000	FIPS County:			
<u>S</u>	Segment Mid-point RefPt 58.450	Latitude: 37.8382	Longitude:	-103.7489	<u>GC</u>	OGLE MAP LINK
	<u></u>	n-Rural Class: 1 Rural	Terrain:		Rolling	
Α	AADT: 340	Truck ADT: 10	Tier Class:	Tier 4	Primary Surface:	1 Asphalt
D	Design Maturity: 0 - Conceptual	NEPA Action: Cat/Ex		NEPA Status:	In Progress	
F	Project Delivery Method: Design-Bid-Build Co	onstruction Start (MMM-YY) Sep-22	Cons	truction Duration (mo)	24.0	
					REGION'S ES	STIMATE
CT CON	NSTRUCTION COSTS:					
	MAJOR CONSTRUCTION ITEMS		 -	····-		
)1 E	TEM DESCRIPTION Earthwork		QTY 0	UNIT CY	PERCENTAGE 0.0%	\$0 \$0
AT300 Ite	Pavement & Bases temized Structure Bridge Replacement		N/A N/A 0	SY N/A DECK AREA (SF)	0.0% 34.1% 0.0%	\$0 \$490,000 \$0
ера В	sridge Replacement Bridge Repair Valls		0	DECK AREA (SF) DECK AREA (SF) SF	0.0% 0.0% 0.0%	\$0 \$0 \$0
culv M	Aajor Culverts Aiscellaneous Structures		0 270	LF LS	0.0% 0.0% 65.9%	\$0 \$945,000
4 Tı	raffic / ITS Other Major Items		N/A N/A	N/A N/A	0.0% 0.0%	\$0 \$0
	MINOR CONSTRUCTION ITEMS		SUBTOTAL (A)		100.0%	\$1,435,000
	TEM DESCRIPTION		EFFORT	UNIT	PERCENTAGE	COST
2 E	Removals / Resets Invironmental		3 - Average 3 - Average	% OF A % OF A	2.4% 6.0%	\$34,727 \$85,383
D	Structural Drainage / Utilities		3 - Average 3 - Average	% OF A % OF A	0.3% 4.3%	\$4,736 \$61,705
M	Roadway Appurtenances Mobilization		3 - Average 3 - Average	% OF A % OF A	3.1% 16.6%	\$44,198 \$237,636
Li	Construction Traffic Control / Detour ighting & Electrical		3 - Average	% OF A % OF A % OF A	20.0% 0.0% 0.8%	\$287,000 \$0
Tı	Permanent Signing & Striping Traffic Signalization & ITS Miscellaneous		3 - Average 3 - Average 3 - Average	% OF A % OF A % OF A	0.8% 0.0% 0.3%	\$11,050 \$0 \$4,736
IIVI	niscenarieous		SUBTOTAL (B)	% OF A	53.7%	\$771,000
		CONTRUCTION BID ITEMS (A + B)	СВІ	% OF A	153.7%	\$2,206,000
F	FORCE ACCOUNTS & TSM&O					
	TEM DESCRIPTION F/A - General			UNIT % OF CBI	PERCENTAGE 6.0%	COST \$132,360
3 F/	F/A - Minor Contract Revisions (MCR's) F/A - Project Communications			% OF CBI % OF CBI	3.0% 0.1%	\$66,180 \$2,623
4 T	SM&O Traffic & Operations		SUBTOTAL (C)	% OF CBI	9.1%	\$0 \$201,000
		CONSTRUCTION ITEMS (A + B + C)	CI	% OF A	167.7%	\$2,407,000
С	CONSTRUCTION ENGINEERING & INDIRECTS					
	TEM DESCRIPTION			UNIT	PERCENTAGE	COST
	Construction Engineering Construction Indirects			% OF CI % OF CI	11.0% 9.5%	\$263,567 \$228,665
					_	\$492,000
			SUBTOTAL (D)	% OF CI	20.4%	
		PROJECT CONSTRUCTION BUDG	. ,	% OF CI	20.4%	\$2,899,000
CT PRE	ECONSTRUCTION COSTS:	PROJECT CONSTRUCTION BUDG	. ,	% OF CI	20.4%	\$2,899,000
Р	PRECONSTRUCTION ITEMS	PROJECT CONSTRUCTION BUDG	. ,		-	
P CAT IT	PRECONSTRUCTION ITEMS TEM DESCRIPTION Right-of-Way [Phase R]	PROJECT CONSTRUCTION BUDG	. ,	UNIT % OF CI	PERCENTAGE 2.0%	COST \$52,713
P R U	PRECONSTRUCTION ITEMS TEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase U] Design & Engineering [Phase D]	PROJECT CONSTRUCTION BUDG	. ,	WNIT % OF CI % OF CI % OF CI	PERCENTAGE 2.0% 0.0% 12.0%	COST \$52,713 \$0 \$316,280
P	PRECONSTRUCTION ITEMS TEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase U] Design & Engineering [Phase D] Subsurface Utility Engineering (SUE) Budget Transportation Systems Management & Operation (TSM&		. , ,	WNIT % OF CI	PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0%	COST \$52,713 \$0 \$316,280 \$19,767 \$0
P	PRECONSTRUCTION ITEMS TEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase U] Posign & Engineering [Phase D] Subsurface Utility Engineering (SUE) Budget		ET (A + B + C + D)	WNIT % OF CI	PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0% 0.0% 0.0%	COST \$52,713 \$0 \$316,280 \$19,767 \$0 \$0
P CAT IT 1 R 2 U 3 D .1 .2 .2 4 E	PRECONSTRUCTION ITEMS TEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase U] Design & Engineering [Phase D] Subsurface Utility Engineering (SUE) Budget Transportation Systems Management & Operation (TSM&C Environmental (NEPA) [Phase E]		. , ,	WNIT % OF CI	PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0% 0.0%	COST \$52,713 \$0 \$316,280 \$19,767 \$0 \$0
P CAT IT 1 R 2 U 3 D .1 .2 .2 4 E	PRECONSTRUCTION ITEMS TEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase U] Design & Engineering [Phase D] Subsurface Utility Engineering (SUE) Budget Transportation Systems Management & Operation (TSM&C Environmental (NEPA) [Phase E]		ET (A + B + C + D) SUBTOTAL (E)	WNIT % OF CI	PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0% 0.0% 1.0% 0.0% 0.0%	COST \$52,713 \$0 \$316,280 \$19,767 \$0 \$0
P R U D D D D D D D D D D D D D D D D D D	PRECONSTRUCTION ITEMS TEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase U] Design & Engineering [Phase D] Subsurface Utility Engineering (SUE) Budget Transportation Systems Management & Operation (TSM&C Environmental (NEPA) [Phase E]	O) Budget	ET (A + B + C + D) SUBTOTAL (E)	WNIT % OF CI	PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0% 0.0% 1.0% 0.0% 0.0%	COST \$52,713 \$0 \$316,280 \$19,767 \$0 \$0 \$0 \$389,000
PCAT III R 2 U 3 D 1	PRECONSTRUCTION ITEMS TEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase U] Design & Engineering [Phase D] Subsurface Utility Engineering (SUE) Budget Transportation Systems Management & Operation (TSM&CENTION (NEPA) [Phase E] Miscellaneous [Phase M]	O) Budget PROJECT BASE COST ESTIMATE	ET (A + B + C + D) SUBTOTAL (E)	WNIT % OF CI	PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0% 0.0% 1.0% 0.0% 0.0%	COST \$52,713 \$0 \$316,280 \$19,767 \$0 \$0 \$0 \$389,000
P	PRECONSTRUCTION ITEMS TEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase U] Design & Engineering [Phase D] Subsurface Utility Engineering (SUE) Budget Transportation Systems Management & Operation (TSM&CENTION (NEPA) [Phase E] Miscellaneous [Phase M]	O) Budget	SUBTOTAL (E) (CONSTRUCTION	UNIT	PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0% 0.0% 1.0% 0.0% 0.0%	\$52,713 \$0 \$316,280 \$19,767 \$0 \$0 \$0 \$389,000 \$3,288,000
P	PRECONSTRUCTION ITEMS TEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase U] Posign & Engineering [Phase D] Subsurface Utility Engineering (SUE) Budget Transportation Systems Management & Operation (TSM&C Invironmental (NEPA) [Phase E] Miscellaneous [Phase M]	O) Budget PROJECT BASE COST ESTIMATE	SUBTOTAL (E) (CONSTRUCTION	## UNIT % OF CI	PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0% 0.0% 16.2%	COST \$52,713 \$52,713 \$0 \$316,280 \$19,767 \$0 \$0 \$0 \$3389,000
P P R P P P P P P P P P P P P P P P P P	PRECONSTRUCTION ITEMS TEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase U] Design & Engineering [Phase D] Subsurface Utility Engineering (SUE) Budget Transportation Systems Management & Operation (TSM&C Invironmental (NEPA) [Phase E] Miscellaneous [Phase M]	O) Budget PROJECT BASE COST ESTIMATE DATE: 11/6/2018	SUBTOTAL (E) (CONSTRUCTION	WNIT % OF CI THE PRECONSTRUCTION RISK RESERVE TAL PROJECT COST	PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0% 0.0% 16.2% 11.7% OF BASE COST	\$52,713 \$52,713 \$0 \$316,280 \$19,767 \$0 \$0 \$0 \$389,000 \$3,288,000 \$3,484,000
PAT III R U D D D M M M M M M M M M M M M M M M M	PRECONSTRUCTION ITEMS TEM DESCRIPTION Right-of-Way [Phase R] Utilities + Railroad Work [Phase U] Posign & Engineering [Phase D] Subsurface Utility Engineering (SUE) Budget Transportation Systems Management & Operation (TSM&C Invironmental (NEPA) [Phase E] Miscellaneous [Phase M]	O) Budget PROJECT BASE COST ESTIMATE	SUBTOTAL (E) (CONSTRUCTION	UNIT	PERCENTAGE 2.0% 0.0% 12.0% 0.8% 0.0% 0.0% 16.2%	\$52, \$316, \$19, \$389, \$3,288,

PCPT - MODEL & REGION ESTIMATE FORM PROJECT PROFILE Project Name Project Number Sub-Account Number **Project Description** Project Work Type BRIDGE REPLACEMENT E.A. Date: 11/6/2018 PROJECT LOCATION & CHARACTERISTICS Begin MP: 47.1 City: NONE Route: CDOT Region: End MP: 69.8 Length: 22.7 Otero Co FIPS City: FIPS County Latitude: 37.8382 RefPt 58.450 Longitude: -103.7489 **GOOGLE MAP LINK** Seament Mid-point Terrain: 2 Functional Classification: 4 Minor Arterial Urban-Rural Class: 1 Rural 340 Truck ADT: 10 Tier Class: Tier 4 Primary Surface: 1 Asphalt AADT: NEPA Action: Cat/Ex 0 - Conceptual NEPA Status: In Progress Design Maturity: Project Delivery Method: Design-Bid-Build Construction Start (MMM-YY) Sep-22 Construction Duration (mo) 24.0 A - MAJOR CONSTRUCTION ITEMS Unit Cost A-01 Cost: 0.0% 0.0% A-02 PAVEMENT & BASES Unit Cost Unit Cost A-02 Cost A-03 MAJOR STRUCTURES (CAT 300 ITEMS Unit Cost \$287,000 A-03 REPL Cost 0.0% A-03_repa BRIDGE REPAIR A-03_REPA Cost: A-03_WALL Cost 0.0% R2 A-03_CULV Cost A-03 misc 72 Inch Reinforced Concrete Pipe
A-03 misc 10x8 Foot Concrete Box Culvert (Precast) A-03_misc 12x10 Foot Concrete Box Culvert (Precast) A-03_misc 14x6 Foot Concrete Box Culvert (Precast) A-03_misc 18x6 Foot Concrete Box Culvert (Precast) A-03 misc 20x6 Foot Concrete Box Culvert (Precast)
A-03 misc 20x8 Foot Concrete Box Culvert (Precast) A-03 MISC Cost A-03 Cost: 100.0% \$1,232,000 100.0% \$1,435,000 Unit Cost A-04 Cost: 0.0% 0.0% A-05 OTHER CATEGORY OTHER MAJOR ITEMS Qty Unit Cost Unit Cost Cost Cost MAJOR CONSTRUCTION ITEMS SUBTOTAL (A) (% of A) \$1,232,00 \$1,435,000 Work Type: BRIDGE REPLACEMENT
MIN % MEAN % MAX % EFFORT
3 - Average
3 - Average
3 - Average % of (A) MAX % Cost Cost B-01 B-02 B-03 B-04 B-05 B-06 B-07 Removals / Resets Environmental 6.0% 13.4% \$73,304 Adjusted--> 13.4% 2.3% 14.9% 5.5% 23.5% 26.1% 3.2% 1.8% 3.4% 1.2% Adjusted-> \$4,066 \$4,736 \$61,705 Drainage / Utilities \$37,946 adway Appurtenances \$44,19 \$204,019 Construction Traffic Control / Detour Lighting & Electrical B-08 B-09 B-10 B-11 Permanent Signing & Striping
Traffic Signalization & ITS \$9,486 \$11,050 \$0 \$4,066 \$4,736 \$662,000 53.74% \$771,000 В MINOR CONSTRUCTION ITEMS SUBTOTAL (B) (% of A) 53.74% 153.74% \$1,894,000 153.74% \$2,206,000 CBI CONTRUCTION BID ITEMS SUBTOTAL (A + B) (% of A) 67.1% % of CBI F/A - General
F/A - Minor Contract Revisions (MCR's)
F/A - Project Communications FIA - Minor Contract Revisions (MCRS)
FIA - Project Communications

[Level 4 \$2,206,000 X 0.12%]
TSM&O Traffic & Operations (for Reconstruction/Resurfacing projects only) \$201,000 \$173,000 F/A's & TSM&O SUBTOTAL (C) (% of CBI) 9.12% 9.12% CI CONSTRUCTION ITEMS SUBTOTAL (A + B + C) (% of A) 167.78% \$2,067,000 167.74% \$2,407,000 D - CONSTRUCTION ENGINEERING & INDIRECTS % of CI Cost \$226,337 \$196,365 % of CI (Default: 10.95%) CONSTRUCTION ENGINEERING & INDIRECTS SUBTOTAL (D) (% of CI) \$423,000 20.45% \$492,000 PROJECT CONSTRUCTION BUDGET \$2,899,000 CONSTRUCTION (A + B + C + D) \$2,490,000 88.2% of Base Cost Indirect % Indirect % AVG % EFFORT % of CI % of CI (% CI + Indirect % (% CI + Indire Right-of-Way [Phase R]

Utilities + Railroad Work [Phase U]

Design & Engineering [Phase D]

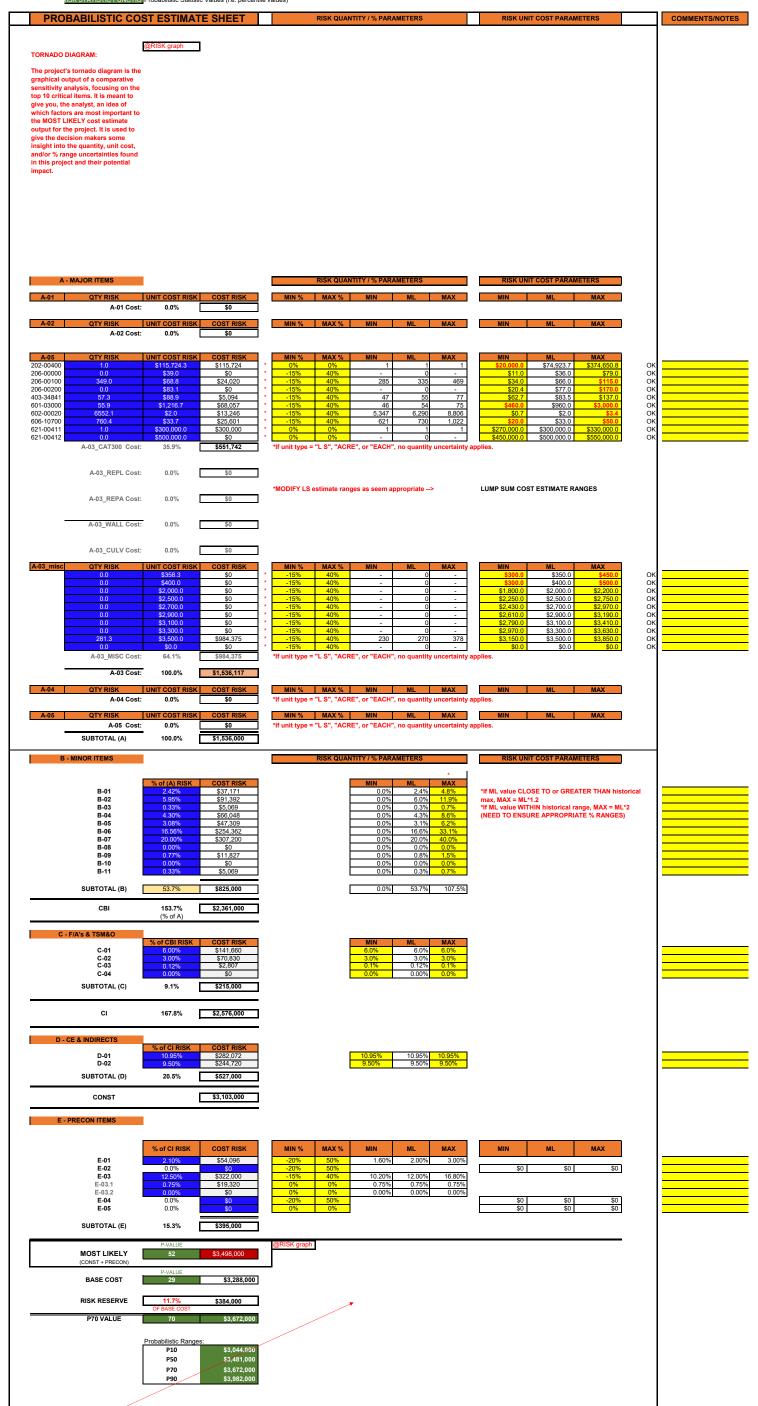
Subsurface Utility Engineering (SUE) Budget

Transportation Systems Management & Operation (TSM&O) Budget

Environmental (NEPA) [Phase E] E-01 E-02 E-03 E-03.1 3 - Average Design Maturity: 0 - Conceptual E-03.2 0.00% 0.00% 0.00% E SUBTOTAL (E) (% of CI) 19.59% \$405,000 16.16% PRECONSTRUCTION ITEMS 11.8% PROJECT BASE COST ESTIMATE (CONSTRUCTION + PRECONSTRUCTION) RE/ME Ratio: RISK RESERVE PROBABILISTIC COST ESTIMATE RISK RESERVE DATE: 11/6/2018 RISK RESERVE 11.7% OF BASE COST TOTAL PROJECT COST (P70) 111.7% ESCALATION Escalation from Estimate Date: Nov-18 Construction Start \$517,000 **ESCALATION** Duration (mo) to Construction Mid-Point Date: Sep-23 ESCALATED COST \$4,189,000 127.4%

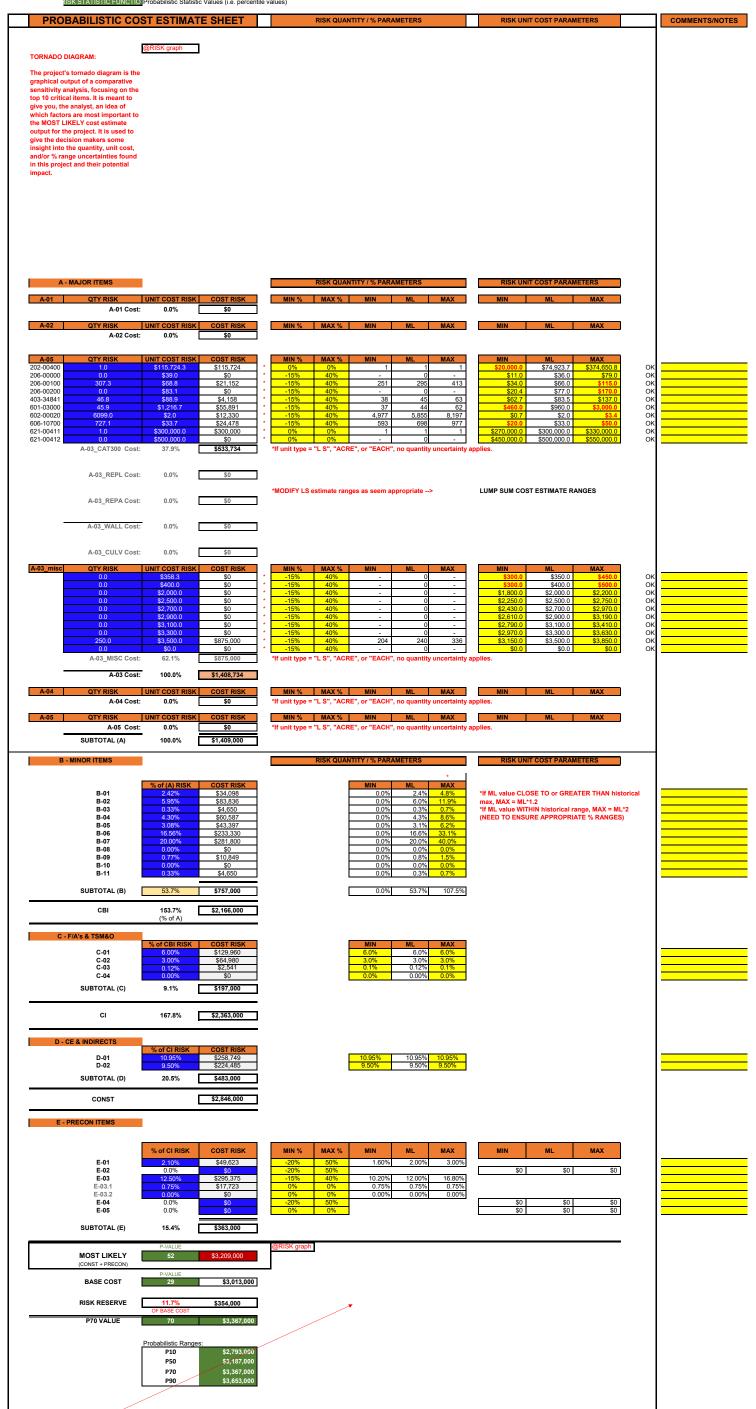
Key:

Model Version 3 Rev 04 Last Update: 22-Oct-18



of Base Cost

PROJECT F	PROFILE	TIMATE FOR	KIVI								4
	Project Name R2 BUND	DLE									
	Project Number M-21-C Sub-Account Number Project Description M-21-C M-21-C										
	, ,										
		DGE REPLACEMEN									
DROJECTU	Estimator:	E.A.	Date: 11/	6/2018							
PROJECT	LOCATION & CHARACTERISTICS	_	Begin MP:	47.1	End MP:	69.8		Longth	22.7	-	
	Route: 350A CDOT Region: 2		City: N	IONE 10000	County: FIPS County:	Otero Co 089		Length:	22.1		
	Seament Mid-point RefPt	58.450	· <u> </u>	7.8382	Longitude:			G	OOGLE MAP LIN	K	
	Functional Classification: 4 Minor A		ban-Rural Class:	1 Rural				Terrain:	2		
	AADT:	340	Truck ADT:	10	Tier Class:	Tier 4		Primary Surface:	1 Asphalt		
							NEDA OL I	1.0			
	· · · · ·	Conceptual gn-Bid-Build	NEP Construction Start (A Action: Cat/l		Construct	NEPA Statustion Duration (mo				
	Project Delivery Method. Design	in-Bid-Build	Construction Start (мімімі-11) <u>[Зер</u> -	22	Construct	ion buration (inc	24.0			4
A - MAJOR	MAJOR CONSTRUCTION ITEMS						Mode	el Estimate	Regio	on Estimate	1
A-01	EARTHWORK				Unit	Qty A-01 Cost:	Unit Cost 0.0%	Cost \$0	Unit Cost 0.0%	Cost \$0	<u> </u>
A-02	PAVEMENT & BASES				Unit	Qty	Unit Cost	Cost	Unit Cost	Cost	il
A-03	MAJOR STRUCTURES (CAT 300 IT	TEMS)				A-02 Cost:	0.0%	\$0	0.0%	\$0]
	300 PAYITEM GROUP CATEGORY		T 300 STRUCTURAL PA		Unit	Qty	Unit Cost	Cost	Unit Cost	Cost	ı
A-03_CAT3	300 202 - Removal of Structures and Obs 300 206 - Structure Excavation & Backfill	II, Cofferdam an 206-		ation	EACH CY	0	\$74,923.7 \$21.6	\$74,924 \$0	\$74,923.7 \$36.0	\$74,924 \$0	1
A-03_CAT3	300 206 - Structure Excavation & Backfill 300 206 - Structure Excavation & Backfill	II, Cofferdam an 206-	-00200 - Structure Backfil	II (Class 2)	CY CY	295 0	\$45.3 \$48.2	\$13,362 \$0	\$66.0 \$77.0	\$19,470 \$0	1
A-03_CAT3	800 403 - Hot Bituminous Pavement 800 601 - Structural Concrete 800 602 - Reinforcing Steel	601-	-34841 - Hot Mix Asphalt -03000 - Concrete Class I -00020 - Reinforcing Stee	D	(PG TON CY LB	45 44 5,855	\$83.5 \$960.0 \$1.0	\$3,747 \$42,336 \$5,891	\$83.5 \$960.0 \$2.0	\$3,747 \$42,336 \$11,710	
A-03 CAT3 A-03 CAT3	300 606 - Guardrail and Bridge Rail 300 621 - Detour	606- 621-	-10700 - Bridge Rail Type -00411 - Structure Tempo	e 7 orary Access Road	LF (Loca LS	698 1	\$95.5 \$65,000.0	\$66,645 \$65,000	\$33.0 \$300,000.0	\$23,034 \$300,000]]
	300 621 - Detour		-00412 - Structure Tempo		(Loca LS	0 3_CAT300 Cost:	\$50,000.0 24.5%	\$0 \$272,000	\$500,000.0 36.1%	\$0 \$475,000	<u> </u>
A-03_repl	BRIDGE REPLACEMENT										
					-	A-03_REPL Cost:	0.0%	\$0	0.0%	\$0	1
A-03_repa	a BRIDGE REPAIR				,	A-03_REPA Cost:	0.0%	\$0	0.0%	\$0	1
A-03_wall	II WALLS										_
					-	A-03_WALL Cost:	0.0%	\$0	0.0%	\$0	1
A-03_culv	v MAJOR CULVERTS				,	A-03_CULV Cost:	R2 0.0%	\$0	0.0%	\$0	1
	c MISCELLANEOUS STRUCTURES				Unit	Qty	Unit Cost	Cost	Unit Cost	Cost	1
A-03 misc	c 60 Inch Reinforced Concrete Pipe c 72 Inch Reinforced Concrete Pipe				LF LF	0	\$350.0 \$400.0	\$0 \$0	\$350.0 \$400.0	\$0 \$0	il .
A-03_miso	c 10x8 Foot Concrete Box Culvert (Pre c 12x10 Foot Concrete Box Culvert (Pre c 14x6 Foot Concrete Box Culvert (Pre	Precast)			LF LF LF	0	\$2,000.0 \$2,500.0	\$0 \$0	\$2,000.0 \$2,500.0	\$0 \$0	
A-03 misc	c 14x10 Foot Concrete Box Culvert (Pre c 18x6 Foot Concrete Box Culvert (Pre	Precast)*			LF LF	0 0 0	\$2,700.0 \$2,900.0 \$3,100.0	\$0 \$0 \$0	\$2,700.0 \$2,900.0 \$3,100.0	\$0 \$0 \$0	
A-03_misc	c 20x6 Foot Concrete Box Culvert (Pre c 20x8 Foot Concrete Box Culvert (Pre c 20x8 Foot Concrete Box Culvert (Pre	ecast)			LF LF	0 240	\$3,300.0 \$3,500.0	\$0 \$840,000	\$3,300.0 \$3,500.0	\$0 \$840,000	11
A-03 misc					LF	0 A-03_MISC Cost:	\$0.0 75.5%	\$0 \$840,000	\$0.0 63.9%	\$0 \$840,000	!
						A-03 Cost:	100.0%	\$1,112,000	100.0%	\$1,315,000	1 1
A-04	TRAFFIC/ITS				Unit	Qty	Unit Cost	Cost	Unit Cost	Cost	<u>'</u>
						A-04 Cost:	0.0%	\$0	0.0%	\$0	j
A-05	OTHER CATEGORY	ОТН	HER MAJOR ITEMS		Unit	Qty A-05 Cost:	Unit Cost 0.0%	Cost \$0	Unit Cost 0.0%	Cost \$0	H
A	MAJOR CONSTRUCTION ITEMS				SUBTOTAL (A)	(% of A)	100.0%	\$1,112,000	100.0%	\$1,315,000	43.6% of Base Co.
B - MINOR	CONSTRUCTION ITEMS										
		Work ⁻		REPLACEMENT EAN % MAX	% EFFORT	ı г	% of (A)	Cont	% of (A)	Cont	,
B-01 B-02	Removals / Resets Environmental		0.0% 2	EAN % MAX 2.4% 6.09 6.0% 13.4	% 3 - Average	Adjusted—> Adjusted—>	2.42% 5.95%	\$26,910 \$66,164	2.42% 5.95%	\$31,823 \$78,243	
B-03 B-04	Structural Drainage / Utilities		0.0% (0.3% 2.3° 4.3% 14.9	% 3 - Average	Adjusted—> Adjusted—>	0.33% 4.30%	\$3,670 \$47,816	0.33% 4.30%	\$4,340 \$56,545	
B-05 B-06	Roadway Appurtenances Mobilization		0.0% 3	3.1% 5.5° 6.6% 23.5	% 3 - Average	Adjusted—> Adjusted—>	3.08% 16.56%	\$34,250 \$184,147	3.08% 16.56%	\$40,502 \$217,764	
B-07 B-08	Construction Traffic Control / Deto Lighting & Electrical	our	0.0% (0.0% 26.1 0.0% 3.2°	% 3 - Average	Adjusted—> Adjusted—>	20.00% 0.00%	\$222,400 \$0	20.00% 0.00%	\$263,000 \$0	<u> </u>
B-09 B-10	Permanent Signing & Striping Traffic Signalization & ITS		0.0% (0.8% 1.8° 0.0% 3.4°	% 3 - Average	Adjusted—> Adjusted—>	0.77%	\$8,562 \$0	0.77%	\$10,126 \$0	
B-11	Miscellaneous		0.0% (0.3% 1.29		Adjusted—>	0.33%	\$3,670	0.33%	\$4,340	<u> </u>
В	MINOR CONSTRUCTION ITEMS				SUBTOTAL (B)	(% of A)	53.74%	\$598,000	53.74%	\$707,000	4
СВІ	CONTRUCTION BID ITEMS				SUBTOTAL (A + B)	(% of A)	153.74%	\$1,710,000	153.74%	\$2,022,000	67.1% of Base Co
C - FORCE	ACCOUNTS & TSM&O					_				_	_
C-01	F/A - General						% of CBI 6.00%	\$102,600	% of CBI 6.00%	\$121,320	1
C-02 C-03 C-04	F/A - Minor Contract Revisions (M F/A - Project Communications TSM&O Traffic & Operations (for F			2,022,000 X	0.12%	1	3.00% 0.12% 0.00%	\$51,300 \$2,006 \$0	3.00% 0.12% 0.00%	\$60,660 \$2,372 \$0	11
C-04	F/A's & TSM&O	Reconstruction/Res	surfacing projects only)		SUBTOTAL (C)	(% of CBI)	9.12%	\$156,000	9.12%	\$184,000	<u> </u>
											•
CI	CONSTRUCTION ITEMS			SUE	BTOTAL (A + B + C)	(% of A)	167.81%	\$1,866,000	167.76%	\$2,206,000	73.2% of Base Co
D - CONSTI	RUCTION ENGINEERING & INDIRECT	TS									
D-01	Construction Engineering			ult: 10.95%)			% of CI 10.95%	\$204,327	% of CI 10.95%	\$241,557	
D-02 D	Construction Indirects CONSTRUCTION ENGINEERING &	& INDIRECTS	(Defau	ılt: 9.5%)	SUBTOTAL (D)	(% of CI)	9.50% 20.45%	\$177,270 \$382,000	9.50%	\$209,570 \$451,000	i l
	PROJECT CONSTRUCTION BUDG	GET		CONSTRUCT	TION (A + B + C + D)	· ·		\$2,248,000		\$2,657,000	88.2%
				20.1017001				V=1=10,000		*=1001 1000	of Base Co
E - PRECO	NSTRUCTION ITEMS						Indirect ⁶	% 9.50%	Indirect 9	% 9.50%	1
				AVG	% EFFORT	[% of CI	Cost	% of CI	Cost	j l
E-01 E-02	Right-of-Way [Phase R] Utilities + Railroad Work [Phase U]	П		5.29		Adjusted>	5.16% 0.00%	(% CI + Indirect %) \$105,433 \$0	2.00% 0.00%	(% CI + Indirect %) \$48,311 \$0	
E-02 E-03 E-03.1	Design & Engineering [Phase D] Subsurface Utility Engineerin		Design	Maturity: 0 - Con	ceptual		12.00% 0.75%	\$0 \$245,192 \$15,325	12.00% 0.75%	\$289,868 \$18,117	
E-03.2 E-04	Transportation Systems Man Environmental (NEPA) [Phase E]	nagement & Operat	ion (TSM&O) Budget				0.00% 0.00%	\$0 \$0	0.00% 0.00%	\$0 \$0	П
E-05	Miscellaneous [Phase M]						0.00%	\$0	0.00%	\$0	<u> </u>
L-03					SUBTOTAL (E)	(% of CI)	19.61%	\$366,000	16.14%	\$356,000	11.8% of Base Co
E E	PRECONSTRUCTION ITEMS							42.044.000		\$2.042.000	4 1
		ATE	CONST	RUCTION + PRE	CONSTRUCTION			\$2.614 000			100.0%
	PRECONSTRUCTION ITEMS PROJECT BASE COST ESTIMA	ATE	(CONSTR	RUCTION + PRE	CONSTRUCTION)			\$2,614,000	PE/ME Bass	\$3,013,000	
E	PROJECT BASE COST ESTIMA	ATE	(CONSTF	RUCTION + PRE	CONSTRUCTION)			\$2,614,000	RE/ME Ratio		
	PROJECT BASE COST ESTIMA		(CONSTF	DATE: 11/6/				RISK RESERVE	11.7%		
E	PROJECT BASE COST ESTIMA		(CONSTF				TOTAL PR			1.15	100.0% of Base Co
E RISK RESE	PROJECT BASE COST ESTIMA ERVE PROBABILISTIC COST ESTIMATE		(CONSTR				TOTAL PR	RISK RESERVE	11.7%	\$354,000	of Base Co
E	PROJECT BASE COST ESTIMA ERVE PROBABILISTIC COST ESTIMATE ON Construction Start Sep-22	E RISK RESERVE	Escalation from Estim	DATE: 11/6/	(2018)		TOTAL PR	RISK RESERVE	11.7%	\$354,000	of Base Co
E RISK RESE	PROJECT BASE COST ESTIMA ERVE PROBABILISTIC COST ESTIMATE	E RISK RESERVE		DATE: 11/6/	(2018)			RISK RESERVE ROJECT COST (P70)	11.7% OF BASE COST 14.1%	\$354,000	of Base Co







Benefit-Cost Analysis Appendix

Department of Transportation's Competitive Highway Bridge Program for Fiscal Year 2018

Prepared for CDOT by AECOM

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Executive Summary

A benefit-cost analysis (BCA) was conducted to support the grant application of the Colorado Department of Transportation (CDOT) for the Department of Transportation's Competitive Highway Bridge Program for Fiscal Year 2018. There are 14 bridges in Region 2 that are bundled for the analysis. This analysis was conducted in accordance with the 2018 Benefit-Cost Analysis Guidance for Discretionary Grant Programs. Capital outlays are scheduled to begin in 2021, with the last bridges scheduled for completion in 2022. Project benefits were estimated for a 20-year analysis period following completion (2023 through 2042). All values are in 2018 dollars discounted to 2018 using 7 percent and 3 percent discount rates.

Exhibit 1 presents the Impact Matrix, which describes the baseline, the Project as a whole, and the estimated results.

Exhibit 1 – Impact Matrix

Current Status/Baseline & Problem to be	Change to Baseline or Alternatives	Types of Impacts	Affected Population	Economic Benefit (Net Present Values, \$2018 M)		Page Reference	
Addressed	Of Atternatives	of Atternatives			Discounted at 7%	Discounted at 3%	in BCA
		Safety:					
		Reduced Roadway Fatalities and Crashes	Drivers who reduce VMT after Project opening	\$7.72	\$13.04	12	
Fourteen (14) bridges are past	past replace 14 bridges, e and bringing them up to a equire state of good repair, and thus reducing e and maintenance expenditures and	Safety Improvements at Bridges	Drivers and property owners near the Project bridges	\$0.09	\$0.15	13	
their useful life and		State of Good Repair:				_	
as a result require frequent		Roadway Maintenance Savings Taxpayers	CDOT	\$ 0.04	\$0.07	40	
frequent maintenance and have the potential			Taxpayers	\$0.04	\$0.07	13	
for emergency		expenditures and VMT incurred by	Environmental Protection:				
closure. The	motorists due to	Emissions Savings	All residents and non-residents	\$0.60	\$1.01	14	
emergency closures create	eate VMT results in travel etours cost savings for autos, operating cost savings for trucks, emissions ult in savings, safety Economic Competitiveness: Travel Time Savings Auto Travel Cost Savings	Economic Competitiveness:					
delays and detours for motorists.		Travel Time Savings	Drivers who reduce VMT after Project opening	\$9.66	\$16.28	13	
These delays and detours result in		Drivers who reduce VMT after Project opening	\$10.43	\$17.61	14		
costs incurred by motorists, CDOT,	improvements and crash reductions, and	Decidual Cavings	CDOT	\$2.14	\$7.24	14	
and trucking businesses.	roadway maintenance savings.	Ιαλραγοίο	\$2.14	Φ1.24	14		
businesses.	Savings.		Freight operators				
		Truck Operating Savings	Shippers	\$4.54	\$7.65	14	
			Customers				

Exhibit 2 summarizes long-term outcomes of the Project. Taken in total, the Project provides \$56.4 million in benefits - reduced roadway fatalities and crashes, safety improvements at bridges, roadway maintenance savings, travel time savings, congestion savings, travel cost savings, residual savings, freight benefits, and emissions savings — over the analysis period, using a 7 percent discount rate. Compared to a similarly discounted cost estimate, the Benefit-Cost Ratio for the Project is 2.1, a solid return on this critical investment for the region. This ratio rises to 3.1 when benefits and costs are discounted at 3 percent. The net benefits of the Project are \$29.35 million using a 7 percent discount rate and \$65.26 million using a 3 percent discount rate.

Exhibit 2 – Costs and Key Benefits Delivered by Long-Term Outcomes

All Region 2 Bridges	7% Discount Rate	3% Discount Rate					
Costs (2018 \$M)							
Capital Cost	\$27.09	\$30.91					
Total Costs	\$27.09	\$30.91					
Benefits (2	018 \$M)						
Safety Benefits							
Reduced Roadway Fatalities and Crashes	\$7.72	\$13.04					
Safety Improvements at Bridges	\$0.09	\$0.15					
Sub-Total	\$7.81	\$13.19					
State of Good Repair Benefits							
Roadway Maintenance Savings	\$0.04	\$0.07					
Sub-Total	\$0.04	\$0.07					
Economic Competitiveness Benefits							
Travel Time Savings	\$9.66	\$16.28					
Auto Travel Cost Savings	\$10.43	\$17.61					
Residual Savings	\$2.14	\$7.24					
Truck Operating Savings	\$4.54	\$7.65					
Sub-Total	\$26.76	\$48.78					
Environmental Protection							
Emissions Savings	\$0.60	\$1.01					
Sub-Total	\$0.60	\$1.01					
Net Operating & Maintenance Costs	\$21.22	\$33.13					
Total Benefits	\$56.45	\$96.17					
Outcome							
Net Benefits (2018 \$M)	\$29.35	\$65.26					
Benefit-Cost Ratio	2.1	3.1					

Source: AECOM

1. Introduction

Colorado is one of the fastest growing states in the country, and with that growth comes significant strain on aging transportation systems that has significant and tangible consequences in the form of growing safety and mobility problems. Three rural highway corridors – State Highway (SH) 9, United States Highway (US) 24, and US 350 – considered for the Region 2 Bundle serve as vital transportation routes for rural communities, freight movement, and support for agriculture.

Based on the evaluation, 14 bridges were identified as candidates for replacement and comprise the Region 2 Bundle (Table 2). All of the bridges are decades past their original design life, with 13 of the bridges being at least 80 years old. None of the bridges meet FHWA roadway standard shoulder width or current construction standards. Thirteen (13) of the bridges are rated as "poor" per the FHWA guidelines and three of the bridges are load restricted.

Exhibit 3 – Bridges Included in Region 2 Bundle

National Bridge Structure Number	Highway Corridor	Year Built	Condition Rating	Load Restricted	Current Bridge Type*	Replacem ent Bridge Type*	Replacement Cost
G-12-C	SH 9	1938	Poor	No	CBC	CBC	\$1,795,000
J-14-C	SH 9	1934	Fair	No	TTS	CBC	\$2,634,000
J-15-G	SH 9	1971	Poor	No	CMP	RCP	\$1,441,000
I-13-G	US 24	1937	Poor	Yes	TTS	CBC	\$2,902,000
I-15-AO	US 24	1937	Poor	No	CBC	CBC	\$2,462,000
I-15-T	US 24	1937	Poor	No	CBC	CBC	\$2,184,000
H-13-N	US 24	1937	Poor	No	TTS	CBC	\$2,104,000
M-21-B	US 350	1937	Poor	No	CI	CBC	\$3,738,000
M-21-C	US 350	1937	Poor	No	CI	CBC	\$3,367,000
M-21-J	US 350	1935	Poor	Yes	TTS	CBC	\$1,897,000
M-22-U	US 350	1935	Poor	No	CI	CBC	\$1,590,000
M-22-Y	US 350	1935	Poor	Yes	TTS	RCP	\$1,177,000
N-21-C	US 350	1936	Poor	No	TTS	CBC	\$3,289,000
N-21-F	US 350	1937	Poor	No	CI	CBC	\$3,672,000

Bridge CBC = concrete box culvert **Total \$34,255,000**

Types: CMP = corrugated metal pipe

CI = concrete on I-beam

RCP = reinforced concrete pipe

TTS = treated timber stringer

The bridges in the Region 2 Bundle are constructed of timber, concrete, and steel. While CDOT has been actively maintaining the bridges, age and severe seasonal weather have led to wooden supports and girders splitting, wooden piles rotting, support walls cracking, concrete spalling, excessive deflection and movement of substructure units, and bridge decks deteriorating. The frequency and magnitude of maintenance and associated emergency

closures of the bridges has accelerated and will reach the point where replacement is the only reasonable option. This need for replacement of the bridges is evident by the replacement of approximately 40 adjacent bridges that has occurred in the same corridors. The bridges replaced by CDOT were of similar age, similar design, and followed similar construction practices as the bridges in the Bundle. This highlights the increased needs of these corridors as the infrastructure ages and also CDOT's ongoing efforts to maintain a state of good repair for the rural highway system.

The implementation and delivery of the replacement of the Region 2 Bundle of bridges represents an opportunity for the State of Colorado to effectively improve mobility and safety outcomes along several of the state's rural corridors while concurrently ensuring that the economic vitality provided by these crucial corridors is maintained.

2. Benefit Analysis Framework

The benefits analysis was conducted using the Benefit-Cost Analysis Guidance for Discretionary Grant Programs document as a guide for preferred methods and monetized values. The parameters of the benefits analysis follow the protocols set by the Office of Management and Budget (OMB) Circular A-94 as well as the recommended benefit quantification methods by the U.S. Department of Transportation (USDOT), the United States Army Corps of Engineers, the Federal Emergency Management Agency, and U.S. Department of Agriculture, Forest Service. Generally, standard factors and values accepted by federal agencies were used for the benefits calculation except in cases where Project-specific values or prices were available. In all such cases, modifications are noted and references are provided for data sources. The analysis follows a conservative estimation of the benefits and assesses some of the benefits qualitatively. By adhering to a strict standard of what could be included in the benefits analysis, actual total benefits may be greater than depicted in the results.

The baseline assumes that the Project will not be built (i.e., the 14 bridges would not be replaced at this time) and the bridges would continue to deteriorate, requiring increased maintenance activities and potential for emergency closure. Under the baseline, the purpose of and need for the Project would not be met. The Project was compared to the baseline to identify benefits and costs.

A custom model was developed to estimate the future benefits for the Project. Benefits were estimated over a 20-year period of analysis beginning when construction ends and concluding after 20 full years of operations. While the replacement schedule for each bridge varies, the construction period for the bundle of 14 bridges is from 2021 through 2022. The 20-year period of analysis is from 2023 through 2042. The base year is 2018 and all values were discounted to the base year.

The benefits are expressed in constant 2018 dollars, which avoids forecasting future inflation and escalating future values for benefits and costs accordingly. The gross domestic product chained price index from the OMB was used to adjust past cost estimates or price values into 2018 dollar terms (OMB, 2018).

The use of constant dollar values requires the use of a real discount rate for discounting to the present value. Projects expecting to use federal funding are required to use a 7 percent discount rate. The Project was also evaluated using a 3 percent discount rate.

3. Analysis Assumptions

The BCA is based on several assumptions on the differences between the baseline scenario and the Build Alternative (replacement of the bridges). The two most significant assumptions are related to maintenance activities and emergency closure and replacement of a bridge. As the bridges age and their conditions worsen, it is anticipated that maintenance activities will increase under the baseline scenario. Engineers at CDOT estimated the maintenance activities that would be required for each of the bridges, which includes repairs to the superstructure and substructure. If the bridges are replaced, structural issues related to the bridges would be resolved and general maintenance activities would decrease.

Bridges in Colorado are regularly inspected by CDOT to identify required maintenance and issues that could impact the integrity of a bridge. While maintenance activities are scheduled and resolved by CDOT, inspectors occasionally identify issues that could compromise the integrity/safety of a bridge. When these issues are identified, load restrictions may be placed on the bridge, and if the issue is significant, the bridge will be closed. When emergency closure occurs, the bridge/road is fully closed and vehicle traffic is required to detour to other roads. Based on experience with prior emergency closures, it is estimated that vehicle traffic would need to follow the detour route for 30 days until a temporary bypass/bridge can be constructed adjacent to the closed bridge. Following an emergency closure, approximately two weeks are needed to get a contract in-place using emergency contracting procedures, and contractor mobilization and construction of the temporary bypass/bridge typically takes two to three weeks. If acquisition of a temporary easement is required, it will add a minimum of a month to the process for a total of 60 to 90 days. For the purposes of this analysis, the assumption has been made that a temporary bypass/bridge would be in place within 30 days.

Because of the condition of a bridge subject to emergency closure, the only reasonable option is to replace the bridge (as opposed to conducting extensive repairs on old bridge). Based on the conditions of the bridges and the rate that similar bridges have been replaced in the corridors (approximately 40 bridges of similar age and construction have already been replaced in the corridors), it is estimated that there is a 5 percent chance in any given year that a bridge would require emergency closure and replacement. This assumption was derived through the engineering judgement of CDOT Staff Bridge and Colorado Bridge Enterprise program leadership with input from CDOT Region staff. Emergency closure and replacement results in an "all hands on deck" at CDOT until the road is open to traffic. Because of the need to quickly mobilize contractors, procure materials, and obtain approvals, CDOT estimates that emergency replacement of a bridge costs 25 percent more than a planned replacement. The primary drivers for the cost increase are lack of a competitive bid due to the implementation of emergency contracting procedures, contractors needing to divert staff/equipment from other projects, and major changes to scope during construction since construction documents for the replacement structure are typically not available in an emergency situation.

A list of assumptions for the Project is provided in the BCA workbook (see Inputs tab in the file BCA_Workbook_Region_2_Bundle.xlsx) as well as in Exhibit 4.

Exhibit 4 – BCA Calculation Inputs

Input	Value	Source		
		General		
Discount Rate	7%	2018 BCA Guidance for Discretionary Grant Programs		
Discount Rate	3%	2018 BCA Guidance for Discretionary Grant Programs		
Biocount reace	See	2010 BCA Guidance for Discretionary Grant Frograms		
	"Deflator"	https://www.whitehouse.gov/sites/whitehouse.gov/files/o		
Deflator	Sheet	mb/budget/fy2018/hist10z1.xls		
Dollar year	2018			
Discount year	2018			
Analysis period	20	years		
		Safety		
AIS 0 (2017\$) per vehicle	\$4,327	2018 BCA Guidance for Discretionary Grant Programs		
AIS 1 (2017\$)	\$28,800	2018 BCA Guidance for Discretionary Grant Programs		
AIS 2 (2017\$)	\$451,200	2018 BCA Guidance for Discretionary Grant Programs		
AIS 3 (2017\$)	\$1,008,000	2018 BCA Guidance for Discretionary Grant Programs		
AIS 4 (2017\$)	\$2,553,600	2018 BCA Guidance for Discretionary Grant Programs		
AIS 5 (2017\$)	\$5,692,800	2018 BCA Guidance for Discretionary Grant Programs		
AIS 6 (2017\$)	\$9,600,000	2018 BCA Guidance for Discretionary Grant Programs		
Injury (severity unknown)	\$174,000	2018 BCA Guidance for Discretionary Grant Programs		
AIS 0 (2018\$) per vehicle	\$4,395	Adjusted by GDP Deflator		
AIS 1 (2018\$)	\$29,251	Adjusted by GDP Deflator		
,				
AIS 2 (2018\$)	\$458,267	Adjusted by GDP Deflator		
AIS 3 (2018\$)	\$1,023,788	Adjusted by GDP Deflator		
AIS 4 (2018\$)	\$2,593,595	Adjusted by GDP Deflator		
AIS 5 (2018\$)	\$5,781,963	Adjusted by GDP Deflator		
AIS 6 (2018\$)	\$9,750,358	Adjusted by GDP Deflator		
Injury (severity unknown) Conversion rate for Metric	\$176,725	Adjusted by GDP Deflator		
tons to Short Tons	1.1015	2018 BCA Guidance for Discretionary Grant Programs		
tone to oner rene		Monetization Values		
	Lillissions	https://www.transportation.gov/sites/dot.gov/files/docs/m		
VOC Value of Emissions		ission/office-policy/transportation-policy/284031/benefit-		
(2017\$) per short ton	\$1,905	cost-analysis-guidance-2018_0.pdf		
		Corporate Average Fuel Economy for MY2017-MY2025 Passenger Cars and Light Trucks (August 2012), page		
NOx Value of Emissions		922, Table VIII16, "Economic Values Used for Benefits		
(2017\$) per short ton	\$7,508	Computations (2010 dollars). Inflated to 2017 dollars.		
PM Value of Emissions (2017\$) per short ton	\$343,442	Adjusted by GDP Deflator		
VOC Value of Emissions	Ψ040,442	Adjusted by ODI Deliator		
(2018\$) per short ton	\$1,935	Adjusted by GDP Deflator		
NOx Value of Emissions	ф т 000	Adjusted by CDD Defleter		
(2018\$) per short ton PM Value of Emissions	\$7,626	Adjusted by GDP Deflator		
(2018\$) per short ton	\$348,821	Adjusted by GDP Deflator		
· · · · · · · · · · · · · · · · · · ·	•	issions Rates		
Passenger Car Emission		http://www.apta.com/gap/fedreg/Documents/NS-		
Rates per Mile, VOC, 2013-	0.6	SS_Final_PolicyGuidance_August_2013.pdf		

2024		
Passenger Car Emission Rates per Mile, NOx, 2013- 2024	0.91	http://www.apta.com/gap/fedreg/Documents/NS- SS_Final_PolicyGuidance_August_2013.pdf
Passenger Car Emission		
Rates per Mile, PM25, 2013- 2024	0.01	http://www.apta.com/gap/fedreg/Documents/NS-SS_Final_PolicyGuidance_August_2013.pdf
Passenger Car Emission		
Rates per Mile, CO2, 2013- 2024	532	http://www.apta.com/gap/fedreg/Documents/NS- SS_Final_PolicyGuidance_August_2013.pdf
Passenger Car Emission		
Rates per Mile, VOC, 2025-		http://www.apta.com/gap/fedreg/Documents/NS-
2034	0.27	SS_Final_PolicyGuidance_August_2013.pdf
Passenger Car Emission		
Rates per Mile, NOx, 2025-		http://www.apta.com/gap/fedreg/Documents/NS-
2034	0.28	SS_Final_PolicyGuidance_August_2013.pdf
Passenger Car Emission Rates per Mile, PM25, 2025-		http://www.apta.com/gap/fedreg/Documents/NS-
2034	0.01	SS_Final_PolicyGuidance_August_2013.pdf
Passenger Car Emission		
Rates per Mile, CO2, 2025-		http://www.apta.com/gap/fedreg/Documents/NS-
2034	434	SS_Final_PolicyGuidance_August_2013.pdf
Passenger Car Emission		http://www.apta.com/gap/fedreg/Documents/NS-
Rates per Mile, VOC, 2035-	0.21	SS_Final_PolicyGuidance_August_2013.pdf
Passenger Car Emission		http://www.apta.com/gap/fedreg/Documents/NS-
Rates per Mile, NOx, 2035-	0.2	SS_Final_PolicyGuidance_August_2013.pdf
Passenger Car Emission Rates per Mile, PM25, 2035-	0.01	http://www.apta.com/gap/fedreg/Documents/NS-SS_Final_PolicyGuidance_August_2013.pdf
Passenger Car Emission Rates per Mile, CO2, 2035-	397	http://www.apta.com/gap/fedreg/Documents/NS- SS_Final_PolicyGuidance_August_2013.pdf
Conversion rate for Metric		
tons to Short Tons	1.1015	2018 BCA Guidance for Discretionary Grant Programs
Truck Emissions Rate g per		https://www3.epa.gov/otag/consumer/420f08025.pdf,
hour VOC (average of 8a and		Class 8 trucks include long-haul semi-tractor trailer rigs
8b trucks)	3.868	ranging from 33,001 lbs to >60,000 lbs
Truck Emissions Rate g per		https://www3.epa.gov/otaq/consumer/420f08025.pdf,
hour Nox (average of 8a and		Class 8 trucks include long-haul semi-tractor trailer rigs
8b trucks)	39.0515	ranging from 33,001 lbs to >60,000 lbs
Truck Emissions Rate g per		https://www3.epa.gov/otaq/consumer/420f08025.pdf,
hour PM2.5 (average of 8a		Class 8 trucks include long-haul semi-tractor trailer rigs
and 8b trucks)	1.092	ranging from 33,001 lbs to >60,000 lbs
Truck Emissions Rate g per		https://www3.epa.gov/otaq/consumer/420f08025.pdf,
hour PM10 (average of 8a		Class 8 trucks include long-haul semi-tractor trailer rigs
and 8b trucks)	1.187	ranging from 33,001 lbs to >60,000 lbs
		EPA 420-F-08-027, Average In-Use Emissions from
Truck Emissions Rate g per		Heavy-Duty Trucks, October 2008,
mile VOC (average of		nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=P100EVY6.TX
gasoline and diesel)	1.0165	Т
		EPA 420-F-08-027, Average In-Use Emissions from
Truck Emissions Rate g per		Heavy-Duty Trucks, October 2008,
mile Nox (average of gasoline	_	nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=P100EVY6.TX
and diesel)	5.7635	T
		EPA 420-F-08-027, Average In-Use Emissions from
Truck Emissions Rate g per		Heavy-Duty Trucks, October 2008,
mile PM2.5 (average of	0.455	nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=P100EVY6.TX
gasoline and diesel)	0.123	T
Truck Emissions Rate g per	0.135	EPA 420-F-08-027, Average In-Use Emissions from

mile PM10 (average of		Heavy-Duty Trucks, October 2008,		
gasoline and diesel)		nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=P100EVY6.TX		
gasonne and dieser)		Tepis.epa.gov/Exe/2yPORE.cgi?Dockey=F100Ev10.1X T		
	T			
Value of Time (2017\$),	Trave	I Time Savings		
private vehicle travel time per				
person hour, all purposes	\$14.20	2018 BCA Guidance for Discretionary Grant Programs		
Value of Time (2017\$), truck	Ψ14.20	2010 BCA Guidance for Discretionary Grant Frograms		
driver per hour	\$28.60	2018 BCA Guidance for Discretionary Grant Programs		
Value of Time (2018\$),	Ψ20.00	2010 BOA Guidance for Discretionary Grant Frograms		
private vehicle travel time per				
person hour, all purposes	\$14.42			
Value of Time (2018\$), truck	* * * * * * * * * * * * * * * * * * * *			
driver per hour	\$29.05			
Average Marginal Costs per	·			
Mile, 2016\$ (includes value of				
driver's time)	\$1.59	Table 8 ATRI Operational Cost of Trucking 2017		
Average Marginal Costs per				
Mile, 2018\$	\$1.64	Adjusted by GDP Deflator		
Vehicle Maintenance Cost per				
Mile, Auto (Gas,				
maintenance, tires, and				
depreciation) (2017\$/Mile)	\$0.39	2018 BCA Guidance for Discretionary Grant Programs		
Vehicle Maintenance Cost per				
Mile, Auto (Gas,				
maintenance, tires, and	¢0.40			
depreciation) (2018\$/Mile)	\$0.40			
Auto Occupancy	1.39	2018 BCA Guidance for Discretionary Grant Programs		
Assumed Speed on Road	55	Facing original independent		
(mph) Average Vehicle Delay Time	55	Engineering judgement		
Due to Maintenance (minutes)	5	Engineering judgement		
Due to Maintenance (minutes)				
Deal a Maistanana Orat	State	of Good Repair		
Roadway Maintenance Cost,		FUNA Highway Cost Allosotion Study, 2000 Addendum		
Rural Interstate (2000\$/mi) - Auto	\$0.000	FHWA Highway Cost Allocation Study, 2000 Addendum, Table 13		
Roadway Maintenance Cost	φυ.υυυ	Table 13		
per Mile, Rural Interstate				
(2018\$) - Auto	\$0.000	Adjusted by GDP Deflator		
Roadway Maintenance Cost,	ψ3.000	,		
Rural Interstate (2000\$/mi) -		FHWA Highway Cost Allocation Study, 2000 Addendum,		
40 kip truck	\$0.010	Table 13		
Roadway Maintenance Cost	•			
per Mile, Rural Interstate				
(2018\$) - 40 kip truck	\$0.014	Adjusted by GDP Deflator		
Share of Construction costs				
that are for bridge structure	75%	Engineering judgement		
		Colorado Bridge Enterprise: Strategies for Enhancing		
Useful life for bridge (years)	100	Bridge Service Life, 2015		
Maintenance				
Maintenance costs in years 0-				
5 as percent of CAPEX				
(inspection)	0.10%	Engineering judgement		
Maintenance costs in years 5-				
20 as percent of CAPEX	0.050/	For the series is decreased		
(inspection and scheduled	0.25%	Engineering judgement		

maintenance)		
Estimated Bridge Closure		
Time in Case of Emergency		
Bridge Replacement (days)	30	CDOT, CBE
Probability of emergency		
bridge replacement	5%	CDOT, CBE
Emergency Repair Premium	25%	CDOT, CBE

4. Benefits Methodology

The methodology used to estimate the benefits of the Project are described in the following sections.

Safety

The Project would result in safety benefits by removing auto trips from the region's roads. The methodologies for calculating this benefit are described in this section.

Reduced Roadway Fatalities and Crashes

As bridges age past their intended useful life, they require more frequent repairs to keep them operational. However, as time goes on, the probability of a bridge needing emergency replacement, instead of repairs, increases. Emergency bridge replacement would require closure of the route, leading to detours. Per CDOT guidance, it was assumed that a typical closure for emergency bridge replacement would last 30 days, after which time a bridge bypass would be constructed. Detour length was applied to average annual daily traffic (AADT) and the number of days the bridge would be closed, to obtain the vehicle miles travelled (VMT) incurred by motorists in an emergency bridge replacement scenario. Per CDOT guidance, it was assumed that the likelihood of an emergency bridge closure and replacement happening in any year of the analysis period is 5 percent. This probability was then applied to the VMT incurred in the event of an emergency bridge closure and replacement to obtain annual VMT incurred. As under the baseline, there would be no emergency bridge replacement due to condition, the VMT incurred is VMT avoided.

The rates of crashes that result in fatalities, injuries, and property damage are applied to the net annual VMT to derive the estimated crashes from the change in VMT. To ensure consistency between the types of crashes, the crash rates for fatalities, injuries, and property damage are the national average crash rates. These crash rates are shown in Exhibit 5.

Exhibit 5 - Crashes by Type per 100,000,000 VMT

Fatalities	1.133692236
Injured persons	78.93618107
Crashes	203.3926964

Source: 2015 BTS Motor Vehicle Safety Data Table 2-17, https://www.bts.gov/content/motor-vehicle-safety-data

These crash reduction factors were then converted to the Maximum Abbreviated Injury Score (MAIS) crash types in order to apply US DOT Guidance on the value of avoiding a crash. The conversion is based on the National Highway Safety and Traffic Administration (NHTSA) KABCO-AIS Conversion Table (July 2011) provided on page 12 of the TIGER Benefit-Cost

Analysis Resource Guide (USDOT 2016),1 for Injury (severity unknown), and No Injury crashes. KABCO refers to the letters used to designate five levels of crash severity used by police at a crash scene; AIS refers to the Abbreviated Injury Scale used by hospitals. These factors provide the probability that an injury will range from critical to minor to more accurately capture the total number of different types of injuries associated with the VMT avoided. Estimating the distribution of expected injury types is important because the economic cost of the injury increases as injury severity increases.

The total annual value for crash severity is based on USDOT guidance and the National Highway Safety Council estimates for the value of avoiding a crash. These estimates are applied to the number of crashes avoided to estimate the total value of crashes avoided from auto VMT avoided. *The total reduction in highway fatalities and crashes results in \$7.72 million in benefits, discounted at 7 percent.*

Safety Improvements at Bridges

In addition to the safety benefit from changes to VMT in the state, the reconstruction of the bridges results in safety benefits from bringing the bridges up to current design standards. Installing a new bridge with a 36' or 40' width would reduce crashes, and thus fatalities, injuries, and property damage. Crash reduction factors for each of the bridges in the bundle were provided by CDOT. To be conservative, it was assumed that all new bridges would have a width of 36', which would have a lower crash reduction factor than a bridge with a width of 40'. The reduced fatalities, injuries, and property damage were valued based on USDOT guidance and are listed in Exhibit 4. *The total safety improvements at bridges results in \$0.09 million in benefits when discounted at 7 percent.*

State of Good Repair

The Project would result in state of good repair benefits by removing auto trips from the region's roads. The methodology for calculating this benefit is described in this section.

Roadway Maintenance Savings

In an event of an emergency bridge replacement, the resulting detours would increase auto and truck VMT during the closure period, incurring additional roadway maintenance costs, such as painting and paving. The roadway maintenance cost savings are negligible per auto VMT on rural highways, as obtained from the FHWA Highway Cost Allocation Study. For trucks, the FHWA Highway Cost Allocation Study values their roadway maintenance cost per mile at \$0.014 for a 40-kip truck. Multiplying the auto and truck VMT by the maintenance costs per VMT results in state of good repair benefits. *Roadway maintenance savings amount to \$0.04 million, discounted at 7 percent.*

Economic Competitiveness

The Project would produce economic benefits by allowing trucks and automobiles to avoid detours, resulting in travel time savings, auto travel cost savings, residual value, and truck operating cost savings. The methodologies for calculating these benefits are described in this section.

¹ Benefit-Cost Analysis (BCA) Resource Guide 2016, https://www.transportation.gov/sites/dot.gov/files/docs/BCA%20Resource%20Guide%202016.pdf

Automobile Travel Time Savings

In an event of an emergency bridge replacement, vehicles must travel longer routes, thus incurring travel time delays. Assuming a 55 mile per hour travel speed on both the through-route and the detour route, the average detour travel time savings were estimated for the traffic volumes. In addition to travel time savings due to fewer detours, there would be fewer delays caused by partial closures for scheduled maintenance. It was assumed that vehicles would experience a 5 minute delay during a partial bridge closure (one lane would remain open). The annual delay time was obtained by multiplying the number of partial bridge closures each year by the AADT and the average delay time of 5 minutes. Multiplying the net hours by the average vehicle occupancy (1.39)² and the personal value of time (\$14.42 in 2018 dollars), as found in Exhibit 4, yields the total travel time savings. *The total travel time savings for the Project amounts to \$9.66 million discounted at 7 percent.*

Auto Travel Cost Savings

Because under the Build Alternative, there won't be an emergency bridge replacement due to condition of the structure, drivers would not have to detour and would thus realize travel cost savings relative to the baseline. Travel cost savings was estimated using cost savings per reduced auto VMT of \$0.40, which is based on the vehicle maintenance cost per mile provided by AAA and recommended by guidance, and inflated to 2018 dollars. The marginal savings includes gas, maintenance, and tires. *Auto travel cost savings amount to \$10.43 million discounted at 7 percent.*

Truck Operating Savings

Based on the additional truck VMT incurred in the event of an emergency bridge replacement, the net truck operating savings is calculated. Additionally, truck delays were calculated for partial bridge closures, also assuming a 5 minute average delay, as described for automobile travel time savings. The savings per mile of \$1.64 in 2018 dollars is the average marginal cost per mile for truck operations from the American Trucking Research Institute. This cost includes both vehicle-based costs and driver-based costs. *The total truck operating savings for the Project amounts to \$4.54 million discounted at 7 percent.*

Residual Value

Construction of the new bridges results in residual value after the end of the 20-year analysis period, because the useful life of the bridge is 100 years. It was assumed that 75 percent of the construction costs are for bridge infrastructure. The remaining value of the bridge discounted from the last year of the 20-year analysis period. The value of the remaining useful life for the Project discounted at 7 percent is \$2.14 million.

Environmental Protection

The Project would result in net environmental protection benefits, as there would not be an emergency bridge replacement due to condition of the structure, resulting in emissions savings relative to the baseline Alternative. The methodology for calculating this net result is described in this section.

² 2018 Benefit-Cost Analysis Guidance for Discretionary Grant Programs, https://www.transportation.gov/sites/dot.gov/files/docs/mission/office-policy/transportation-policy/284031/benefit-cost-analysis-guidance-2018.pdf

³ Source: AAA, Your Driving Costs, 2017

⁴ Source: CDOT. Colorado Bridge Enterprise: Strategies for Enhancing Bridge Service Life, 2015

Emissions Savings

The decrease in auto and truck VMT in the Build Alternative relative to the baseline results in emissions reductions.

The emissions reductions for autos were estimated using emissions rates from USDOT guidance for volatile organic compounds (VOC), nitrogen oxides (NOx), and particulate matter (PM2.5).5 The rates for autos are shown in Exhibit 4 and vary over time as vehicle efficiencies improve. The emissions rates for trucks for VOC, NOx, PM2.5, and PM10 are shown in Exhibit 4 and are constant over the analysis period.

The tons of emissions reduction were summed and monetized using the recommended value of emissions from 2018 USDOT guidance,6 also shown in Exhibit 4, and inflated to 2018 dollars. In total, the Project results in net emissions savings of \$0.60 million when discounted at 7 percent.

In addition to VOC, NOx, and PM reductions, carbon dioxide (CO2) or greenhouse gas emissions would also be reduced. Because there is no official guidance on the value of CO2 emissions reductions, these benefits were not quantified in the analysis.

5. Costs

The Project has two cost components: the initial capital costs and ongoing operating and maintenance (O&M) costs. The components used in this analysis are described in this section.

Capital Costs

The capital costs for the Project include the costs for right of way, utilities, design, and construction (Exhibit 6). The capital costs are applied over the individual project construction periods, beginning in 2021 and ending in 2022. Capital costs were given in 2018 dollars. It is estimated that the individual project costs are expended equally over the construction periods. *The total capital costs for the Project discounted at 7 percent are \$27.09 million.*

⁵ USDOT, Federal Transit Administration, New and Small Starts Evaluation and Rating Process Final Policy Guidance, August 2013

⁶ 2018 Benefit-Cost Analysis Guidance for Discretionary Grant Programs, https://www.transportation.gov/sites/dot.gov/files/docs/mission/office-policy/transportation-policy/284031/benefit-cost-analysis-guidance-2018.pdf

Exhibit 6 – Summary of Project Cost by Bridge

National Bridge Structure ID Number	ROW (including utilities)	Professional Services	Construction	Total
G-12-C	\$28,000	\$58,000	\$1,709,000	\$1,795,000
J-14-C	\$87,000	\$176,000	\$2,372,000	\$2,634,000
J-15-G	\$35,000	\$71,000	\$1,335,000	\$1,441,000
I-13-G	\$79,000	\$160,000	\$2,663,000	\$2,902,000
I-15-AO	\$72,000	\$146,000	\$2,244,000	\$2,462,000
I-15-T	\$46,000	\$94,000	\$2,043,000	\$2,184,000
H-13-N	\$44,000	\$90,000	\$1,970,000	\$2,104,000
M-21-B	\$137,000	\$278,000	\$3,323,000	\$3,738,000
M-21-C	\$121,000	\$245,000	\$3,002,000	\$3,367,000
M-21-J	\$56,000	\$113,000	\$1,728,000	\$1,897,000
M-22-U	\$67,000	\$136,000	\$1,388,000	\$1,590,000
M-22-Y	\$25,000	\$50,000	\$1,103,000	\$1,177,000
N-21-C	\$115,000	\$234,000	\$2,940,000	\$3,289,000
N-21-F	\$134,000	\$272,000	\$3,267,000	\$3,672,000
Total	\$1,045,000	\$2,122,000	\$31,089,000	\$34,255,000

Note: Right of way (ROW) includes utility relocation and any temporary easements that may be needed during construction. No permanent acquisition of property will be required for the replacement bridges.

Annual Operating and Maintenance Costs

The Project requires annual and periodic O&M expenditures to maintain the new bridge, but the replacement bridge would result in O&M savings from the baseline. In the baseline, the cost to maintain the bridges was provided by CDOT for a 20-year period (Exhibit 7).

Exhibit 7 - Annual O&M Costs for Existing Bridges by Year

National Bridge Structure ID #	2022	2027	2032	2037	2042	Total
J-15-G	\$81,700	\$19,092	\$27,700	\$19,092	\$27,700	\$175,284
J-14-C	\$51,800	\$41,703	\$37,000	\$41,703	\$37,000	\$209,206
N-21-C	\$456,822	\$22,000	\$56,122	\$22,000	\$56,122	\$613,066
M-21-J	\$58,303	\$22,000	\$42,328	\$22,000	\$42,328	\$186,959
M-22-Y	\$39,985	\$22,000	\$32,485	\$22,000	\$32,485	\$148,955
G-12-C	\$273,500	\$14,353	\$48,000	\$14,353	\$48,000	\$398,206
I-13-G	\$23,000	\$57,076	\$22,000	\$57,076	\$22,000	\$181,152
H-13-N	\$44,049	\$22,000	\$34,049	\$22,000	\$34,049	\$156,147
M-21-B	\$673,536	\$0	\$64,434	\$4,200	\$64,434	\$806,604
M-22-U	\$495,609	\$0	\$36,262	\$0	\$36,262	\$568,133
I-15-T	\$363,200	\$14,172	\$196,000	\$14,172	\$196,000	\$783,544
I-15-AO	\$357,500	\$15,555	\$180,000	\$15,555	\$180,000	\$748,610
N-21-F	\$1,042,316	\$0	\$126,649	\$6,300	\$126,649	\$1,301,914
M-21-C	\$868,280	\$0	\$97,478	\$9,240	\$97,478	\$1,072,476

Source: CDOT

Additionally, emergency bridge replacement costs were included in the analysis. A probabilistic approach, assuming a 5 percent chance of emergency bridge replacement in any year of the analysis, was applied to the cost of building a new bridge. Because emergency replacement would cost more than a planned replacement, a 25 percent premium was applied to the replacement cost, per CDOT guidance.

Maintenance of the new bridges is assumed to be 0.10 percent of capital costs for the first 5 years, and 0.25 percent of the capital costs thereafter. This is a lower cost than the existing O&M costs, so many years result in O&M savings from the bridge reconstruction. *The net O&M savings over the analysis period and discounting at 7 percent is \$21.22 million.*

6. BCA Results

The analysis results in a total Project BCA ratio of 2.1 when discounted at a rate of 7 percent, and increases to 3.1 when discounted at 3 percent. Exhibit 8 displays a summary of the BCA results for the bundle.

Exhibit 8 – BCA Results

All Region 2 Bridges

7% Discount Rate 3% Discount Rate

2 (22.42.42)						
Costs (20°	18 \$M)					
Capital Cost	\$27.09	\$30.91				
Total Costs	\$27.09	\$30.91				
Benefits (2	018 \$M)					
Safety Benefits		_				
Reduced Roadway Fatalities and Crashes	\$7.72	\$13.04				
Safety Improvements at Bridges	\$0.09	\$0.15				
Sub-Total	\$7.81	\$13.19				
State of Good Repair Benefits						
Roadway Maintenance Savings	\$0.04	\$0.07				
Sub-Total	\$0.04	\$0.07				
Economic Competitiveness Benefits						
Travel Time Savings	\$9.66	\$16.28				
Auto Travel Cost Savings	\$10.43	\$17.61				
Residual Savings	\$2.14	\$7.24				
Truck Operating Savings	\$4.54	\$7.65				
Sub-Total	\$26.76	\$48.78				
Environmental Protection						
Emissions Savings	\$0.60	\$1.01				
Sub-Total	\$0.60	\$1.01				
Net Operating & Maintenance Costs	\$21.22	\$33.13				
Total Benefits	\$56.45	\$96.17				
Outcome						
Net Benefits (2018 \$M)	\$29.35	\$65.26				
Benefit-Cost Ratio	2.1	3.1				
0 AEOOM						

Source: AECOM

List of Supporting Documents

AAA, Your Driving Costs, 2017, http://exchange.aaa.com/wp-content/uploads/2017/08/17-0013_Your-priving-Costs-Brochure-2017-FNL-CX-1.pdf

CDOT. Colorado Bridge Enterprise: Strategies for Enhancing Bridge Service Life, 2015

FHWA Highway Cost Allocation Study, 2000 Addendum, Table 13, https://www.fhwa.dot.gov/policy/hcas/addendum.cfm

USDOT 2018 Benefit-Cost Analysis Guidance for Discretionary Grant Programs, https://www.transportation.gov/sites/dot.gov/files/docs/mission/office-policy/transportation-policy/284031/benefit-cost-analysis-guidance-2018.pdf

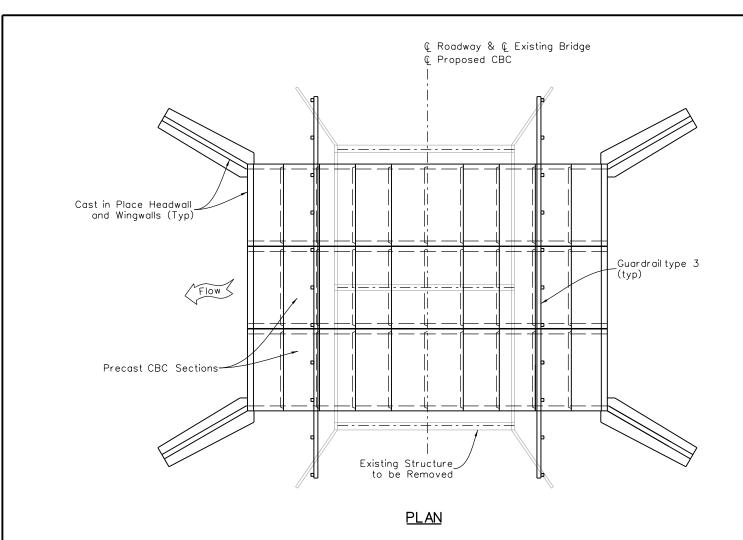
USDOT Benefit-Cost Analysis (BCA) Resource Guide, March 1, 2016, https://www.transportation.gov/sites/dot.gov/files/docs/BCA%20Resource%20Guide%202016.pdf

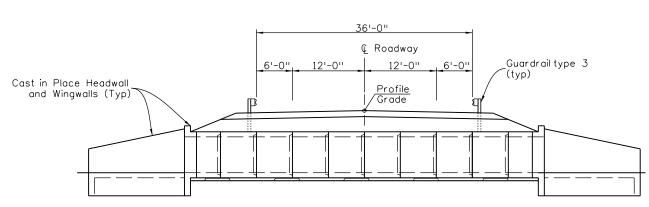
USDOT, Federal Transit Administration, New and Small Starts Evaluation and Rating Process Final Policy Guidance, August 2013

White House Office of Management and Budget. Historical Tables, Table 10.1 – Gross Domestic Product and Deflators Used in the Historical Tables 1940-2021. https://www.whitehouse.gov/omb/budget/Historicals

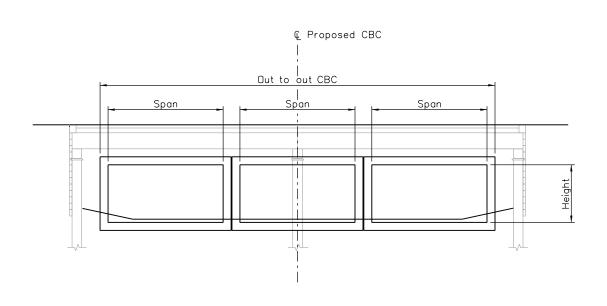
BCA_Workbook_Region_2_Bundle excel workbook







<u>SECTION</u>



SECTION

STRUCTURES WITH 2 LANE DETOUR

Bridge	Facility	F4 -4	N 4:1 = N 4 = ml = m	Replacement
	Carried	Feature Intersected	iville iviarker	Structure
G-12-C	SH 9 ML	PLATTE GULCH	71.445	3 cell CBC - 14'x6'
I-13-G	US 24 ML	DRAW	227.095	3 cell CBC - 14'x6'
H-13-N	US 24 ML	DRAW	240.686	2 cell CBC - 12'x10'
I-15-T	US 24 ML	DRAW	271.691	2 cell CBC - 10'x8'
I-15-AO	US 24 ML	DRAW	271.900	2 cell CBC - 10'x8'

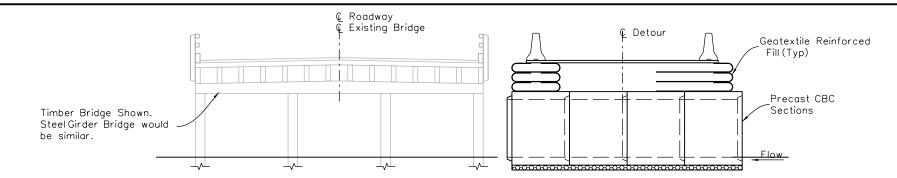
Print Date: 11/30/2018				Sheet Revisions	
File Name: Typical General Layout.dgn			Date:	Comments	Init.
Horiz. Scale: NTS	Vert. Scale: As Noted				
Staff Bridge Branch					

Colorado Department of Transportation

2829 West Howard Place
3rd Floor
Denver, CO 80204
Phone: 303-512-4079 FAX: 303-757-9197

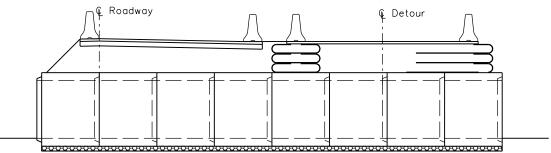
Staff Bridge Branch

As Constructed	TYPIC	Project No./Code			
No Revisions:	TIPIC	FHWA NOTICE OF			
Revised:	Designer:	CDOT	Structure	VARIOUS	FUNDING OPPORTUNITY
	Detailer:		Numbers		
Void:	Sheet Subset:	CBC	Subset Sheets:		



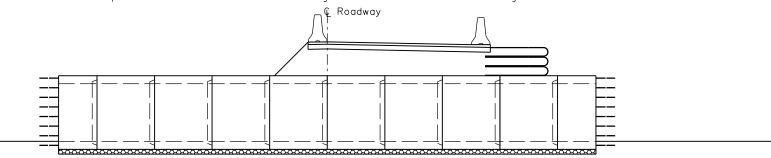
PHASE 1

- 1a. Level ground and prepare aggregate basecourse subgrade. Place CBC sections. Construction activity should be conducted entirely within the existing RDW, avoiding the time required to obtain temporary easements.
- 1b. Place geotextile reinforced backfill material and construct a single lane detour. Use temporary signals and shift traffic onto the single lane detour.



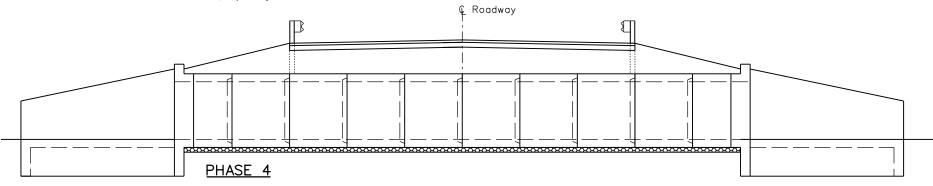
PHASE 2

- 2a. Demolish the existing bridge.2b. Grade, prepare subgrade, and place additional CBC sections.
- 2c. Place additional backfill material. Place pavement section which can be to final grade. Shift the location of the single lane detour.



PHASE 3

- 3a. Remove portions of the Phase I detour. Some of the CBC sections that will not be needed for the ultimate width may be removed and used to extend the other end.
- 3b. Place end sections that will have projecting rebar.



- 4a. Construct cast in place ends of CBC with headwall and cutoff wall. Construct cast in place wingwalls.
- 4b. Backfill, place pavement and guardrail. Open completed structure to traffic.

Print Date: 11/30/2018			Sheet Revisions		Colorado Donartment of Transportation
File Name: One Lane Detour Phasing.dgn		Date:	Comments	Init.	Colorado Department of Transportation
Horiz. Scale: NTS Vert. Scale: As Noted					CDOT 2829 West Howard Place 3rd Floor
Staff Bridge Branch					Denver, CO 80204 Phone: 303-512-4079 FAX: 303-757-9197
					Staff Bridge Branch

As Constructed	PHASIN	Project No./Code				
No Revisions:	WITH	FHWA NOTICE OF				
Revised:	Designer:	CDOT	Structure	VARIOUS	FUNDING OPPORTUNITY	
	Detailer:		Numbers			
Void:	Sheet Subset:	CDOT	Subset Sheets:			

STRUCTURES WITH ONE LANE DETOUR

Bridge	Facility	Feature Intersected	Mile Marker	Replacement
	Carried	reature intersected	iville iviai kei	Structure
J-15-G	SH 9 ML	MACK GULCH	15.970	3 - 6' RCP
J-14-C	SH 9 ML	LOUIS GULCH	20.107	3 cell CBC - 20'x8'
N-21-C	US 350 ML	DRAW	47.131	3 cell CBC - 14'x6'
N-21-F	US 350 ML	SHEEP CANYON ARROYO	48.744	3 cell CBC 20'x8'
M-21-C	US 350 ML	HOE RANCH ARROYO	50.582	3 cell CBC 20'x8'
M-21-B	US 350 ML	TREE ARROYO	51.682	4 cell CBC 20'x8'
M-21-J	US 350 ML	DRAW	57.069	2 cell CBC 18'x6'
M-22-Y	US 350 ML	DRAW	57.474	5' RCP
M-22-U	US 350 ML	OTERO DITCH	69.817	2 cell CBC 14'x10'
			· ·	

