US 36 Managed Lanes Project
Phase 1 - US 36 Reconstruction
(Federal to Interlocken Loop)

Project Management Plan

Prepared by:
the Colorado Department of Transportation
in Consultation with:
the Regional Transportation District
and the Federal Highway Administration

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1. INTRODUCTION

The US 36 Managed Lane/BRT Project (Project) was developed by the Colorado High Performance Transportation Enterprise (HPTE), the TIFIA sponsor, in partnership with the Colorado Department of Transportation (CDOT) and the Regional Transportation District (RTD). The HPTE is a government-owned business that operates as a division of CDOT. The Project is part of RTD's FasTracks Program, a multibillion dollar comprehensive transit expansion plan, in cooperation with Denver Regional Council of Governments (DRCOG); Colorado Bridge Enterprise (CBE); City and County of Broomfield; the Cities of Westminster, Boulder, and Louisville; Town of Superior; Boulder County; Adams County; and BNSF Railway (BNSF).

CDOT is managing this Project under a Design-Build delivery method.

The Design-Build, multimodal, toll-integrated Project includes the following elements:

- Reconstruction of approximately 10.1 miles of the US 36 mainline.
- Reconstruction of existing pavement, including widening to accommodate a new buffer-separated Express Lane in each direction of US 36 and12-foot-wide shoulders.
- Construction of retaining walls and sound walls.
- Replacement of the Wadsworth Parkway, Wadsworth Boulevard, and Lowell Boulevard bridges.
- Reconstruction of portions of the Wadsworth Parkway interchange.
- Installation of Intelligent Transportation Systems for tolling, transit information, and incident management. Toll systems installation and integration will be provided by others.
- Construction of portions of a commuter bikeway along the reconstructed section of the US 36 Corridor to provide a continuous commuter bikeway by connecting to or using existing facilities.

A. STATUS OF PROJECT

Major milestones for the Project Contract are listed below. A more detailed schedule for Project milestones is provided in Section 7 of this PMP.

Completed

- Signed Record of Decision Documenting the Preferred Alternative for Improvements to the US 36 Corridor — December 24, 2009
- Shortlisted Three Design-Build Teams — July 22, 2011
- Issued Design-Build Contract Request for Proposals (RFP) — September 2011

Current and Future

- Receive Design-Build Proposal — January 2012
- Select and Award Design-Build Contract — March 2012
- Open Project for Toll Collection — July 2015

B. FINANCIAL PLAN

CDOT has and maintains a Financial Plan for this Project. It was submitted prior to the first federal authorization for construction funds. The Plan is updated annually as required by section 1904(a) of SAFETEA-LU and the stipulations of the TIFIA loan. The Financial Plan:

- Provides the current estimate of the total cost of the Project and the remaining cost to complete the Project, identifies any significant cost changes since the previous Financial Plan, discusses reasons for and implications of the cost changes, and includes a summary table showing the history of Project Costs by major activity or category since the Base Case Financial Plan and the preceding Financial Plan.
- Provides the current schedule and implementation plan for completing the Project, including the Substantial Completion Date; identifies major milestones for each phase of the Project and compares current milestone dates with milestone dates in the Base Case Financial Plan and the preceding Financial Plan; and discusses reasons for changes in Project milestones.
- Provides current estimates of sources and uses of funds for the Project, identifies any significant funding changes since the preceding Financial Plan, discusses reasons for and implications of the funding changes, and includes a summary table showing the history of Project funding since the Base Case Financial Plan and the preceding Financial Plan.
- Provides an updated cash flow schedule showing annual cash needs versus available revenue and funding to meet those needs and identifies any potential revenue and funding shortfalls and addressing contingency measures that will or may be taken to address any shortfalls.
- Based on the updated cash flow schedule, provides projected debt service coverage ratios for any Senior Obligations and the TIFIA Loan through the Final Maturity Date.
- Provides cost containment strategies and risk mitigation plans that have been or may be implemented to address factors that are affecting or could affect the scheduled completion or financial viability of the Project.
- Provides the total value of approved changes in project design or scope, and provides a listing of each individual change valued at $2,500,000 or more, setting forth the rationale or need for the proposed change and describing the impact of such change on the Project.
- Contains, in form and substance satisfactory to the TIFIA Lender, a written narrative report on the progress of design, permitting, acquisition and construction of the Project since the Base Case Financial Plan and the preceding Financial Plan, describing in reasonable detail all significant activities concerning Project status including any material matters that may affect the future performance of the Borrower's obligations under this Agreement and the causes thereof.
- Complies in all respects with FHWA's Major Project Financial Plan requirements.

Once the initial Project Financial Plan is accepted by the USDOT, Nick Faber with the High Performance Transportation Enterprise and Ben Stein, Director of the CDOT's Office of Financial Management and Budget, will be responsible for the required annual updates.

C. PROJECT MANAGEMENT PLAN PURPOSE AND SCOPE

This Project Management Plan (PMP) was prepared in accordance with the FHWA requirements for major projects. The PMP establishes roles, responsibilities, project management control processes, and project administration framework; and it documents how CDOT will implement and manage all elements of the Project, including the startup of the tolling operations along US 36. The PMP is a living document and will be adjusted and updated periodically.

With this PMP, CDOT defines communication channels among all stakeholders, formulates the general management methodology and organizational structure, and describes the controls required for implementation. The PMP addresses all elements of applicant staffing, organizational structure, project scope, financing, budget, schedule, document control, quality assurance and quality control, internal reporting, third-party agreements, stakeholder coordination, property acquisition, utility relocations, construction management, safety, and scope change review and analysis, final design, tolling system testing, and start-up to tolling system operation and maintenance.

CDOT prepared this PMP and is implementing and maintaining it. Additionally, the Request For Proposal (RFP) and the Contract Documents require the Design-Build Contractor to develop various management plans to be submitted to CDOT for review and approval. These plans will define the processes and procedures that the Contractor will follow to assure the Contractor and Subcontractors perform in accordance with the Contract Documents and will be included in this Project Management Plan when approved or accepted by CDOT.

This PMP is a management tool that demonstrates that CDOT has evaluated management and administrative needs to successfully manage this Project.

D. US 36 MANAGED LANE PROJECT ROLES AND RESPONSIBILITIES

An Intergovernmental Agreement executed in August 2011 between CDOT, HPTE, and RTD outlines the roles and responsibilities for the implementation and operation of the managed lanes. The stakeholder groups that have a role in the design, construction, maintenance, financing, and operation of the proposed managed lane facility, along with responsibilities relating to ITS and tolling, are the following:

- **HPTE:** HPTE has the responsibility for managing and operating the I-25 and future US 36 toll facilities. They will provide a critical portion of the funding for the managed lane project through a Transportation Finance and Innovation Act (TIFIA) loan from the United States Department of Transportation (USDOT) backed by US 36 toll revenues. Once the loan is approved and financing for the project is secured, HPTE will partner with CDOT engineering and construction staff to execute the project.
- **CDOT ITS:** The CDOT ITS branch will operate and maintain the existing and proposed ITS infrastructure along US 36. This includes many of the ITS elements, but will not include the tolling equipment.
- **CDOT Headquarters:** The Division of Transportation Development (DTD) and CDOT Staff Traffic and Safety are located at CDOT Headquarters. The DTD will maintain the existing permanent traffic counters. CDOT Staff Traffic and Safety, who oversees all safety programs throughout the State, will evaluate safety performance in the corridor.
- **CDOT Region 4:** CDOT Region 4 will operate and perform general maintenance of the US 36 facility west of Wadsworth Boulevard. Region 4 will also be involved in the design and construction of the Project.

- **CDOT Region 6:** CDOT Region 6 will operate and perform general maintenance of the US 36 managed lane facility. They will continue to be responsible for opening and closing the I-25 Express Lanes (under an agreement with HPTE), and ensure that the existing and new VTMS are operational. Region 6 will also oversee the design and construction of the Project.
- **Regional Transportation District (RTD):** RTD is providing funding for the Project and will have specific requirements related to the use of the facility by public transit vehicles. In addition, coordination with RTD will be necessary to ensure that the proposed Project is consistent with the queue by-pass project that will be completed by RTD prior to the completion of the Project. Because of this RTD personnel will be included in the US 36 Project Management Team.
- **E-470:** Through an agreement with HPTE, the E-470 Public Highway Authority currently provides back-office support to HPTE for the I-25 Express Lanes. They will have a similar role for the managed lane along US 36. In addition, they will provide and install the toll collection equipment for the managed lanes.
- **Northwest Parkway:** No direct connection between the US 36 managed lane and Northwest Parkway is proposed. As a result, the role of the Northwest Parkway will be limited.
- **Denver Regional Council of Governments (DRCOG):** DRCOG is providing a portion of the funding for the project and will be involved as the Metropolitan Planning Organization (MPO) for the project.
- **Mayors and Commissioners Coalition:** The Mayors and Commissioners Coalition includes representatives from the Cities of Westminster, Broomfield, Louisville and Boulder along with the Town of Superior and Boulder County. These communities will be directly impacted by the managed lane and their feedback and concerns will be incorporated into the concept of operations, design, and final construction.
- **36 Commuting Solutions:** This non-profit public/private partnership organization has a goal to enhance mobility along the US 36 corridor for today and the future. As a result, their input will be considered related to the concept of operations.
- **Federal Highway Administration (FHWA):** Since US 36 is part of the United States Highway System, FHWA will have input into the final design of the facility. In addition, FHWA through the TIFIA Joint Program Office is administering The Transportation Infrastructure Finance and Innovation Act (TIFIA) loan that is providing a significant portion of the funding for the Project.
- **Law Enforcement Agencies:** The local law enforcement agencies and/or the Colorado State Patrol (CSP) will have a critical role of providing enforcement along the facility to ensure safe operations and compliance with HOV occupancy requirements. HPTE will enter into appropriate agreements to provide HOV enforcement for the managed lanes.

2. PROJECT DESCRIPTION AND SCOPE OF WORK

A. PROJECT BACKGROUND AND HISTORY

1) PROJECT NEED

US 36 is a congested and rapidly growing corridor carrying between 80,000 and 100,000 daily vehicle trips. US 36 currently operates at close to 90 percent volume to capacity. Nearly 19 percent of the region's households and 23 percent of employment are located along the US 36 Corridor. Corridor employment is expected to increase by 47 percent, adding approximately 137,000 new jobs between 2010 and 2035. The corridor has the highest transit ridership in the Denver metropolitan region, with 15,000 patrons per weekday. US 36 commuters currently experience three to four hours of severe bi-directional congestion daily. The area US 36 traverses is economically diverse, with a high concentration of businesses in the renewable energy, high tech, aerospace, and biotech industries, playing an important role in the emerging national economy. Current and projected travel patterns, level of roadway congestion, and growth in population and employment indicate the need for substantial transportation improvements along US 36.

2) US 36 ENVIRONMENTAL IMPACT STATEMENT (EIS)

The US 36 Final Environmental Impact Statement (FEIS), completed in October 2009, identified a $1.3 billion Preferred Alternative, featuring a number of sustainable transportation solutions in its Ultimate Configuration:

- A new buffer-separated managed lane in each direction of US 36, providing transit, High Occupancy Vehicles (HOVs) and paying Single Occupant Vehicles (SOVs) with travel time savings of up to 25 minutes each way.
- Repair or replacement of 14 bridges, 5 of which are considered poor, and 12 miles of poor roadway surface.
- Implementation of a Bus Rapid Transit (BRT) system connecting to the regional transit and intercity rail system through Denver Union Station, the metropolitan transit hub and a TIFIA-funded project.
- Installation of Intelligent Transportation Systems (ITS) for tolling, transit information and incident management.
- Auxiliary lanes between interchanges to improve intra-corridor mobility.
- An 18-mile commuter bikeway adjacent to the highway.
- Transportation Demand Management (TDM) strategies to affect commuter behavior.

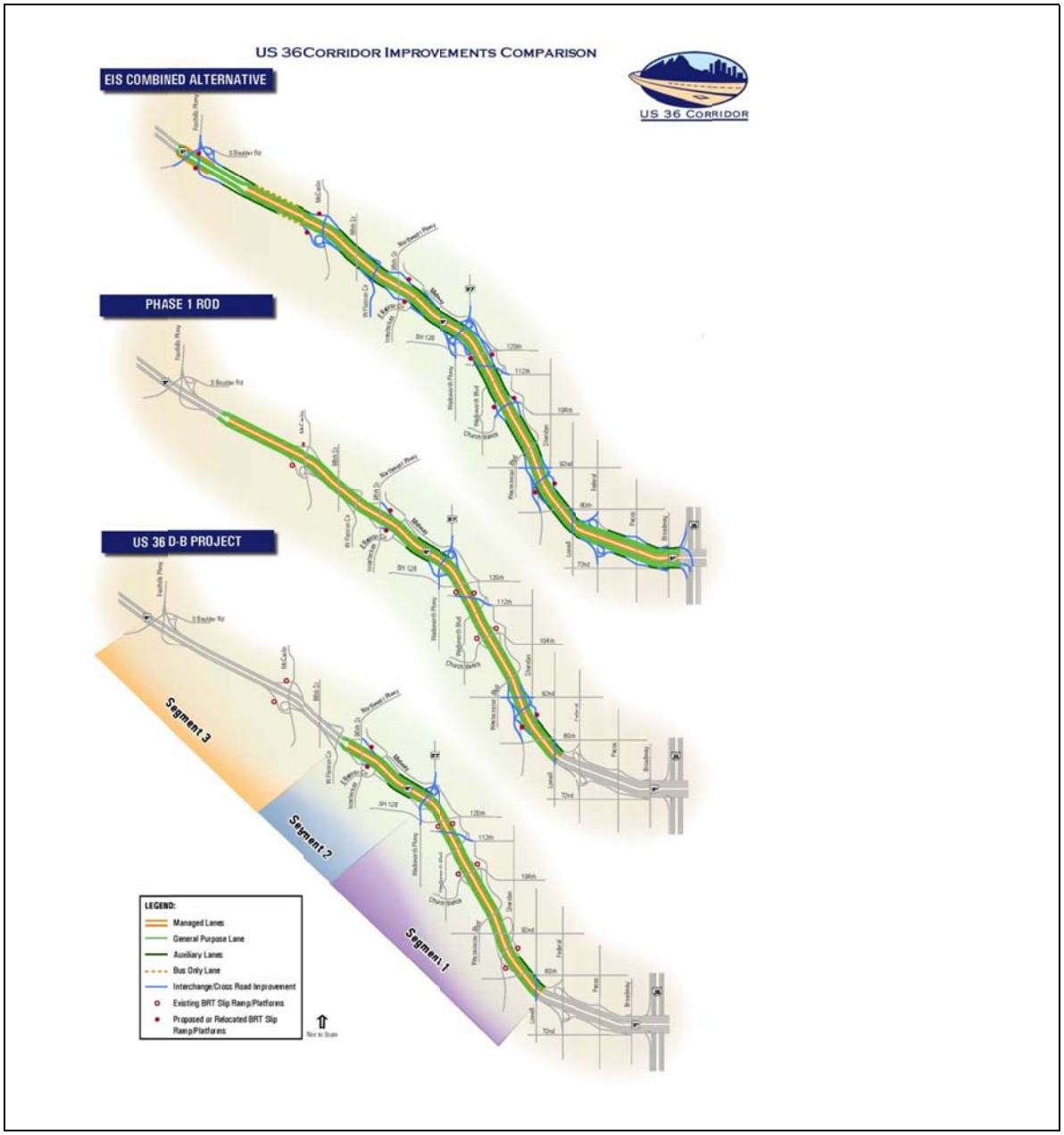
3) RECORD OF DECISION AND PHASE 1 IMPROVEMENTS

A diverse political coalition—CDOT, in partnership with RTD, the US 36 Mayors & Commissioners Coalition, Adams County, Jefferson County, City and County of Denver, City of Arvada, and 36 Commuting Solutions, identified a first phase of improvements at an estimated cost of $550 million. This first phase includes implementation of the managed lanes, BRT service, and a commuter bikeway the full length of the US 36 Corridor.

This first phase of the Preferred Alternative was included in the 2009 Record of Decision (ROD) for the US 36 Managed Lane/BRT Project. The ROD was signed on December 24, 2009, documenting the Preferred Alternative for improvements to the US 36 Corridor.

The evolution of the US 36 Project is illustrated in this graphic.

US 36 Corridor Improvements



4) TIGER GRANT OPPORTUNITY

The TIGER Discretionary Grant program presented an opportunity for accelerated implementation of the first phase of US 36 improvements, delivering project benefits 20 years earlier than anticipated. CDOT, with its regional partners, submitted a segmented implementation plan for TIGER funding consideration.

In February 2010, the U.S. Department of Transportation (US DOT) awarded CDOT $10 million through the TIGER grant program as a TIFIA Challenge Grant, providing a TIFIA Loan opportunity for the Project. The $10 million grant is primarily dedicated to paying the TIFIA credit assistance charge, with the remainder allocated to eligible Project costs. Since award, HPTE, in partnership with CDOT, has undertaken much effort to meet the requirements of the TIGER TIFIA Challenge Grant, maximize the benefit of the funding sources, and deliver a meaningful portion of the Preferred Alternative.

The addition of a TIFIA Loan to the Project's funding sources has stimulated an increase in state and local funding. The identification of the US 36 Managed Lane Project limits as an initial phase of the Preferred Alternative is consistent with Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) requirements to have funding for projects identified before final decisions are made. As funds become available in the future, it is the intent of the HPTE, CDOT, RTD, and their federal partners to implement the Preferred Alternative in its entirety.

5) US 36 MANAGED LANES/BRT DESIGN-BUILD PROJECT

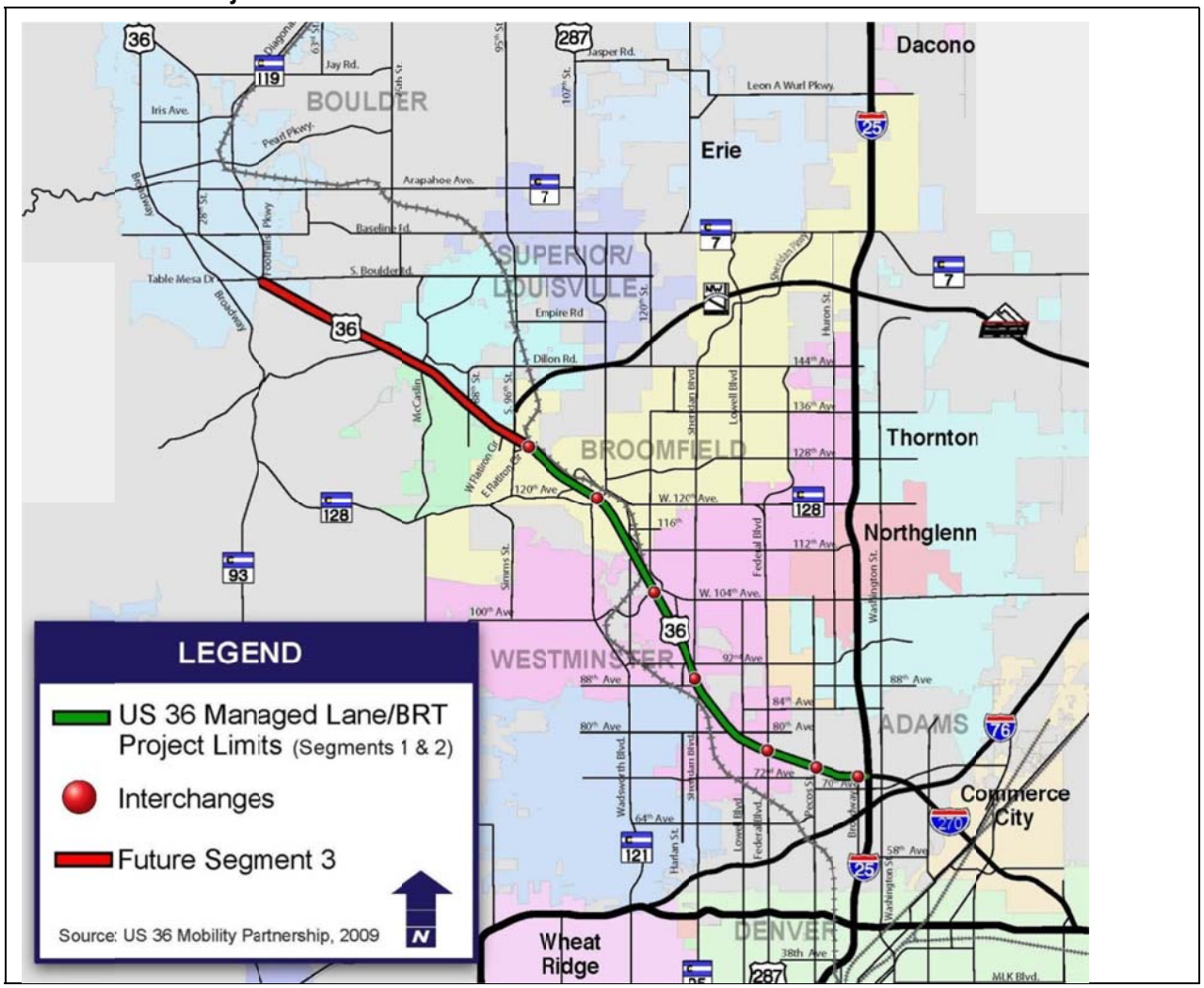
The TIFIA-supported Project is a 10.1-mile segment of US 36 from Pecos Street to Interlocken Loop. Upon completion, this portion of US 36 will have six lanes (three in each direction), two of which will be managed lanes. The Project also includes implementation of a BRT system (part of RTD's FasTracks Program approved by voters in 2004), and the construction of a commuter bikeway that will connect to the regional Denver trail system. The Project also includes the replacement of aging infrastructure, some of which has not been upgraded since the opening of US 36 in the early 1950s.

The new managed lanes will connect to the northern terminus of the existing, reversible I-25 Express Lanes (a seven-mile section of I-25 between downtown Denver and Pecos Street on US 36). The I-25 Express Lanes, which opened in 2006, allow carpools, buses, hybrid vehicles with permits, and motorcycles to use the lanes toll-free, while SOVs pay a toll. The completion of the Project will provide another link in the Denver metropolitan toll system, resulting in a 17-mile continuous managed lane from eastern end of Boulder County to downtown Denver. Given the connectivity between US 36 and I-25 Express Lanes, the HPTE intends to treat both facilities as a single system.

The portion of the US 36 Corridor to be reconstructed during this Project passes through a number of communities, including the City of Westminster, the City and County of Broomfield, the City of Louisville, the Town of Superior and portions of Jefferson, Boulder, and unincorporated Adams Counties.

The limits of the Project are from Pecos Street to Interlocken Loop interchange. Other major intersecting highways include Sheridan Boulevard, W. 104th Avenue/Church Ranch Boulevard, and Wadsworth Boulevard. The various parts of the Project are shown below.

US 36 Corridor Project Area



B. MANAGED LANES AND TOLLING

The Concept of Operations for Tolling Related Aspects of this Project that was executed in August 2011 by CDOT, HPTE, and RTD outlines how the managed lane facility will be implemented. The legislative background and agreements that established the groundwork for this includes:

- Colorado State law (§ 43-4-806 (1), C.R.S.) allows HPTE to implement user fees, issue revenue bonds, pursue public-private partnerships, enter into concession agreements, and implement user fees on existing roadway capacity with approval of local governments on roadways across the State.
- DRCOG approved the US 36 Corridor tolling plan on Aug. 19, 2009.
- Authority to toll US 36 will be provided per Section 166(c) of Title 23, United States Code.
- A tolling agreement for US 36 was submitted to and was approved by FHWA.

- An amendment to the I-25 Express Lanes intergovernmental agreement (IGA) with RTD allows excess revenues from those lanes to be used for operations and maintenance expenses (O&M) on US 36. It has been agreed to in principle and is pending formal approval.

C. PROJECT SCOPE FOR DESIGN/CONSTRUCTION PHASE

The Project scope for the design/construction phase is described in this section.

Note: This section was taken from the US 36 US 36 Managed Lane/BRT Project RFP. It will be updated once the Design/Build Contract is in place.

Except as otherwise stated or required in the Contract Documents, CDOT Roadways (US 36, SH 121, SH 95, and ramps) are to be designed and constructed according to CDOT standards and requirements. Other roadways are to be designed and constructed according to the agency's standards and requirements that control or maintain the facility (e.g., RTD, City of Westminster, and City and County of Broomfield).

1) BASIC CONFIGURATION

The Basic Configuration is defined as Work required to conform to the *US 36 Basic Configuration Typical Sections*, included in this PMP as Appendix A and as described in the Contract Documents. Also included are the Roadway Design Criteria as Appendix B.

a) Pavements and Laneage

- Reconstruct US 36 mainline with Portland Cement Concrete Pavement from the existing concrete pavement west of Federal Boulevard interchange to the west end of the ramp tie-ins west of Interlocken Loop.
- Construct realigned Wadsworth Parkway from SH 121 to the south edge of the BNSF Railway (Railroad) structures (Str. E-16-HS and E-16-HR).
- Reconstruct portions of interchange ramps affected by the Project or to provide bus queue-jump lanes.
- Construct Wadsworth Boulevard, 112th Avenue, Lowell Boulevard, and Turnpike Drive.

b) Structures

- Construct the Wadsworth Parkway over US 36, 112th Avenue over US 36, and US 36 over Lowell Boulevard.
- Widen the US 36 structures over Promenade Drive and E. Flatiron Crossing Drive. Match existing structure type; existing landscaping and wall types around the structures; and the aesthetic/enhancements of the structures.

c) Commuter Bikeway

- Construct continuous concrete Bikeway from the existing US 36 over W. Flatiron Crossing Drive structure to the existing underpass at 80th Avenue.
- A grade separation with the BNSF railroad will be provided.

d) RTD Elements

- Construct RTD bus queue jumps lanes at the US 36 eastbound and westbound on-ramps at 104th Avenue/Church Ranch Boulevard and the US 36 Eastbound and Westbound on-ramps at Interlocken Loop. Construct any associated modifications to the existing ramp metering to accommodate the Bus Rapid Transit/High Occupancy Vehicle (BRT/HOV) bypass lanes.
- Reconstruct any existing BRT stations, platforms, or elements that are impacted by the roadway improvements, and construct the relocated station elements in accordance with the RTD Bus Transit Facility Design Guidelines and Criteria.

e) Design of Future Elements

- In addition to the design of all elements constructed with the Project, provide designs for additional and future elements as follows:
- Prepare preliminary design and plans (30% level) for roadway, Bikeway, structure, and drainage elements within the limits of AREs #1 and #2 that are not constructed as a part of the Basic Configuration.

2) ADDITIONAL REQUESTED ELEMENTS (ARE)

The RFP stated:

"CDOT has identified the following AREs and desires to have the Proposers include them in the Project within the Guaranteed Maximum Price. AREs and portions of AREs that are included in theContractor's Proposal shall be incorporated into the Basic Configuration."

The Proposers were required to include the AREs in Section One of their Technical Proposal as part of the proposed Basic Configuration. Section One was evaluated according to a set of criteria. Each ARE had points assigned to it that comprised most of the points possible for that section. Each ARE included in the Proposal was reviewed to determine its ability to meet or exceed the Project Goals and technical requirements and points awarded on that basis. Portions of points could be given for all AREs. The Proposal Evaluation Matrix for Section One is below.

Request for Proposal – US 36 Managed Lane/BRT Project
Technical Proposal Section One Evaluation Matrix

Maximize scope and improvements within the Project budget – Basic Configuration and Additional Requested Elements (AREs)	Maximum Points
Value-Added Proposals	12
ARE # 1 - Extend the Managed lanes and Bikeway from the end of the Basic Configuration at Interlocken Loop to Coal Creek	15
ARE # 2 - Extend the Managed Lanes and Bikeway from Coal Creek to the McCaslin Boulevard interchange	5
ARE # 3 - Replace Sheridan Boulevard over US 36 bridge	13
ARE # 4 - Replace US 36 over BNSF Railroad bridge	7
ARE # 5 - Additional BRT Elements	1
Subtotal Points:	**53**

a) ARE #1

All Work associated with extending the Managed Lanes and Bikeway from the end of the Basic Configuration at Interlocken Loop to Coal Creek.

- Full depth reconstruction of US 36 mainline and ramps from the west end of the Basic Configuration at Interlocken Loop to a logical terminus east of the Coal Creek bridges.
- Widen US 36 over W. Flatiron Crossing Drive structures. . Match existing structure type; existing landscaping and wall types around the structures; and the aesthetic/enhancements of the structures.
- Construct a concrete Bikeway and local street connections from the west end of the Basic Configuration and connecting to the existing path on the west side of Coal Creek.

If the entire ARE is not included in the Project, Bikeway elements will extend as far as the Managed Lane included in ARE #1 and must be completed to a logical and functional termini.

b) ARE #2

All Work associated with extending the Managed Lanes and Bikeway from the end of ARE #1 work to the McCaslin Boulevard interchange.

- Full depth reconstruction of US 36 mainline and ramps from the westernmost extent of ARE #1 to a functional terminus within the McCaslin Boulevard interchange.
- Construct concrete Bikeway and local street connections from its endpoint at Coal Creek constructed under ARE #1 to the intersection of McCaslin Boulevard and the westbound US 36 off-ramp.
- Replace US 36 over Coal Creek structures to meet hydraulic, pedestrian, Bikeway, and wildlife crossing requirements.

If the entire ARE is not included in the Project, Bikeway elements will extend as far as the Managed Lane included in ARE #2 and must be completed to a logical and functional termini.

If ARE #2 is to be included in the Project, all Work associated with ARE #1 will also be included.

c) ARE #3

All Work associated with replacing the existing Sheridan Boulevard over US 36 Structure (Str. E-16-FO).

- Construct the Sheridan over US 36 Structure to ultimate Sheridan Boulevard requirements and to accommodate the Ultimate Configuration section of US 36 and ramps. Construct US 36 under new bridge to the typical Basic Configuration laneage, shoulder widths.
- Construct the pavement on Sheridan Boulevard and affected ramps to provide existing laneages, medians, and turn lane lengths, at a minimum.

d) ARE #4

All Work associated with replacing the existing US 36 Structure over the BNSF Railroad (Str. E-16-LY).

- Construct the US 36 over the Railroad Structure to ultimate US 36 laneage and ultimate railroad requirements.
- Additional widening of the south side of the US 36 over Promenade Drive bridge to provide a continuous 12-foot-wide shoulder over the bridge to accommodate BOS operations.

e) ARE #5

All Work associated with upgrading the BRT Stations at Westminster Center (Sheridan), Church Ranch, Broomfield, Flatiron, McCaslin, and Table Mesa.

- Construct passenger shelters and windscreens at each BRT Station (westbound and eastbound) in accordance with the RTD Bus Shelter Details in the Reference Documents.

3) OPTIONS

AREs, and portions of incomplete AREs, that the Proposer is unable to include in its Proposal within the Guaranteed Maximum Price will become Options.

The Proposer is required to include an Option Price for each Option with its Proposal. CDOT will not consider such Option Prices or the Option in its evaluation of the Proposals.

The Proposer will also provide Option Prices for the following items with its Proposal:

- Enhancements to the US 36 over Lowell Boulevard bridge. Includes realignment of the 79th Avenue intersection with Lowell Boulevard. The Proposer will provide separate costs within the Option for the aesthetic treatments and street realignment.
- Enhancements to the replacement Sheridan Boulevard. Enhancements will be based on the following elements from adjacent structures on the Corridor:
  - Form liner, monuments, and form liner element staining will match similar elements of the 80th Avenue over US 36 bridge.
  - Bridge rail, pedestrian railing and fencing, and structural steel arch elements will match similar elements of the 92nd Avenue over US 36 bridge.
  - Enhancements to the Wadsworth Parkway bridge over US 36.
  - Enhancements to the 112th Avenue bridge over US 36. Provide 10 foot sidewalk on north side of 112th Avenue, west from bridge to connect to existing sidewalk at F Street.

D. ITS AND ETC SCOPE ITEMS

The Contractor is providing the Intelligent Transportation System (ITS) and Electronic Toll Collection (ETC) infrastructure elements for the Project. The purpose of these elements is to inform the roadway users, collect various data to assist agencies in the maintenance and operation of the facility, and collect tolling revenue to support the Project's funding sources.

The Contractor will be responsible for the design, furnishing, and installation of all ITS devices, the communications network, and the supporting infrastructure that is necessary to install and operate the ETC system components. The actual ETC system components will be designed and installed by the ETC System Integrator.

The ITS system includes Variable Message Signs (VMS), Closed Circuit Television (CCTV), Ramp Meter Stations (RMS), Microwave Vehicle Radar Detection (MVRD), Travel Time Indicators (TTI), Automatic Traffic Recorders (ATR), Doppler Radar, Road Weather Information Systems (RWIS), Bus on Shoulders (BOS), Bicycle and Pedestrian Counters, and a Regeneration Building. In addition, the ITS system includes the various components that make up the communication system, such as conduit, fiber optic cable, and Ethernet switches.

The ETC system includes Variable Toll Message Signs (VTMS), Transponders, Automatic Vehicle Identification (AVI) Readers, Automatic License Plate Recognition (ALPR) Cameras, Loop Detectors, Lane Controller Cabinets, and Transaction Status Indicator Beacons. The ETC system will rely on the communications network to link the ETC field devices to the ETC back-office.

A complete scope of these items is included in Book 2 of the Contract Documents. The following sections provide a summary overview.

1) ELECTRICAL POWER

The Contractor will provide alternating current (AC) power service to every ITS and ETC device and cabinet that does not have existing metered service. This includes all existing devices or cabinets that are relocated by the Contractor. The Contractor will obtain (from the power service provider[s]) approval of the power service design and coordinate and meet all requirements as specified by the power service provider for the complete and operational power service to all required locations. All power connections to devices will include a quick-disconnect.

2) COMMUNICATIONS SYSTEM

The communications system is used to transmit data to and from all existing and proposed ITS devices. In addition, the system is responsible for transmitting all ETC tolling data to and from the back-office for processing, issuing of tolls, and updating of information in the lanes.

The Contractor will design a fiber optic communication system to replace the existing wireless system. The system will be capable of transporting data and video signals between field devices and support the functional requirements.

3) VARIABLE MESSAGE SIGNS (VMS)

The VMS are large dynamic displays that are used for a wide range of purposes, including providing driver information regarding weather advisories, travel times, amber alerts, and construction and incident notifications. These VMS along US 36 will not be used for tolling purposes. The Contractor will design a complete VMS system..

4) CLOSED CIRCUIT TELEVISION (CCTV)

The CCTV cameras are used for monitoring travel conditions in the corridor, such as weather conditions, accidents, traffic congestion, and other events (reversible gate closure/opening). The video images are also shared with the public via the internet (www.CoTrip.org) and television news agencies.

The Contractor will design a CCTV system that provides full surveillance coverage along the extent of the new CDOT fiber optic backbone. The coverage will include the entire roadway surface, including all mainline lanes, ramp lanes, and interchanges with an approximate camera spacing of 1.5 miles.

5) RAMP METER STATIONS (RMS)

The RMS help control the number of vehicles entering US 36 when the highway experiences congestion. The Contractor will replace all existing RMS detection with Microwave Vehicle Radar Detection (MVRD) for mainline detection and wireless in-pavement sensors for on-ramp detection. If the Contractor impacts any of the existing RMS along the corridor, the Contractor will design and reconstruct a new fully functioning RMS in accordance with the latest CDOT guidelines on ramp metering stations and the CDOT ITS Standard Details included in the Reference Documents.

In addition, the Contractor will design and construct new RMS at locations specified in the Contract Documents.

6) MICROWAVE VEHICLE RADAR DETECTION (MVRD)

The MVRD, also referred to as side-fire radar, are used to collect point data of volume, occupancy, speed, and classification in each lane of travel. The data is used primarily for measuring and analysis of traffic conditions, both real-time and for studies.

The Contractor will prepare a design to locate side-fire MVRD units with an approximate spacing of one-half mile. Each location will be accessible by CDOT bucket trucks to provide device maintenance and other functions without performing lane closures, affecting traffic operations, or requiring complex traffic control; and cannot be placed in the median.

7) TRAVEL TIME INDICATORS (TTI)

TTI sites are comprised of Sirit 5204 antennas and readers that detect toll tag transponders in vehicles. While MVRD units give volume, occupancy, and speed data at a given point, the TTI are used to track vehicle travel times across segments spanning from one TTI location to the next.

The Contractor will prepare a design to locate TTI units that will read only the general purpose lanes with an approximate spacing of no more than one mile and located before and after each interchange (including the Federal Boulevard interchange). Additional TTI units will be installed in between the off-ramp and on-ramp at each interchange to allow users exiting the facility for a short period of time to be excluded from the travel time calculations. For the Managed Lanes, one set of TTI units will be located between each ingress/egress point to obtain directional travel times for each segment.

8) DTD AUTOMATIC TRAFFIC RECORDERS (DTD ATR)

The CDOT Division of Transportation Development (DTD) automatic traffic recorder stations continuously collect vehicle volume and functional classification data using in-pavement loops and piezoelectric sensors.

The Contractor will design replacement DTD ATR counting stations for those locations that are impacted by the Project. Each new DTD ATR must collect data for all lanes of travel, including the general purpose lanes and Managed Lanes in both directions. Communications to the DTD ATR stations will be provided via the existing telephone line. In addition, a 6-strand SMFO lateral for future use will be provided from the CDOT fiber optic backbone to the DTD ATR cabinet.

9) AUTOMATIC TRAFFIC RECORDERS (ATR)

The ATR stations are counting stations that continuously collect vehicle volume and functional classification data. The data collected is transmitted to CDOT Region 6 for processing and analysis. ATR stations utilize the same equipment as the RMS with the exception of the traffic signal poles and heads. The Contractor will design replacement ATR stations for those locations that are impacted by the Project.

10) DOPPLER RADAR

These are self-contained, solar-powered units that collect point travel data and transmit it wirelessly to the device manufacturer SpeedInfo and to CDOT. These devices are owned by SpeedInfo, and data is provided to other entities.

Because the SpeedInfo Doppler radar units are self-contained (including wireless communications), all existing units need to be relocated will be installed per the manufacturer's recommendations. All Doppler radar units will be co-located with other sign structures and therefore will not require separate structures to be installed by the Contractor.

11) ROAD WEATHER INFORMATION SYSTEM (RWIS)

Road Weather Information Systems (RWIS) are used for traveler information systems and highway maintenance operations by providing on-Site weather information. The Contractor will design RWIS stations at a suitable location along US 36 between the 104th Avenue and Wadsworth Boulevard interchanges and at the overlook west of McCaslin Boulevard.

12) ENHANCED ACTIVE TRAFFIC MANAGEMENT (ATM) ELEMENTS

At a minimum, the following enhanced ATM elements will include lane status information via Lane-Use Signals (LUS) over each general purpose lane to roadway users along the US 36 corridor to notify drivers of lane closures, restrictions, or merge conditions. These enhanced ATM elements will be designed, furnished, and constructed in such a manner that the lane status information is displayed at least every half mile throughout the corridor starting at one half mile in advance of the Pecos Street interchange for the westbound direction and one half mile west of the western construction limits for the eastbound direction. They will provide continuous visibility of the sequential LUS which can be mounted and combined with other sign structures. LUS will be capable of displaying a red "X", green arrow, and left and right diagonal yellow arrows.

13) VARIABLE TOLL MESSAGE SIGNS (VTMS)

The VTMS is a combination of a static sign with one or two electronic VMS inserts that is utilized to display the specific tolls for each segment of the corridor. All mainline VTMS will be located upstream of the Managed Lane ingress/egress point. This will allow the roadway users sufficient time to read the toll rate and then make their decision whether to enter, or continue to use, the Managed Lanes.

The Contractor will design a complete VTMS system according to the requirements in the Contract Documents.

14) AUTOMATIC VEHICLE IDENTIFICATION (AVI) READER

An AVI reader and antennas will be installed at each tolling point and used to read the tag information stored inside each transponder. The AVI reader will be installed by the ETC System Integrator in the lane controller cabinet, and the antennas that will read the tag information will be mounted directly above the Managed Lane. The Contractor will be responsible for providing a

structure at each tolling point (either dedicated or shared with another installation) to allow the ETC System Integrator to mount the AVI antennas in the correct positions.

15) AUTOMATIC LICENSE PLATE RECOGNITION (ALPR) CAMERAS

The ALPR cameras will be used to obtain an image of the vehicle's license plate if a transponder is not detected. In-pavement loops will be used to signal to the ALPR camera that a vehicle is present. Once the image is taken, the Optical Character Recognition (OCR) system inside the camera unit (or the lane controller) will process the image to identify the vehicle's license plate. This information will then be sent to the lane controller.

The ALPR cameras will be mounted by the ETC System Integrator on break-away sign supports mounted on the concrete median barrier. The Contractor will be responsible for providing these supports at the locations determined by the ETC System Integrator. It is anticipated that four of these structures will be needed at each tolling point (either dedicated or shared with another installation).In addition to the structure, the Contractor will also provide two 2-inch conduits between the ALPR camera structure and the lane controller. Communications to the ALPR cameras will be provided and installed by the ETC System Integrator.

16) ELECTRONIC TOLLING LANE CONTROLLER

The lane controller will be located in the enforcement area of each tolling point and will be connected to the rest of the electronic tolling equipment using two 2-inch conduits. The lane controller will be used for all data processing and transmittal of transponder tag and license plate information via the fiber optic communications network to the ETC back-office for processing.

Although the ETC System Integrator will be responsible for the installation and configuration of the lane controller, the Contractor will be responsible for the design of the cabinet and associated foundation, the conduit to connect the lane controller to the AVI antenna, ALPR cameras, and transaction status indicator beacon, and the conduit to provide communications and power to the cabinet. One lane controller cabinet will be provided for each tolling point location. The locations of the cabinets, foundations, and conduits will be coordinated with and approved by the ETC System Integrator. However, the maximum conduit length between the lane controller and the ETC devices (AVI antennas, ALPR cameras, and transaction status indicator beacon) will not exceed 100 feet.

17) ENFORCEMENT ZONES

The enforcement zones will provide a location for enforcement personnel to perform tolling enforcement at each tolling point. The Contractor will provide enforcement zones at each tolling point that meet the design requirements outlined in the Contract Documents.

18) PROGRAMMABLE INFORMATION DISPLAY SYSTEMS (PIDS)

The Contractor will install two RTD PIDS at the following transit centers (one per bus loading platform in each direction) and all associated support infrastructure, including cabling, power, and mounting equipment. The exception is Broadway Station where only one RTD PIDS will be installed. The exact locations will be approved by RTD.

- Broadway Station
- Westminster Station
- Church Ranch Station
- Broomfield Station

- Flatiron Station
- McCaslin Station
- Table Mesa Station

19) BICYCLE AND PEDESTRIAN COUNTERS

The Contractor will install two Bicycle and Pedestrian Counters along the bikeway, one near the Broomfield park-n-Ride and one near the Westminster park-n-Ride, and all associated infrastructure including cabling, power, and mounting equipment. The exact locations will be approved by CDOT.

20) CABLING AND CONDUCTORS

The Contractor will design conductors and cables utilizing a minimum of #12 AWG for all electrical conductors. All video-device control cables and connectors will be designed in accordance with the manufacturer's recommendation and the CCTV manufacturer's signal attenuation requirements.

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3. PROJECT GOALS AND OBJECTIVES

This section documents the goals and objectives of the Project and sets forth methods for measuring whether or not they were met.

A. PROJECT GOALS

The following goals have been established for the Project:

- Maximize scope and improvements within the Project budget
- Minimize operating and life cycle maintenance costs and provide a quality product.
- Meet or beat schedule to be fully operational by July 1, 2015.
- Minimize inconvenience to the public and maximize safety of workers and traveling public.
- Maximize engagement of local workers, businesses, and communities in the development, construction, and sustainability of improvements.

Each of these project goals was explicitly incorporated into Design/Build RFP. The Technical Proposal requirements were structured so that each goal was one section of the Technical Proposal. Each section had specific requirements, evaluation criteria, and a maximum number of points that could be awarded. Points were awarded according to how well the Proposers presented how they would accomplish each goal according to the stated requirements.

Because the Proposal becomes a part of the Contract Document upon acceptance, the Contractor is legally required to implement their proposal and fulfill their commitment made to implementing the Technical Proposal and thereby meeting the goals delineated above. During the project, the Contractor is required to submit Monthly Reports to CDOT which will assist CDOT in tracking the Contractor's progress and ultimately measure the success of the project related to meeting or exceeding the project goals.

The Technical Proposal evaluation matrix is below.

Request For Proposal – US 36 Managed Lane/BRT Project
Technical Proposal Evaluation Matrix

SECTION ONE	
Maximize scope and improvements within the Project budget – Basic Configuration and Additional Requested Elements (AREs)	**Maximum Points**
Value-Added Proposals	**12**
ARE # 1 - Extend the Managed lanes and Bikeway from the end of the Basic Configuration at Interlocken Loop to Coal Creek	**15**
ARE # 2 - Extend the Managed Lanes and Bikeway from Coal Creek to the McCaslin Boulevard interchange	**5**
ARE # 3 - Replace Sheridan Boulevard over US 36 bridge	**13**
ARE # 4 - Replace US 36 over BNSF Railroad bridge	**7**
ARE # 5 - Additional BRT Elements	**1**
Subtotal Points:	**53**

Request For Proposal – US 36 Managed Lane/BRT Project
Technical Proposal Evaluation Matrix

SECTION TWO	
Minimize operating and life cycle maintenance costs and provide a quality product.	**Maximum Points**
Approach and commitments for minimizing operating and life cycle maintenance costs for US 36 pavement, ramp and cross road pavement, and other project elements	13
Project, Quality management, environmental approach and commitments, and long term safety improvements approach and commitments	15
Subtotal Points:	28
SECTION THREE	
Meet or beat schedule to be fully operational by July 1, 2015.	**Maximum Points**
Complete Project prior to July 1, 2015	5
Subtotal Points:	5
SECTION FOUR	
Minimize inconvenience to the public and maximize safety of workers and traveling public	**Maximum Points**
Approach and commitments for the Maintenance of Traffic	6
Approach and commitments for the Public Information Plan	2
Safety Management Plan approach and commitments	4
Subtotal Points:	12
SECTION FIVE	
Maximize engagement of local workers, businesses, and communities in the development, construction, and sustainability of improvements	**Maximum Points**
Innovative approach and commitments for the Workforce Development Plan	2
Subtotal Points:	2

B. PROJECT OBJECTIVES

The key objectives of the Project are reflected in the Purpose and Need statement from the EIS. As identified in the EIS, these are:

- Increase trip capacity.
- Expand access.
- Provide congestion relief.
- Expand mode of travel options.
- Increase efficiency of transit service.
- Update outdated highway facilities.

C. CORRIDOR STAKEHOLDER DESIGN PRINCIPLES STATEMENT

The objective of the Project is to reconstruct the existing corridor to significantly improve mobility, economic opportunity, and provide modal choice for those who use the corridor. Key to this vision is the implementation of a high-quality multi-modal system that has Bus Rapid Transit (BRT) and high-occupancy vehicle (HOV) use as core elements, as well as options for enhanced mobility for toll paying single-occupant vehicles. The Project will reconstruct the existing general purpose lanes, replace structurally deficient bridges, build Managed Lanes, implement a reliable and innovative BRT system, construct portions of a Bikeway, integrate Intelligent Transportation Systems (ITS) for transit and tolling, implement Transportation Demand Management (TDM) strategies, enhance mobility, and support modal choice. The complete transportation system will integrate community design preferences and pursue sustainable implementation strategies from a social, environmental, and financial perspective.

The Project will include the following key construction elements:

- Reconstruction of the US 36 mainline with concrete pavement from the existing concrete pavement west of Federal Boulevard interchange to the west end of the ramp tie-ins west of Interlocken Loop.
- Reconstruction of existing pavement, including widening to accommodate a new buffer-separated Managed Lane in each direction of US 36 and12-foot-wide shoulders
- Construction of retaining walls and sound walls.
- Replacement of the Wadsworth Parkway, Wadsworth Boulevard, and Lowell Boulevard bridges and widening of the E. Flatiron Crossing Drive and Promenade Drive bridges.
- Reconstruction of portions of the Wadsworth Parkway interchange.
- Installation of ITS for tolling, transit information, and incident management. Toll systems installation and integration will be provided by others.
- Construction of portions of a Bikeway along the reconstructed section of the corridor and providing connections to the Bikeway for existing bike facilities.
- Enhanced Active Traffic Management (ATM) elements, including lane status information over each general purpose lane that is displayed between each interchange along the corridor.
- Traveler information and travel demand management.
- BRT elements, including Programmable Information Display Systems and Station upgrades.
- Additional elements that may be included are:
    a. Extending the Managed Lane and Bikeway from Interlocken Loop to Coal Creek.
    b. Extending the Managed Lane and Bikeway from Coal Creek to McCaslin Boulevard interchange.
    c. Replacing the existing Sheridan Boulevard over the US 36 structure.
    d. Replacing the existing US 36 over the BNSF railroad structure.
    e. Upgrading BRT Stations along the US 36 Corridor.

D. PROJECT METRICS

1) TIGER PERFORMANCE GOAL

There are certain performance metrics tied to the requirements of the TIGER Discretionary Grant. These are detailed in the table below. The methodology for collecting and measuring the data follows the table.

TIGER Performance Goal	Objective	Measure	Data needed and when to collect.	Who has the data?
To the extent possible, all data will reflect averages for US 36 from Pecos to Interlocken on the specified dates/times. In case of anomalies on any given Wednesday data will be purged. Anomalies related to incidents/explained events will be reported as such.				
Travel Time Reliability	Reduced Buffer Index in managed lane compared to Buffer Index of GP lanes pre- and post-project.	Buffer Index for managed lane post construction better than for GP lanes pre and post construction.	Baseline – collect data monthly for GP lanes 1 year before project gets started report quarterly. Comparison points: collect GP and Managed Lane data monthly with a quarterly report for 3 yrs post construction Wed AM/PM peak, EB/WB directions, and GP/managed lanes will be measured. Speeds will be collected and average travel time per 5 min period between Interlocken and Pecos for Wed peak period in each direction will be calculated for use in the Buffer index. A Buffer Index for the month will be reported for each category.	CDOT Buffer Index = (95th %tile travel time – average travel time) / average travel time. All figures in minutes. Data available from ramp meter loops. (Collect at 5 min intervals (kept for 180 days). Use speed data and convert to travel time. EB: Pecos, 104th, Sheridan, Wadsworth, and Superior (all ramps except Superior which is DTD permanent traffic counter) WB: Pecos, Federal, Sheridan, 104th and McCaslin.
	(secondarily, no decline in Buffer Index for GPs post construction compared to pre-opening)	Buffer Index for GP lanes no worse post-construction than for GP lanes pre-construction.		
	Equal or improved transit on-time performance post project over pre-project. Ultimately, we would like to see the express buses compress their schedules and still meet their on-time performance.	% of buses operating on time post-construction is at least as high as % on-time pre-construction. Also report modifications to schedule.	Baseline – RTD already collects this data. Collect monthly report quarterly for one year before project gets started. Collect all Wednesdays am and pm Peaks EB/WB direction. (or if more easily available in different time periods from RTD – use that instead)	RTD Collect for B-local and B-express. Report both separately and together. Data to be reported for trips within Pecos to Interlocken/ Superior

TIGER Performance Goal	Objective	Measure	Data needed and when to collect.	Who has the data?
			Post-project: Collect monthly report quarterly for 3 yrs.	
Improved Speeds	Maintain minimum speed in managed lane	traffic in managed lane moves at least 45 mph at least 95% of the time except for incidents or explained events	No baseline needed – post-construction only Collect monthly for managed lanes , report quarterly for 3 yrs. Speeds measured in managed lane at all locations in travel time reliability (above)each Wednesday AM and PM Peak EB/WB. Report 95th %tile monthly speed each segment during am and pm peak hours. Frequency of sample (5 min).	CDOT
	Faster speeds in managed lane compared to GP lanes post construction.	managed lane moves at speeds greater than or equal to speeds in GP lane at least 95% of the time *am and pm peak hours* (except for incidents / explained events)	Need baseline of speeds in the current system to indicate the overall benefits of this Project. Collect monthly for GP and managed lanes , report quarterly for 3 yrs Measured and calculated the same as the managed lanes above.	CDOT
Throughput	More ADT post-construction than pre-construction.	Before and After Average Daily Vehicles all lanes (note this will capture # of vehicles, not number of trips)	Baseline -- Collect monthly for 1 year prior. Post project – collect monthly, report quarterly for 3 yrs. Managed lane/GP EB/WB between Pecos and Interlocken/ Superior. Report ADT between each segment (same as data collected for speeds above)	CDOT

a) Current Data Collection Devices

Within the Project corridor, travel time is collected using the Radio Frequency Identification (RFID) toll tag readers at the following approximate locations along US 36:

- Pecos Street
- Sheridan Boulevard
- Wadsworth Boulevard
- Interlocken Loop
- McCaslin Boulevard

Ramp meters, Automatic Traffic Recorders, and side-fire radars will be located at most on-ramps. They collect volume and detector occupancy by lane for the on-ramp and mainline, and speed on the mainline. The data will be collected in 20-seconds bin intervals, and historical data can be queried in the ramp metering database.

CDOT DTD Automatic Traffic Recorders (permanent counting stations) collect point volume, occupancy, speed, and vehicle classification. Their locations are:

- Between Sheridan Boulevard and 104th Avenue
- Between Interlocken Loop and McCaslin Boulevard

b) Proposed Data Collection Methodology

Data will be collected during the AM and PM peak periods in both the eastbound and westbound directions of travel and both before and after construction.

Facility performance will be measured by travel time reliability, speed, and throughput, as defined in the following paragraphs:

i Travel Time Reliability

Travel time will be measured both preconstruction and post-construction, and data will be collected for the AM and PM peak periods of travel in both directions of travel. Historical data from the ramp metering system will be used to define the exact duration of the peak periods.

Preconstruction

Preconstruction travel time will be measured using the existing toll tag travel time readers (at the locations listed previously). To accomplish this, CDOT DTD will modify their software to allow for the archiving and retrieval of the travel time data for each segment. Segments will then be aggregated to obtain travel time for the entire corridor. Though travel time data will be measured and collected continuously; it is the intent to provide travel time data coalesced in 5-minute intervals and for Wednesdays, discarding any errant or misrepresentative data. The 5-minute data will then be assembled and averaged for the daily peak period and then for monthly reporting.

Post-construction

Post-construction travel time will be measured the same as preconstruction; however, travel time will be collected for both the general purpose lanes and

managed lanes, and the Project will be providing instrumentation along the US 36 Corridor to facilitate this data collection.

The travel time data will be used to calculate the travel time reliability using the FHWA Buffer Index calculation.

ii Speed

Travel speed will be collected and measured for the managed lanes to assess whether the traffic moves per the thresholds agreed upon by RTD and CDOT. Managed lane speed will be derived from the travel time information since the unique toll tag IDs are associated with a date and time stamp. This data will be reported in the same format as the current monthly reports generated by HPTE/E-470 for the I-25 Express Lanes facility. Speeds will be collected in 5-minute bin intervals and averaged over the peak period, and then assembled for monthly reporting. Speeds will be collected and measured both preconstruction and post-construction for comparison.

Speeds for the general purpose lanes will be collected and reported in the same manner to measure whether the managed lanes are moving faster.

iii Throughput

Throughput will measure the numbers of vehicles passing through the facility during the peak periods. The ramp meter, Automatic Traffic Recorder, and side-fire radar data at each interchange will be used to measure the number of vehicles using the facility.

These volumes will be collected in hourly bins and then assembled to report Average Daily Traffic (ADT) at the locations where data is presently being measured.

Throughput will be measured both preconstruction and post-construction.

2) CARPOOL USE

It is anticipated that the introduction of managed lanes along US 36 will lead to an increase in carpool use. Carpool use is measured as follows:

- Preconstruction:

  CDOT has the HOV lane volume data for the existing HOV lane between eastbound from Sheridan to Pecos. The existing data contains the present volume in 5-minutes bins for average weekdays (Tuesday, Wednesday, and Thursday).

- Post-Construction:

  Once the managed lanes have opened and drivers have had sufficient time to alter their driving patterns (the timeframe will be determined by the stakeholders), the HOV volumes in the managed lanes will be measured again at the same data collection point as the preconstruction. HOV volumes will be obtained by collecting the total volume in the managed lane and removing the number of toll transactions, buses, motorcycles, and ILEVs.

The HOV, or carpool use, will be defined as the total number and percent difference before and after the managed lanes.

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4. PROJECT ORGANIZATIONAL CHART, ROLES, AND RESPONSIBILITIES

The Project requires managerial, technical, oversight, and decision-making coordination with and decision making among multiple funding partners and stakeholders. A current organizational chart for the Project can be found in Appendix C.

A. EXECUTIVE OVERSIGHT

The Executive Oversight Committee (EOC) provides overall policy direction, dispute resolution, and guidance to the Project Delivery Team. The primary functions of the EOC are to:

- Make policy decisions for the Project.
- Assure adequate resources are provided from each respective organization to support the Project.
- Provide support to the project team in relation to regional and national stakeholders.
- Monitor the progress of the Project.

1) EOC MEMBER ORGANIZATIONS

The member organizations of the EOC have the following roles and responsibilities on the Project:

HPTE	TIFIA sponsor and lead Project agency, assures US DOT that the Project is delivered as planned, fulfilling all prior commitments and comply with the TIFIA credit agreement, applicable regulations, and federal and state laws
CDOT Region 6	Delivery and management of the Design-Build Contract; Right-of-Way acquisition; Intergovernmental Agreements and other project-related agreements with utilities and other agencies
Colorado Bridge Enterprise	Oversight of the funding related to the CBE structures being replaced as part of the Project
FHWA Colorado Division Office	Full oversight of the Project, consistent with the Stewardship Agreement for Federal-Aid Projects; quality assurance reviews and process claims and Contract modification orders
RTD and DRCOG	Key funding partners

2) EOC MEMBERS

The EOC comprises the following individuals:

Tim Harris	Colorado Bridge Enterprise
Michael Cheroutes	High Performance Transportation Enterprise
Reza Akhavan	CDOT - Region 6
Johnny Olson	CDOT - Region 4
Del Walker	Regional Transportation District
Shaun Cutting	Federal Highway Administration
Steven Rudy	Denver Regional Council of Governments

a) CDOT Chief Engineer – Tim Harris P.E.

The assignment of complete responsibility for individual Construction and Design Contracts is at the administrative direction of the Chief Engineer, who is responsible for directing all CDOT activities within the Division of Engineering and Maintenance.

Tim Harris is the Chief Engineer for CDOT. Tim recently competed his 31st year of progressive engineering experience with CDOT, where he started his career in the Roadway Design Branch. He has progressed through project delivery and supervisory engineering positions, most recently serving almost five years as Regional Transportation Director for CDOT's Region 2, which includes the Pikes Peak Region of Colorado and the southeastern corner of the state.

He holds a Bachelors degree in Civil Engineering from Georgia Tech in Atlanta and is a licensed Professional Engineer in the State of Colorado. CDOT currently holds memberships with a number of professional affiliations including the American Association of State Highway Transportation Officials (AASHTO) and the Western Association of State Highway Officials (WASHTO). As Chief Engineer, Tim is a delegate in those organizations.

b) HPTE Director – Michael Cheroutes

HPTE Director Mike Cheroutes is an attorney with over 40 years of government and public finance experience. Prior to joining the HPTE, his work included public private partnerships for infrastructure projects in the U.S. and overseas, and complex project financings for key transportation improvements such as E-470 and Denver International Airport.

c) CDOT Region Transportation Directors

The CDOT Region Transportation Directors (RTD) exercise overall control of their Region and act as the Chief Engineer's representative in their respective Region. Additional assigned duties include supervision of the Region Business Office, EEO Office, Maintenance Section, Planning and Environmental Section, Traffic and Safety Section, and the Program Engineering Section. Colorado is currently divided into six CDOT Regions. Portions of this Project are located in Regions 4 and 6.

d) CDOT Region 6 RTD – Reza Akhavan, P.E.

Reza Akhavan has over 25 years of progressive transportation engineering and planning experience. He has been the Region 6 RTD since December 2009. He played a key role in advancing recent improvements at the I-225/Colfax interchange, I-225 corridor widening, and construction projects, which resulted from the Valley Highway Environmental Impact Statement. He strategized the creation of the mini-TREX, thereby creating the opportunity to advance the RTD's light rail transit and highway widening on I-225. His foresight in planning prepared Region 6 to advance several large transportation projects utilizing ARRA funds. His partnership with Douglas County paved the way to build a flyover structure at the C-470 and Santa Fe interchange. He is a believer in the Planning and Environmental Linkage (PEL), and under his leadership Region 6 has undertaken three new PEL studies to identify needed improvements on SH-7, I-25 and the I-70/Kipling interchange. In the mid-1990s, Reza was the project engineer on CDOT's first design-build project at I-225/I-70.

Mr. Akhavan has consistently promoted the importance of the US 36 BRT/Managed Lane project and helped create the groundwork to deliver the Project, which will be the second largest design-build project in CDOT's history.

e) CDOT Region 4 RTD – Johnny Olson, P.E.

Johnny Olson has been the RTD of Region 4 since June 2010. He began his CDOT career in 1991 and worked for 17 years in various positions before leaving CDOT in 2008 to become the Vice President of the Colorado Regional Office at Bohannan Huston Inc. Prior to leaving CDOT, Mr. Olson worked in Region 4 as a Project Manager in Design and Construction and as a Resident Engineer. In 2007, he was promoted to Branch Manager of Maintenance and Operations where he oversaw 12 statewide programs. With his 20 years of experience and background in all aspects of the transportation industry, Mr. Olson brings an important outlook to the Region and leadership team.

f) RTD Deputy Assistant General Manager for Capital Programs – Del Walker, P.E.

Del Walker has recently taken on the responsibilities as the Deputy Assistant General Manager (AGM) for Capital Programs, with primary responsibility for the FasTracks Program Implementation. He provides leadership and direction to all FasTracks corridors to ensure successful delivery of the program as it evolves toward final design and construction.

During his more than 24-year career prior to taking the position as Deputy AGM at RTD, Mr. Walker worked on a variety of projects and within numerous program areas at both Parsons and CDOT. These experiences helped him to develop a broad knowledge base in core competencies necessary for successful leadership within the transportation engineering and program management fields. With time and experience, he has gained an appreciation for clear and concise communication, team-building within a diverse workforce, creative and innovative problem-solving, a keen awareness of external stakeholder expectations, and a strong commitment to financial management.

g) FHWA-Colorado Division Program Delivery Team Leader – Shaun Cutting, P.E.

Shaun Cutting has 18 years of experience with the FHWA. His experience includes involvement in some of the signature major projects in the Denver metropolitan area, including the T-REX project and the I-25 Value Express Lanes project. Mr. Cutting has also gained extensive experience in the implementation of the NEPA process in his role as the lead engineer for the C-470 Environmental Assessment; and Valley Highway, I-70 East, Northwest Corridor, and US 36 Environmental Impact Statements.

h) DRCOG- Transportation Planning and Operations Director – Steven D. Rudy, P.E.

Steve Rudy is the Director of Transportation Planning and Operations at DRCOG. He has nearly 35 years of experience working in the fields of traffic engineering, transportation operations, and transportation planning with consultants, local government, and with DRCOG(for more than 20 years). He directs DRCOG's MPO planning program, including the development of regional transportation plans (currently, the 2035 Metro Vision Regional Transportation Plan) and transportation improvement programs (currently, the 2012-2017 Transportation Improvement Program), and coordinated the process DRCOG utilized to select projects to receive ARRA transportation funding in 2009. As a registered Professional Engineer, he has managed or directed DRCOG's Traffic Signal Systems Improvement Program since 1992, working with local governments and CDOT to minimize delay on the region's arterial roadways. He also directs RideArrangers, DRCOG's regional rideshare/transportation demand management organization.

B. AGREEMENTS

1) CDOT/HPTE AND RTD INTERGOVERNMENTAL AGREEMENT

Because the Project is part of RTD's FasTracks Program, coordination and communication between RTD and CDOT is conducted in accordance with the terms of an IGA executed between the two agencies. The IGA establishes processes for identifying physical, safety, operational, and future transportation impacts, responsibility for funding these impacts, and procedures for coordinating and constructing the Projects.

The following IGA between CDOT and RTD pertaining to this Project has been executed:

- CDOT/RTD US 36 IGA (August 2011); a copy of the agreement between CDOT and E-470 is included in Appendix D.

2) ADDITIONAL IGAS

The following additional IGAs are anticipated to be in place for the Project.

Agency	Subject of IGA
DRCOG	Project funding
City and County of Broomfield	Bikeway maintenance Bridge enhancement (Wadsworth Parkway and 112th Avenue) Bridge widening (East and West Flatiron)
City of Westminster IGAs	Bikeway maintenance Bridge enhancement (Lowell Blvd) Bridge widening (Promenade)
City of Superior IGA	Bikeway maintenance
City of Louisville IGA	Bikeway maintenance
City of Boulder IGA	Bikeway maintenance Wetlands mitigation
Boulder County	Bikeway maintenance
E-470 Public Highway Authority	Toll system integration

A copy of the IGA between CDOT and E-470 Public Highway Authority is included in Appendix E.

3) THIRD-PARTY AGREEMENTS

The Contractor is responsible for obtaining all third-party approvals required to complete the Work, except as otherwise specified in the Contract Documents. Third-party coordination and approvals are required from, but not limited to, the following agencies:

- Local Agencies
- BNSF Railway Company
- Irrigation Ditch Companies
- Public Utility Owners
- Private Utility Owners

4) LOCAL JURISDICTIONS

Several local jurisdictions are contributing financially to the Project. CDOT has also worked very closely with these agencies to incorporate specific design requirements into the Design-Build

Contract that meet and support local agency goals for regional mobility and aesthetics. The stakeholders are to remain involved in the design development and construction of the Project via interaction with the Contractor. The Contractor is responsible for implementing the commitments that have been made to these local jurisdictions. They are:

- RTD
- DRCOG
- City and County of Broomfield
- City of Westminster

A list of additional stakeholders is included in Section 16 (Project Communications) of this PMP.

C. CDOT Project Management Team

1) Project Director

This position reports to the EOC. The Project Director is the senior point of contact for the Project. Responsibilities include:

a. Overall responsibility for delivery of the Project on time and on budget.

b. Overseeing staffing issues and needs.

c. Serving as the senior point of contact for the Project.

d. Ensuring terms and conditions of the Contract are met by CDOT and the Contractor.

e. Managing the Contractual and financial matters.

f. Overseeing administration of the federal funding.

2) Assistant Project Director

This position reports to the Project Director. The Assistant Project Director is primarily responsible for assisting the Project Director to carry out the responsibilities as described above.

3) EO Compliance Officer

The EO Compliance Officer will be responsible for assuring all Equal Employment Opportunity requirements of the contract are fulfilled.

4) Design Managers

The Design Managers report directly to the Project Director. Design Managers from both CDOT and RTD are charged with the overall administration of the design portion of the Project and ensuring the design conforms to the terms of the Contract. They are responsible for assuring a smooth cooperative relationship between the Contractor, CDOT, and RTD staff, and impacted local jurisdictions in review and approvals necessary as stipulated in the Contract. They also coordinate with the Construction Manager to resolve design-related issues that are brought up during construction.

5) CONSTRUCTION MANAGERS

The Construction Managers report directly to the Project Director. Construction Managers from both CDOT and RTD are charged with the overall administration of the construction portion of the Project. They evaluate, process, and approve change orders, disputes, and claims. The Construction Managers also coordinate with the Design Managers both before and during construction so that the Project is built per the Contract and to the highest quality possible.

6) PROJECT PUBLIC INFORMATION (PI) LIAISON

The Project PI Liaison reports directly to the Project Director and is responsible for coordinating all Public Outreach efforts by CDOT, RTD and the Contractor during the life of the project.

7) RTD STAFFING

RTD provides staff to support CDOT in the management of the Project per the terms of Intergovernmental Agreement between CDOT, RTD, and HPTE dated August 2011. The following RTD staff are assigned to the project in support roles to CDOT:

a) RTD Project Manager

The RTD Project Manager provides support services to the CDOT Project Director in the overall management of the Project, as follows:

- Provide overall project management services for the project, including the RTD elements.
- Assist with development of the RFP
- Assist with stakeholder relations
- Assist with the procurement process
- Review contractor submittals
- Attend project meetings
- Review contract changes
- Act as a general liaison between CDOT and RTD for this project
- Other duties as necessary

b) RTD Construction Manager

The RTD Construction Manager provides support services to the RTD Project Manager and assists the CDOT Construction Manager with overall construction management of the project. Responsibilities include:

- Provide construction management services for the Project, including the RTD elements.
- Support the RTD Project Manager and the CDOT staff
- Assist with development of the RFP
- Assist with the procurement process
- Review Contractor submittals including schedules, pay estimates, and management plans.
- Provide support to the Project team on assessments
- Attend project meetings

- Review contract changes
- Act as a general liaison between CDOT and RTD for this project
- Other duties as necessary or assigned

c) RTD Office Engineer

The RTD Office Engineer provides support services to the RTD Project Manager and assists CDOT with the overall delivery of the project, as follows:

- Provide general engineering support to the Project team
- Review and track Contractor submittals
- Conduct project assessments for both design and construction activities as directed by the Project team
- Provide design and construction coordination support for Project team (tracking RFIs, design changes, updating plans sets, etc.)
- Conduct design and construction assessments as assigned by the Project team
- Attend project meetings
- Provide oversight activities for the RTD elements
- Other duties as necessary or assigned

D. OPERATIONS AND BACK OFFICE SUPPORT

Operations and back-office support are provided by:

- CDOT Public Information Liaison
- CDOT Environmental Manager
- Region 4 and Region 6 Traffic
- Region 6 Right-of-Way Manager
- Region 6 Operations Engineers who have operated the I-25 Express Lanes for more than 15 years.
- E-470 Public Highway Authority back office and customer service center personnel.
- CDOT's Traffic Operations Center's ITS Engineers and Technicians who have a proven track record of operating and maintaining complex electronic systems to support highway operations.

E. TECHNICAL SUPPORT

Throughout the construction period, the Project will also receive support from experienced CDOT and RTD engineers and construction managers; experts from other agencies; experts from CDOT's specialty units, such as environmental, traffic, and right-of-way; transit managers from RTD, and the FHWA Senior Operations Engineer.

F. DESIGN-BUILD PROJECT DELIVERY TEAM

The Contractor will maintain the following positions as part of the Project Delivery Team:

- Project Manager
- Design Quality Manager
- Construction Quality Manager
- Environmental Compliance Manager
- Safety Manager
- Public Information Manager
- ROW Manager (if acquisition of ROW is approved by CDOT)
- Legal Counsel

5. PROJECT PHASES

A. FUTURE INTEGRATION OF THE MANAGED LANES TOLLING SYSTEM

The US 36 Managed Lanes Project includes managed lanes that will be implemented as a tolled facility. The current phase of the Project involves building the infrastructure for the tolling systems. Ultimately, the tolled facility will be connected with the toll collection systems maintained and operated by the E-470 Public Highway Authority.

The E-470 Public Highway Authority will provide and install the toll collection equipment for the managed lanes after the infrastructure is in place.

During Project design and construction phases, the appropriate coordination with the E-470 Public Highway Authority will take place to assure a smooth implementation of the tolling systems.

B. FUTURE PHASES OF US 36 CORRIDOR

CDOT is currently working toward a Public Private Partnership to complete construction of the Managed Lane to Boulder. At this time, CDOT anticipates that this project will continue construction from the west end of the current project to Boulder. CDOT expects that this project will also use the Design-Build delivery method.

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6. PROCUREMENT AND CONTRACT MANAGEMENT

A. DESIGN-BUILD DELIVERY

CDOT chose to use the Design-Build delivery approach for this Project. Design-Build is an alternative delivery strategy where Design and Construction services are included in a single Contract. Design-Build is generally suited for projects with high potential for innovation associated with complexity and schedule. Aspects of this Project that made it an ideal candidate for a design-build delivery method include:

- Bridge replacement on major transportation facilities.
- Reconstruction of major transportation facilities.
- Widening of major transportation facilities.
- ITS development, or integration, on transportation facility networks.
- Construction phasing is a major issue.
- Revenue generating project (tolling).
- Bonded projects.
- Innovative financing projects (TIFIA or Concessions).
- Status of right-of-way acquisition or potential for delays in securing parcels.
- Status of securing Intergovernmental or Cooperating Agency Agreements.
- Status of securing permits.
- Public and private utility relocation and or adjustment agreements.
- Unforeseen conditions, such as hazardous materials.
- Unforeseen subsurface or geological features.
- Constrained schedule for design, construction and completion.
- Ability to transfer, share, and manage risks.
- Ability to define the scope for both design and construction.
- CDOT's ability to develop, implement and support the Design-Build process.

CDOT is hoping to realize benefits from using the Design-Build delivery method in the following areas:

- Savings of time, cost, and administrative burden,
- Improved quality without sacrificing schedule and budget,
- Reduction in the risks,
- Improved coordination of efforts.
- Risk transfer from the HPTE/CDOT to the Contractor, including responsibility to deliver the Project within a fixed price and guaranteed completion date.

- Allocation of responsibility and risk to the parties who can best manage the processes and outcomes.
- Incentivizing contractors to provide the maximum scope content and early project delivery.
- Innovation in design, construction techniques, construction phasing, sequencing, risk management, traffic management, public information, and cooperative communication.

B. DESIGN-BUILD PROCUREMENT

CDOT's general procurement process can be summarized by the following activities:

- Identification of potential Design-Build project.
- Identification of project attributes (goals and risks).
- Approval authorization request.
- Team formulation.
- Scope definition.
- Base data gathering.
- Request for Proposal preparation.
- Selection of Design-Build Contractor.

CDOT used a Two-Phase Selection procedure for this Project, guided by federal regulations and state statutes. The Two-Phase Selection procedure consists of a Request for Qualifications (RFQ) followed by a Request for Proposal (RFP).

The Award criteria options are the following: Lowest Price, adjusted low-bid (price per quality point), meets criteria and low bid, weighted criteria process, fixed price and best design, and best value. The Award of the Project will be based on two elements–the "Cost" element, and the "Technical" element.

The award of this Project will be based on the best value award criteria.

Key staff who participated in the oversight, development, support, and management of the Design-Build process included the Project and Assistant Project Directors, Directors, the Design and Construction Managers, Evaluation Committees, Technical Advisors, Subject Matter Experts, and Observers.

The Executive Oversight Committee oversaw the Project's Design-Build process development. They authorized and approved For Release prepared documents, such as the Letter of Interest, Request for Qualifications, and Request for Proposals. They also authorized and approved criteria and processes used to evaluate proposals.

The Technical Advisors and subject matter experts participated in the Evaluation of Qualifications, the Evaluation of Proposals, or both. The Technical Advisors and subject matter experts may have expertise in one or more technical element areas of the Project. These may include public information, quality management, traffic management, roadway design, construction methods and techniques, and safety.

C. CONTRACT ADMINISTRATION

Contract administration for the Design-Build Contract is the responsibility of CDOT. CDOT will managed the contract based on the documents and requirements included in the Contract Documents.

Under the Design-Build approach, CDOT provides conceptual designs and focused on assessing compliance with processes and required performance results. The Design-Build concept places risks of ownership and accountability on the selected Design-Build team. These risks are further identified and defined in the submitted response to the Final Request for Proposals, which after selection and award become a portion of the "Contract."

The selected Design-Build Contractor (Contractor) has responsibility for Quality Control and Quality Assurance (QC/QA) for the Work, including, Design, Construction, and Materials. This QC/QA approach places the Design-Build team in full responsibility, and thereby eliminates the conflict over errors and omissions.

D. OTHER

Additional areas that to be addressed in future versions of this PMP are:

- Performance Reporting
- Payments
- Claims Administration
- Records Management
- Contract Close-out

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7. PROJECT SCHEDULE, COST, AND FUNDING

A. PROJECT SCHEDULE

Major project milestones for the Project leading to the award of the Design-Build Contract and the Project completion date are listed below. These are the anticipated dates and are subject to modification.

Milestone	Date
Issue RFP	September 22, 2011
One-on-One Meetings / Alternative Technical Concepts (ATC) with Pre-Qualified Proposers	September 22, 2011 to October 13, 2011
Last Date for Industry Review Period	October 13, 2011
Issue Conformed Contract – Book 1	October 27, 2011
Begin ATC one-on-one meetings	October 14, 2011
Last Date for Pre-Proposal Submittal of ATCs	December 1, 2011 (no meetings the week of Thanksgiving)
Last Date for ACC Submittals	December 7, 2011
Last Date for Owner Comments to Pre-Proposal ATC Submittals and ACC Submittals	December 15, 2011
Last Date for Proposer Submittals of Request for Clarifications (RFCs)	January 5, 2012
Last Addendum to RFP Issued	January 5, 2012
Technical Proposal Due Date	January 18, 2012
Price Proposal Due Date	January 25, 2012
Escrowed Proposal Documents (EPDs) Due Date	Three Working Days after Price Proposal Due Date
Select Contractor	March 2012
ROW Available for Construction	September 2012
Open Project for Toll Collection	July 2015
Complete Project	September 2015

1) ANNUAL UPDATE OF SCHEDULE

Under the terms of the Contract, CDOT and the Contractor will continually update the schedule to assure Project complete by the required date. This will include development of Recovery Schedules if any aspects of the Project delivery are falling behind schedule. This process is more fully detailed in the Contract Documents.

B. PROJECT COST

Capital costs for the Project are estimated to be $306 million in year of expenditure (YOE) dollars. The costs include construction of a managed lane, BRT elements, portions of a commuter bikeway, and replacement of aging roadway and bridge infrastructure. Please refer to the US 36 Major Project Financial Plan for more detailed and updated financial information for this project.

Project Capital Costs by Major Category

Project Element	($ millions)
Design-Build Construction, Intelligent Transportation Systems, Tolling	$205.0
Right-of-Way (ROW) for Managed Lanes	$15.8
Bridge Structures and ROW	$46.0
HPTE/CDOT Costs (contingency, Construction Engineering, force account)	$39.2
TOTAL	**$306.0**

The main assumptions underlying the cost model include the following:

- Project cost estimates are based on unit prices. Project cost elements used in the EIS and original TIGER grant were developed and reviewed by a team of CDOT and FHWA. The project team has investigated and refined the design/quantities for the Design-Build Contract to reflect current and expected market conditions.
- Approximately 6 percent contingency has been included within the budgeted Project elements.
- Anticipated project development, procurement, oversight, and Design-Build costs have been built into the overall estimate.

The Project's capital costs are provided below by year in YOE dollars. All capital costs listed qualify as eligible project costs under the TIFIA program.

1) ANNUAL UPDATE OF COST ESTIMATE

As required by FHWA, the Financial Plan and cost estimates will be updated annually. This will include cost information that must be submitted to CDOT by the Contractor per the Contract Documents.

Project Capital Costs by Major Category by Project Year

	($ millions YOE Dollars)						
Project Element	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**Total**
Managed Lanes & GP Lanes Reconstruction							
Preliminary Engineering, Force Account and CDOT Costs	$0.90	$3.60	$6.80	$10.50	$11.40	$6.00	$39.20
ROW for Managed Lanes	0	5.7	10.1	0	0	0	15.8
Design-Build Construction	0	0	15.8	76	84	5.1	180.9
Intelligent Transporta-tion Systems and Tolling	0	0	0	2	15.4	6.7	24.1
Subtotal Managed & GP Lanes	**0.9**	**9.3**	**32.7**	**88.5**	**110.8**	**17.8**	**260.0**
Colorado Bridge Enterprise Structures							
Preliminary Engineering, Force Account and CDOT Costs	0	0.7	1.8	2.3	1.9	0.3	7.0
ROW for Bridge Structures	0	1.3	2.5	0	0	0	3.8
Design-Build Construction	0	0	2.3	18.3	13.1	0	33.7
Intelligent Transportation Systems and Tolling	0	0	0	0.3	1.2	0	1.5
Subtotal Bridge Enterprise Structures	**0**	**2.0**	**6.6**	**20.9**	**16.2**	**0.3**	**46.0**
TOTAL	**$0.9**	**$11.3**	**$39.3**	**$109.4**	**$127.0**	**$18.1**	**$306.0**

C. GUARANTEED MAXIMUM PRICE (FIXED PRICE)

The Work required for the Basic Configuration of the Project, plus any Additional Requested Elements (ARE) and portions of AREs included in the Proposal, will not exceed the Guaranteed Maximum Price of $231,000,000 ($22.6 million for Wadsworth Parkway Bridge Enterprise elements, $9.6 million for Wadsworth Boulevard/112th Avenue Bridge Enterprise Elements, $198.8 million for remainder of Project scope). The Basic Configuration is defined in the Contract (see Book 2, Section 1, Exhibit A, for drawings of Basic Configuration).

D. PROJECT FUNDING

1) STATE AND LOCAL FUNDING SOURCES

HPTE and CDOT have assembled a diverse funding package for the Project anchored by $248 million of State and locally directed funds. This equity contribution to the Project represents approximately 81 percent of its total capital costs. This high level of State and locally directed funding demonstrates the high level of financial commitment the stakeholders have in the Project. The Project's State and local funding sources include the following:

- *Colorado Bridge Enterprise Funding* - In 2009, then Governor Ritter signed into law a measure establishing the CBE, Like HPTE , the CBE is a business enterprise within CDOT. Unlike CDOT, the CBE is authorized to enter into debt to finance bridge replacement projects. Two of the bridges authorized and funded for replacement under the CBE are located within the US 36 project limits.
- *CDOT Federal and State Grants* - CDOT funding contributions are pledged from sources identified by the Colorado Transportation Commission for roadway surface treatment, safety, and mobility improvements in the Denver metropolitan area. State transit funding is also included.
- *RTD Sales Tax Revenue* - RTD contributions are sales tax revenues generated from the .04 cent increase in sales tax approved by District voters in 2004.
- *DRCOG Federal Funds* - DRCOG has pledged contributions from the Surface Transportation Program (STP-Metro) and Congestion Mitigation and Air Quality (CMAQ) funding sources it receives annually under SAFETEA LU.

2) TIGER DISCRETIONARY GRANT

The Project received an American Reinvestment and Recovery Act's (ARRA) Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grant in the amount of $10 million, resulting in total funding on hand of $258 million for the Project prior to debt financing

3) TIFIA CREDIT ASSISTANCE

HPTE received TIFIA credit assistance in the form of a secured loan (TIFIA Loan) in an amount not to exceed $52.9 million.

HPTE has actively considered a Senior Bonds/Subordinate TIFIA structure; however, under current conditions in the tax exempt bond market, such a scenario is not viable. HPTE requests to reserve the right to revisit this scenario if the conditions in the capital markets change.

4) SOURCES AND USES OF FUNDS

The following table identifies the sources and uses of Projects funds. Sources should be considered received or approved unless otherwise noted.

Sources and Uses of Funds

Sources of Funds	**($ millions)**
Colorado Bridge Enterprise Funding	44.4
CDOT Federal and State Grant Funds	39.0
RTD Sales Tax Revenue *	120.0
DRCOG Federal Funds **	44.0
City and County of Broomfield	1.86
City of Westminster	.86
TIGER Grant	10.0
Subtotal Non-Debt Financing	**260.1**
TIFIA Loan	52.9
Total Sources	**313.0**
Uses of Funds	
TIFIA Credit Assistance Charge	3.9
TIFIA Cost of Issuance Funded from TIGER	0.9
TIFIA Cost of Issuance	1.0
Preliminary Engineering/Procurement	9.6
ROW Acquisition	15.5
Construction Engineering Costs/Indirects	20.5
Construction	217.2
Colorado Bridge Enterprise	44.4
Total	**313.0**

* RTD has committed $30 million to date and approval of the additional $90 million is expected at its February 15 Board meeting.
** DRCOG has committed $25 million to date and approval of the additional $19 million is expected at its March 16 Board meeting.
Status of these commitments will be provided as this PMP is updated.

5) ANNUAL UPDATE OF FINANCE PLAN - FUNDING

As required by FHWA, the Financial Plan will be updated annually. This will be the responsibility of the CDOT's Office of Financial Management and Budget.

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8. PROJECT REPORTING AND TRACKING

A. REPORTING

The Contractor will be responsible for implementing systems that track and report project progress, status, changes, and issues. Regular meetings between the Contractor and CDOT allow all involved parties to be fully aware of the significant issues and actions planned as well as to mitigate any adverse impacts.

A Monthly Status Meeting attended by the Contractor team, CDOT, and RTD will provide a forum to discuss project costs, schedules, quality issues, compliance with federal requirements, and other status items in sufficient enough detail to allow all involved parties to be fully aware of the significant status issues and actions planned to mitigate any adverse impacts. At the meeting, the attendees review the Monthly Status Report prepared by the Contractor, as described in Section B below.

The results of the meeting will be reported to the Executive Oversight Committee. The Executive Oversight Committee includes all of the major stakeholders on the project so they are fully aware of the complete status of the Project and are in a position to take appropriate action to resolve issues, if necessary.

B. MONTHLY STATUS REPORTS

The Contractor will compile a Monthly Status Report for the monthly meetings that includes the following sections.

1) EXECUTIVE SUMMARY

An Executive Summary of the report is provided to all attendees before the meeting to brief the Executive Committee on the progress and issues in the Project. The Executive Summary will be a clear and concise summary of the current status of the Project, including any major issues that have an impact on the Project's scope, budget, schedule, quality, or safety. The following summary information is an example of items that are to be included in the Executive Summary:

- Current total project cost (forecast) vs. latest approved budget with the reasons for any deviations from the approved budget.
- Current overall project completion percentage vs. latest approved plan.
- Delays or exposures to milestone and final completion dates.
- Significant Subcontracts advertised, awarded, or completed.
- Significant scope of work changes.
- Significant quality or safety issues.
- Any significant federal issues such as environmental compliance, Buy America, Disadvantaged Business Enterprise (DBE), affirmative action requirements, etc.

Information included in the Executive Summary is gathered as described in the following sections:

2) PROJECT ACTIVITIES AND DELIVERABLES

The Project Schedule has an Approved detailed Work Breakdown Structure (WBS) with a detailed, organized hierarchical division of the (WBS) for completing each element of the Work. The Accepted WBS is the basis for organizing all Work under the Contract Documents, and is used as a basis for all project activities and deliverables.

The monthly report highlights the Project activities and deliverables that occurred during the previous month (reporting period) and defines the activities and deliverables planned for the next three months. Activities and deliverables that are reported so that the Executive Committee can better schedule their time to incorporate the upcoming activities. These include meetings, audits and other reviews, packages submitted, advertisements, awards, construction submittals, construction completion milestones, financial plan submittals, media or Congressional inquiries, value engineering/constructability reviews, and other items of significance.

3) ACTION ITEMS/OUTSTANDING ISSUES

The Monthly Progress Report includes those action items and outstanding issues of highly significant or sensitive issues requiring action. In general, issues and administrative requirements that could have a significant or adverse impact to the Project's scope, budget, schedule, quality, safety, and/or compliance with federal requirements are included. The status, responsible person(s), and due dates are included in the Report for each action item/outstanding issue. Those action items requiring action or direction in the current month are included in the agenda for the Monthly Status Meeting.

4) PROJECT SCHEDULE

The Contractor uses either Microsoft Project or Primavera Scheduling software to develop and manage a CPM Schedule. CPM is a scheduling method that shows the interdependencies between work activities so that when it is updated, any delays occurring in one activity are reflected through the entire Project Schedule through an updated completion date.

Once CDOT approves the Project Schedule, it becomes the basis for tracking progress and is updated and submitted as part of the Monthly Progress Report. The Monthly Progress Schedule includes all current information regarding status, delays, potential exposures, and recovery efforts.

For the three-month look-ahead portion of the Monthly Progress Schedule, the Contractor provides sufficient detail for weekly Schedule control and specifically identifies:

- Completion Deadlines, if any.
- Phasing of design, construction, testing, and staging of the Work as specified will be prominently identified. Particular attention will be given to release for construction dates, Site availability, construction staging, and maintenance and protection of traffic requirements of the Contract.
- Procurement, fabrication, preparation of mock-ups, preparation of prototypes, delivery, installation, testing of Materials, and Equipment, including factory testing and demonstration testing, and any long lead time (over 30 Days) orders for Material and Equipment.
- Interface coordination and dependencies with preceding, concurrent, and follow-on Contractors.
- Work to be performed by other Contractors and agencies that may affect the Schedule.

a) Recovery Schedule

The Recovery Schedule demonstrates the Contractor's program and proposed plan to regain lost Schedule progress, as well as demonstrates how Project Completion and Final Acceptance of the Project will be achieved by the deadlines specified in Exhibit B of the Contract.

If the Work is lagging the late start cost curve in the Current Initial Schedule for a period which exceeds the greater of, (a) 15 Days in the aggregate or (b) that number of Days in the aggregate that equals 5 percent of the Days remaining until the Project Completion Deadline, the Contractor must

prepare and submit to CDOT for Approval a Recovery Schedule within 14 Days after the Contractor first becomes aware of such Schedule delay.

CDOT notifies the Contractor within 14 Days after receipt of the Recovery Schedule whether the Recovery Schedule is Approved, or describes changes that CDOT believes should be made to the Schedule. The Contractor incorporates and fully includes the Recovery Schedule (including CDOT's comments) into the next scheduled Monthly Progress Schedule (or, if the next scheduled Monthly Progress Schedule is due within 7 Days of Approval of the Recovery Schedule, then the Recovery Schedule will be incorporated into the subsequent Monthly Progress Schedule), and provides CDOT a Revised Initial Schedule.

5) PROJECT COST

Project costs are tracked and reported through the CPM Schedule that is cost-loaded at each of the required WBS levels. Information relative to the current forecasted cost vs. the latest approved budget vs. the baseline budget is provided. Narratives, tables, and/or graphs (in a format that best displays the critical information) accompany the updated cost information. Reasons for deviation from the approved budget, impacts resulting from the deviations, and initiatives being analyzed or implemented to recover any cost overruns will be provided.

Additional information related to the Project's federal obligations and/or TIFIA disbursements for the Projects, compared to planned obligations and disbursements are also shown.

6) PROJECT QUALITY

This section summarizes the QA/QC activities from the previous month and highlights any significant items identified as being deficient in quality. Deficient items noted are accompanied by reasons and specifics concerning the deficiencies and corrective actions taken or planned. Responsibility for the corrective action is identified and the corrective actions are included in the Action Items/Outstanding Issues section of the report.

C. OTHER STATUS REPORTS

As part of the Contract Documents, the Contractor must also submit to CDOT the following monthly progress tracking reports:

1) MONTHLY MAINTENANCE REPORT

Monthly Maintenance Progress Reports will be required for the full term of the Contractor's maintenance responsibilities. These reports will detail all maintenance Activities performed, monitored maintenance condition of existing facilities, identification of any deficiencies from minimum standards, and an action plan for correcting the deficiencies.

2) MONTHLY TIFIA REPORT

The Contractor will submit the following status to CDOT in a single report:

- Project Costs expended to date as well as the preceding month and the amount of the Project Costs estimated to be required to complete the Project.
- Assessment of the overall construction progress since the date of the last report and since the beginning of the project, together with an assessment of how such progress compares to the Contractor's Current Initial Schedule.

- Specify the anticipated date to begin collection of toll revenue. If the Contractor plans to phase toll collecting facilities, the Contractor shall specify intermediate dates of toll collection as well as the anticipated date of final Toll collection facilities.
- Detailed description of all material problems (including but not limited to actual and anticipated cost and/or schedule overruns, if any) encountered or anticipated in connection with the construction of the Project since the date of the last report, together with an assessment of how such problems may impact the Contractor's Current Initial Schedule and the meeting of critical dates and a detailed description of the proposed solutions to any such problems.
- The delivery status of major equipment and the effect, if any that the anticipated delivery dates of such equipment has on the Contractor's Current Initial Schedule.
- Any proposed or pending Change Orders.
- Any material changes or deviations from CDOT's land procurement plans or schedule.

9. STAKEHOLDER AND INTERNAL COMMUNICATIONS

A. RTD

RTD and CDOT both have full time personnel assigned to the Contract procurement phase, and the design and construction phases of the Project. Coordination with RTD staff occurs at the Executive Oversight Committee and through integration of the staff from both organizations in the Project Management Team.

B. OTHER STAKEHOLDERS

CDOT has a strong commitment to maintaining an open line of communication with stakeholders who have an interest in the US 36 Corridor and is communicating and coordinating with them to the maximum practical extent. These stakeholders include:

- E-470
- Denver Regional Council of Governments (DRCOG)
- Mayors and Commissioners Coalition
- CSS Working Group
- 36 Commuting Solutions
- Federal Highway Administration (FHWA):
- Law Enforcement Agencies

C. INTERNAL COMMUNICATIONS

In addition to the informal contacts and meeting inherent in the Design-Build process, the following regularly scheduled meeting will be held between CDOT, RTD and the Contractor.

1) PROGRESS STATUS MEETING

A Progress Status Meeting shall be conducted each time a draft Monthly Invoice submittal is made. The meeting shall be used to verify, address and finalize the following:

- Actual start dates
- Actual and planned Completion Deadlines
- Earned value of Work that has been Accepted and reported in-place, based on installed quantities and Material on Hand (stockpiled Materials)
- Activity percent complete
- Incorporation of Approved Change Orders
- Verification of unit-price items, if any
- Status of outstanding Nonconforming Work
- Completion of Value Engineering Change Proposals, if any
- Work performance
- Project Schedule, including changes from previous month's Schedule
- Critical Path(s)

2) TASK FORCE MEETINGS

The Contractor and CDOT will hold regular Task Force Meetings for the following disciplines to facilitate "Over the Shoulder" review of the design: 1. Drainage; 2. Roadway; 3. Structures; 4. Traffic/ITS/Tolling; 5. Utilities 6. Environmental; 7. Public Involvement

As a minimum, the Contractor shall prepare an agenda and conduct each meeting to discuss the status of the design, coordinate the design development between design disciplines, discuss constructability issues, and identify any questions associated with design requirements.

3) PROJECT SAFETY MEETINGS

The Contractor shall conduct regularly scheduled Project Safety Meetings, tool box talks, etc., as specified in his Project Safety Management Plan.

4) DESIGN PROGRESS REVIEW MEETINGS

The Contractor shall hold design progress review meetings at certain stages of the design development process (e.g., 60%, 90% packages) and invite CDOT to attend. The design progress meetings shall be scheduled, conducted, and documented by the Contractor. The meetings minutes shall be taken by the Contractor and submitted to CDOT within 5 Working Days after each meeting

5) WEEKLY COORDINATION MEETINGS

The Contractor will hold weekly coordination meetings with CDOT to provide Project Schedule, accomplishments, and planned activities, for the upcoming week.

6) PUBLIC INFORMATION PLAN REVIEW MEETINGS

The Contractor will schedule and hold PIP review meetings with CDOT to review, assess input, and/or modify the Contractor's PIP. These meetings will be held quarterly after the initial PIP is established and Approved by CDOT.

7) MAINTENANCE OF TRAFFIC TASK FORCE MEETINGS

Maintenance of Traffic Task Force meetings will be held to monitor the Traffic Management Plan, the Incident Management Plan and the Travel Demand Management Program. The Maintenance of Traffic Task Force will include, at a minimum, the Contractor's Public Information Officer, Traffic Control Supervisor, Superintendent, CDOT, RTD, 36 Commuting Solutions, and Local Agency representatives.

10. PROJECT MANAGEMENT CONTROLS

Need a description of CDOT's project controls team or whoever is on the team. Roles, functions, responsibilities, etc. Rest of section should be specific project controls activities.

A. RISK MANAGEMENT PLAN

The Design-Build process is based on risk assessment, assignment, and allocation. Understanding and allocating risk is necessary to determine ownership and responsibility for individual tasks. Design-Build uses performance provisions that allow CDOT to assign and allocate risk to the party most capable to manage the risk.

The Risk Management Plan was developed by CDOT. It identifies how the Risk Matrix is revised regularly throughout the Project, as follows:

Standing project meetings where the Risk Matrix is reviewed

Frequency for review and update of the Risk Matrix

1) RISK MATRIX

CDOT developed the Project's Risk Matrix and will use it to identify, compare, and evaluate risk allocation over the life of the Project. As the Project nears Notice to Proceed, CDOT and RTD will further develop the Risk Matrix based on Industry Reviews into a Risk Management Plan that will fully delineate anticipated Risks and Risk Controls.

CDOT adds a risk to the matrix based on:

The CDOT Project Manager and the Contractor identify the parties responsible for developing a risk mitigation plan to address the risk. The periodic reviews ensure that the responsible party is updating the plan until the potential risk has been fully mitigated.

Risks are removed from the matrix when:

The Risk Matrix is included in the Appendix F of this Project Management Plan. It:

- Identifies risks within the Project.
- Categorizes and prioritizes each risk.
- Determines the likelihood of the risks occurring.
- Identify the impact on the Project if risk does occur.
- Identifies actions to prevent the risk from occurring.
- Lists contingent actions to reduce the impact, should the risk occur.
- Schedules these actions within an acceptable timeframe.
- Delineates a method to monitor the status of each risk throughout the Project.

B. SCOPE MANAGEMENT PLAN

1) DESIGN

CDOT's Design Manager and Construction Manager will hold weekly or biweekly meetings with the Contractor to monitor the Project design and construction progress. The Project Director will sometimes attend these meetings, but in all cases will receive meeting minutes and a briefing from the Managers describing the results of the meeting.

On a monthly basis, the Design Manager and Construction Manager will attend a Plan Status meeting chaired by the Project Director to report on the status of the Project and any problems and obstacles which have arisen in the previous month. Representatives from Specialty units, such as Utilities, ROW, Traffic, Hydraulics, Environmental, and the Region Business office will also attend. These individuals have a detailed knowledge of the requirements in their specialty and of the details as to how their specialty impacts the Project. The Project Director will make recommendations and/or give directions as to the best way to proceed.

The process for approving scope changes and verifying that the planned scope is actually completed will be included once the Contractor is under contract.

2) CONSTRUCTION

CDOT's Design Manager and Construction Manager hold weekly meetings with the Contractor to monitor progress. They discuss progress since the last meeting and anticipated work until the next. The Project Director may attend these meetings, but will be briefed as to the results by the Managers.

3) SCOPE CONTROLS

- Work Breakdown Structure (WBS) for Scope Identification
- Key Delivery and Interface Milestones

C. SCHEDULING CONTROLS

The Contractor will notify the Managers in writing at the first schedule submittal which software will be used. The Contractor will perform all work required so that the schedule accurately reflects the planned schedule and progress.

1) SCHEDULE CONTROLS

To manage the Schedule, the Contractor will submit to CDOT for Approval the following Project Schedules:

a) Preliminary Initial Schedule

The Preliminary Initial Schedule is defined as the Initial Project Schedule for the purpose of initiating Work on the Project. It will be a CPM Schedule with Activity detail for the first three months following the NTP1 and will be cost-loaded to WBS Level V.; The Preliminary Initial Schedule will conform to the Accepted WBS and include all Contractor-defined WBS Level IV and V Activities.

b) Original Initial Schedule

The Original Initial Schedule is defined as the Contractor's original plan for the Project from NTP1 through Final Acceptance. It will be a detailed CPM Schedule with Work Activities and Completion Deadlines included for the full term of the Project.; The Original Initial

Schedule will be developed from the Preliminary Initial Schedule and will conform to the Accepted WBS and include all Contractor defined WBS Level IV and V Activities.; The Original Initial Schedule will not change after Approval.; The Original Initial Schedule will be cost loaded to WBS Level V and, when summarized for the aggregate costs of WBS Level V Activities, will equal the WBS Level IV prices set forth in the Proposal Documents.

c) Current Initial Schedule

The Current Initial Schedule is defined as the Original Initial Schedule with cost and Schedule changes from Approved Change Orders incorporated. It will be updated monthly with only Approved cost and Schedule changes.; This Schedule will not show progress but will maintain the original data date from the Original Initial Schedule as a baseline.; The Current Initial Schedule will be submitted to CDOT for Acceptance with each Monthly Invoice.; The Current Initial Schedule will be cost loaded to WBS Level V and, when summarized for the aggregate costs of WBS Level V Activities, will equal the WBS Level IV prices set forth in the Proposal Documents and Approved Change Orders.

d) Revised Initial Schedule

The Revised Initial Schedule is defined as the Contractor's plan for the Project which is current with progress to date.; This Schedule will reflect the planned execution of the Work for the remainder of the Project along with a reallocation of the remaining resources and quantities to represent the estimate to complete the Work.; The Revised Initial Schedule will include all Approved Change Orders, Work Orders, and Completion Deadlines.; A Revised Initial Schedule must be Approved by CDOT; such Approval will only apply to the scheduled Work that is planned after the Schedule's Approval date.; The Revised Initial Schedule will be prepared by the Contractor when requested by CDOT.; The Revised Initial Schedule will be cost loaded to WBS Level V and when summarized for the aggregate costs of WBS Level V Activities, will equal the WBS Level IV prices set forth in the Proposal Documents and Approved Change Orders.

e) Monthly Progress Schedule

The Approved Original Initial Schedule or Current Initial Schedule, will be used as the basis to establish the Progress Schedule. It will be updated every month to show the actual progress of Work and the earned value of Work accomplished, including Approved Change Orders and Work Orders.; The Monthly Progress Schedule will be cost loaded to WBS Level V, and when summarized for the aggregate costs of WBS Level V Activities, will equal the WBS Level IV prices set forth in the Proposal Documents and Approved Change Orders.; In addition, the Progress Schedule will include WBS Level VI detail for the upcoming three months of design and construction on the Project, except that cost loading to WBS Level VI is not required for the three-month look-ahead.

f) Recovery Schedule

The Recovery Schedule is defined as the Contractor's program and proposed plan for the recapture of lost Schedule progress and to achieve Project completion or Final Acceptance by the applicable Completion Deadlines. The Recovery Schedule will be based on the latest Accepted Monthly Progress Schedule and will include equivalent detail.; The Recovery Schedule will show the proposed changes to the Schedule, include cost loading and additional detail to substantiate the recovery plan, and will reflect all proposed changes to WBS Level V Activities through Project Completion.; The Recovery Schedule will be cost loaded to WBS

Level V and, when summarized for the aggregate costs of WBS Level V Activities, will equal the WBS Level IV prices set forth in the Proposal Documents and Approved Change Orders.

g) As-Built Schedule

The last Current Initial Schedule submitted will be identified by the Contractor as the As-Built Schedule. The As-Built Schedule will reflect the exact manner in which the Contractor executed the Work (including start and completion dates, Activities, actual durations, sequences, and logic), and will be signed and certified by the Engineer and the Contractor's Scheduler as being a true reflection of the way in which the Work was executed at the time of Final Acceptance.; This certified As-Built Schedule must be Accepted before the final Retainage is released.

D. DOCUMENT CONTROL

CDOT and RTD are using Aconex to track project Contract documentation. Aconex automates and streamlines the management of highway construction contracts by eliminating time-consuming repetitive tasks.

E. COST AND BUDGET CONTROLS

1) BUDGET CONTROLS

- Baseline Budget
- Approved Change Orders

2) COST CONTROLS

- Control Accounts
- Cost Breakdown Structure (CBS)
- Period and Cumulative Actual Cost (Actuals)
- Invoice Verification
- Forecasting Estimate to Complete (ETC) and Estimate at Complete (EAC)
- Contingency and Management Reserve

F. CHANGE CONTROLS

It is CDOT's and RTD's desire for the Contractor to have significant flexibility in determining how best to deliver the Project within the parameters established by the Contract Documents. Elements of the Contract have been identified as belonging to either Category A or Category B requirements. CDOT's Approval is required with respect to any proposed changes in the Category A and B Requirements. Changes in Category A Requirements may be submitted as Value Engineering Change Proposals (VECPs); and changes in Category B Requirements may be submitted as Category B Change Proposals (CBCPs).

1) VALUE ENGINEERING CHANGE PROPOSALS

The Contractor is encouraged to submit VECPs whenever it identifies potential savings. CDOT may also request the Contractor to develop and submit a specific VECP. The Contractor has the right to refuse to consider such CDOT-initiated VECPs.

a) Definition of Value Engineering Change Proposal

A VECP is a proposal developed and documented by the Contractor which:

- Would modify or require a change in any of the Category A Requirements in order to be implemented (including any changes to the Basic Configuration or Temporary Configuration); and
- Reduces the cost of the Project without impairing essential functions or characteristics of the Project (including service life, economy of operation, ease of maintenance, desirability and safety) as determined by CDOT in its sole discretion, and provided that it is not based solely upon a change in quantities, performance or reliability or a relaxation of the Contract requirements.

b) Required Information

At a minimum, the following information will be submitted by the Contractor with each VECP:

- A statement that the submission is a VECP, a narrative description of the proposed change, the advantages and disadvantages of the proposed change and the justification for changes in function or characteristics and the effect the proposed change has on performance.
- Description of the existing Contract requirements, which are involved in the proposed change.
- Identification of the Contract requirements (with reference to specific Sections), which must be changed if the VECP is Approved.
- A description of any previous use or tests of the proposal and the conditions and results. If the proposal was previously submitted on another CDOT project, indicate the date, Contract number and the action taken by CDOT.
- Date or time by which a Change Order adopting the VECP must be issued in order to obtain the maximum cost reduction, noting any effect on the Contract Schedule.
- A complete cost analysis including current pricing for the existing Contract requirements compared to the Contractor's cost estimate of the proposed changes.

The Contractor will provide any additional information requested by CDOT in a timely manner. Additional information could include results of field investigations and surveys, design computations, and field change sheets.

c) CDOT Review and Approval or Rejection of VECPs

CDOT may approve, in its sole discretion, in whole or in part, by Change Order, any VECP submitted.

d) Value Engineering Change Proposals Affecting Right-of-Way Plans

In a case where a VECP involves an adjustment to the ROW Plans (such as a proposal that additional real property be purchased to reduce construction costs), the VECP will compare:

- The incremental reduction in costs (such as for not designing and building a wall); and

- The costs involved in adjusting the ROW Plans or environmental approvals (which will be based on the Contractor's additional costs**,** such as for providing real property acquisition support services, including profit, plus CDOT's additional costs, including land acquisition, appraisals, negotiation, relocation, condemnation, closing, property management, and environmental permitting, specifically including allocated costs of CDOT personnel involved in the acquisition); or (as appropriate) will compare:

The incremental reduction in costs (if any) for not acquiring the unnecessary real property; and

The additional construction costs to be incurred.

2) CATEGORY B CHANGE PROPOSALS

The Contractor may submit CBCPs that, if Approved, may be implemented without any sharing of the Contractor's cost savings (and without any additional cost to CDOT).

a) Definition of Category B Change Proposal

A Category B Change Proposal (CBCP) is a proposal developed and documented by the Contractor that would modify or require a change in any of the Category B Requirements in order to be implemented that is "equal to or better than" the underlying requirement.

b) Required Information

At a minimum, the following information is to be submitted by the Contractor with each CBCP:

- A statement that the submission is a CBCP, and a narrative description of the proposed change.
- Redline of the changes proposed to the Contract requirements that are involved in the proposed change.
- Description of why the proposed change is equal or better than the existing Contract requirements.
- Justification for changes in function or characteristics of each item, and effect of the change on the performance of the end item, as well as on the meeting of requirements contained in the Contract Documents, including environmental compliance requirements and requirements contained in Governmental Approvals if requested by CDOT.
- A description of any previous use or tests of the proposal and the conditions and results if requested by CDOT. If the proposal was previously submitted on another CDOT project, indicate the date, Contract number, and the action taken by CDOT.
- Signature on the CBCP form from Contractor's discipline lead, Design Manager, or Construction Manager, as applicable, and the Contractor's Project Manager.

G. PARTNERING

CDOT intends to encourage the use of an extensive partnering program among CDOT, the Contractor, its Subcontractors and other stakeholders, where appropriate. The partnering relationship is structured to draw on the strengths of each organization to identify and achieve reciprocal goals. The objectives include effective and efficient Project performance and completion on schedule, within budget, and in accordance with the Contract Documents.

CDOT anticipates a partnering session involving the Executive Oversight Committee, the Project Management Team, Project team members, the Design-Build Contractor,, and others. Participation is encouraged. Any cost associated with partnering activities will be agreed to by both the Contractor and CDOT and will be shared equally with no change in the Contract Price. The Contractor will pay all costs and submit paid invoices to CDOT for 50 percent reimbursement.

It is the intent of the parties that the dispute resolution provisions contained in the Contract will apply only in the event that the normal CDOT-Contractor issue resolution efforts through partnering are not successful.

H. DISPUTE RESOLUTION

1) MANDATORY NATURE OF PROCESS

All disputes between the Contractor and CDOT that have not been resolved by the parties through the partnering process are to be resolved as stated in the Contract.

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11. QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

Note: This section was taken from the US 36 US 36 Managed Lane/BRT Project RFP. It will be updated once NTP2 has been issued.

Per the terms of the Design-Build Contract, the Contractor will lead all Activities related to Quality Control (QC) and Quality Assurance (QA) for the Project. CDOT provides Independent Assurance. CDOT's Independent Assurance is the Verification of the Contractor's implementation of and adherence to its Quality Management Plan (QMP).

The Contractor's QMP will document the Contractor's Quality Management Program, including the Contractor's approach to quality policy, quality planning, Quality Control, Quality Assurance, quality improvement, quality personnel, training, and coordination with CDOT's Independent Assurance procedures. The QMP will list procedures for meeting all requirements of the Contract Documents.

A. ADMINISTRATIVE REQUIREMENTS

1) QUALITY POLICY

The QMP will include the Contractor's executive management written definition and endorsement of the Contractor's policy for quality, including objectives for quality and its commitment to quality. The QMP will delineate the procedures used by executive management to implement the Contractor's quality policy.

2) QUALITY PLANNING

The Contractor's QMP will use industry standard inspection procedures, as well as those outlined in CDOT's *Construction Manual*, *Field Materials Manual*, and *Standard Specifications for Road and Bridge Construction*.

The following elements will be addressed in the QMP:

- Identification - Work items included in the Plan
- Characteristics - What characteristics of the item(s) will be inspected
- The QMP will include procedures to be taken for Nonconforming Work. Inspections will be performed during all phases of the Work from NTP1 to Final Acceptance to assure that the Work meets, and is being performed in accordance with, the Contract Documents.
- An examination of the quality of workmanship will also be conducted to confirm that all Work is being performed in accordance with all Contract requirements. Appropriate follow-up inspections, sampling, and testing of Materials will be performed as each item of Work progresses to assure consistency in workmanship, compliance with Contract requirements, (including Design and Construction Documents), and satisfactory performance of the Work in service.
- The Contractor will include in the QMP its planning methods to meet the requirements of the Contract Documents. The Contractor will include the Activities below in its quality planning efforts to meet the Contract Documents requirements for the Work. The Activities specified are the minimum for the QMP.
- Define and develop quality objectives for the Project.

- Identify the necessary processes, resources, and Quality Assurance personnel that are needed to assure that the Work meets the requirements of the Contract Documents, including environmental commitments, public information requirements, Maintenance of Traffic requirements, safety, project management processes, and the QMP.
- Ensure the compatibility of design, construction, installation, public information, inspection, and testing procedures.
- Develop and maintain the currency of Quality Control, Quality Assurance, and quality improvement procedures.
- Identify and define all measurable Contract Documents requirements.
- Identify construction Quality Assurance hold points for Contractor Quality Assurance testing and inspection and to allow CDOT the opportunity to perform its Owner Verification responsibilities.
- Identify, define, and implement standards of workmanship for all applicable Work features (e.g., concrete finishing).
- Identify, define, prepare, and maintain quality records and quality plans.
- Develop a procedure for preparation, control, Approval, and distribution of the QMP.
- Develop a procedure for Quality Assurance auditing to ensure the Contractor, Subcontractors, and Material Suppliers understand and are effectively implementing the QMP.
- Develop a procedure for corrective and preventative actions regarding quality compliance and implement the Quality Improvement Plan to address corrective Work.
- Develop a procedure and ensure the Contractor's executive management reviews the QMS at planned intervals to ensure its continued suitability, adequacy and effectiveness. Such reviews should include Quality Assurance/Quality Control (QA/QC) results, Owner Verification results, status of corrective/preventive actions, follow-up items from previous management reviews, changes to the QMS, and recommendations for improvement.

3) QUALITY CONTROL

The Contractor will be responsible to establish, document, and implement, a Quality Control Program. The Quality Control Program will be described in the QMP and include all procedures necessary for the Contractor to control the quality of its production processes to meet the requirements of the Contract Documents. The Contractor will develop a testing and inspection schedule to control the production processes.

Construction Quality Control Activities will utilize statistical analyses of material test results, including mean, variance, range, and running averages; measurements; clearances; and interactions between QC and QA. The results of these Activities will be used by the Contractor to set up control charts to monitor and track variations in materials over time. The control charts and the analytical results on which they are based will be provided to CDOT as requested.

Tests or inspections performed by production or Quality Control personnel as part of the Quality Control process will not be used to satisfy the Quality Assurance requirements.

4) QUALITY ASSURANCE

The Contractor will be responsible to establish, document, and implement a Quality Assurance program. The Contractor will include in the QMP the methods and procedures by which the Work will be certified by the Contractor as complying with the requirements of the Contract Documents.

Quality Assurance personnel will not participate in any Quality Control Activities and will be independent of the Quality Control personnel.

The Contractor will identify in the QMP all necessary resources and personnel to perform all Quality Assurance Activities required to ensure all Work meets the requirements of the Contract Documents. The QMP will identify the construction Quality Assurance hold points for Contractor Quality Assurance testing and inspection and will describe how the Contractor will notify CDOT so that it may have the opportunity to perform its Verification responsibilities.

5) QUALITY IMPROVEMENT

The Contractor will be responsible to establish, document, and implement a program for quality improvement. The Contractor will include in the QMP the methods for identifying, analyzing, evaluating, and implementing solutions to continuously improve quality. The QMP will establish and maintain specific procedures to ensure a successful Quality Improvement Program.

The QMP will establish and maintain documented procedures for planning and implementing Contractor quality audits to measure the effectiveness of the QMP and identify quality improvement opportunities. The Contractor will schedule and perform internal quality audits on the basis of the status and importance of the Activity to be audited.

Personnel that are assigned to audit Work Activities will not have direct quality responsibilities for the respective Activities they audit. The results of the audits will be recorded and reviewed with the personnel having responsibility in the area audited not later than 3 Working Days following completion of the audit.

The Contractor's project management personnel will timely implement the necessary corrective actions to improve any deficiencies found during the audit. The Contractor's follow-up Activities will ensure the implementation and effectiveness of the corrective action taken. Corrective actions will identify the root causes of deficiencies and will be developed, implemented, and tracked to prevent the recurrence of future deficiencies. Corrective actions will be monitored through review of documents, surveillance, or follow-up audits. Records of corrective actions will be kept together with the respective audit records and submitted to CDOT upon request.

The Contractor will consider CDOT's auditing efforts and the overall goals of the Project to determine where Contractor quality improvement audits will be performed.

6) QUALITY PERSONNEL

The Contractor's executive management will have overall responsibility for success of the QMP, and will ensure that responsibilities and authority are defined and communicated within their organization.

The Contractor will identify a Quality Manager for all Design Activities and a Quality Manager for all Construction Activities. The Quality Manager will be responsible for all Quality Control and Quality Assurance Activities. The Contractor's Quality Manager will develop and document procedures, instructions, and process controls to ensure the Work being produced by the Contractor meets the requirements of the Contract Documents. The Contractor's Quality Manager will review and approve the QMP prior to submittal to CDOT. The Contractor's Quality Manager will be

responsible for assuring, certifying, and providing documented evidence that the Work meets the requirements of the Contract Documents. At a minimum, the Quality Manager will report the status of the Project's quality monthly to CDOT.

All construction Quality Assurance testing personnel and Quality Control testing personnel performing concrete and hot bituminous pavement process control tests will meet the standards established in Section CP-10 of the CDOT *Field Materials Manual*.

The Contractor will ensure that personnel performing Work will have the education, training, skills, and experience to meet the requirements of the Contract Documents. The Contractor will maintain appropriate personnel records that may be examined by CDOT upon request.

7) TRAINING

The Contractor will establish and maintain documented procedures for identifying training needs and requirements and will provide training of all personnel performing Activities affecting quality. Personnel performing specific assigned tasks affecting quality will be trained in the specific plans, processes, and procedures as assigned in the QMP (e.g., MTIP, Contractor auditing procedures, etc.).

The Contractor will provide training to all personnel that may interface with CDOT's oversight efforts (audit process) to ensure it understands its roles and responsibilities for cooperating and responding to audits.

B. QUALITY MANAGEMENT PLAN REQUIREMENTS

The QMP will state the Contractor's commitment to quality and provide a clear definition of the scope of Activities and detail the methods to ensure the Work meets the requirements of the Contract Documents.

The QMP will list all deliverables to CDOT, as required by the Contract Documents and this Section.

1) CONTRACTOR RESPONSIBILITY TO RESPOND TO NONCONFORMANCE NOTICES

For verification purposes, CDOT will perform assessment of the Work. These efforts do not relieve the Contractor of responsibility for checking all Work. CDOT will forward all assessment reports and Nonconformance Notices (NCN) (if any) to the Contractor. The Contractor will respond in writing to CDOT NCNs identified by importance (Level 1 or Level 2), through a Quality Management Oversight Database provided by CDOT. User accounts and training will be provided by CDOT for this purpose. The Contractor's response will identify how it proposes to remedy the Work identified as nonconforming and the date by which the remedy will be completed. The Contractor will describe in the QMP its approach and methodology for resolving and responding to CDOT's NCNs.

2) RESPONSIBILITY AND AUTHORITY

The Contractor will include in the QMP an organizational chart that illustrates a commitment to an effective quality program to ensure all Work meets the requirements of the Contract Documents. The QMP will describe the hierarchy of the Contractor's organization. The QMP will graphically depict the principal quality participants, showing lines of responsibility, authority, communication, and interfaces with CDOT; other involved agencies; and any other team members having a significant quality role, including Subconsultants, Subcontractors, and Suppliers. The Quality Manager and Quality Assurance staff will be shown on the organization chart to report to the Contractor's executive management and be independent of the Contractor's Project Manager. The organization charts will be updated and distributed to CDOT when any changes to the organization are made.

The QMP will describe the roles and responsibilities of the Quality Manager, Quality Control and Quality Assurance staff, and other key personnel; and will describe their authority to implement quality improvements for the Project.

The Quality Manager and Quality Assurance staff will have no responsibilities in the production of the Work. The Contractor's Quality Manager and all Quality Control and Quality Assurance staff will have the authority to stop Work that does not comply with requirements of the Contract Documents.

The responsibilities of all personnel who manage, perform, and ensure the quality of the Work include:

- Initiate action to prevent the occurrence of Nonconforming Work.
- Identify, evaluate, and document quality problems.
- Recommend or initiate quality improvement solutions through established organizational channels.
- Ensure the implementation of quality improvement solutions.
- When Nonconforming Work is identified, stop incorporating Work that is affected by the Nonconforming Work into the Project until the deficiency is corrected.
- The Contractor's Quality Manager will have the following responsibilities defined in the QMP:
- Facilitate compliance of Work with the requirements of the Contract Documents and the Approved QMP.
- Approve Contractor quality processes and procedures.
- Provide adequate resources and trained personnel for Quality Control and Quality Assurance Activities.
- Ensure the adequacy and enforcement of quality procedures, processes, inspections, and tests for all Work.
- Establish and implement procedures to control and ensure the Work performed by Subconsultants, Subcontractors, and Suppliers meet the requirements of the Contract Documents.
- Ensure the QMP is being implemented and report in writing regularly to the Contractor's executive management regarding the status of the implementation of the QMP.
- Ensure that quality records are properly prepared, completed, maintained, and delivered to CDOT, as required by the Contract Documents, to provide evidence of quality Activities performed and quality results achieved.
- Ensure that Quality Assurance staff is independent of the Contractor's Project Manager, and regularly reports to the Contractor's executive management.
- Continually promote awareness of the requirements of the Contract Documents throughout the Contractor's entire project organization.

C. QUALITY ASSURANCE

The Contractor will be responsible to establish, document, and implement a Quality Assurance program. The Contractor will include in the QMP the methods and procedures by which the Work will be certified by the Contractor as complying with the requirements of the Contract Documents.

The QMP will establish procedures for procuring services. The procedure will include a review and approval process by the Contractor's organization for adequacy of specified technical requirements and the adherence to quality requirements. Procurement documents will contain data clearly describing the service needed. The Proposal Documents will describe how Subcontractors and Subconsultants are evaluated prior to award.

The QMP will describe the measures to be taken to ensure that Subcontractors and Subconsultants meet, implement, document, and maintain the QMS requirements.

The selection of Subcontractors and the type and extent of control exercised by the Contractor will be dependent upon the type of product or service and, where appropriate, on records of Subcontractors' and Subconsultants' previously demonstrated capability and performance.

1) DESIGN QUALITY ASSURANCE

The QMP will include procedures that address all elements of design, including architectural, civil, structural, geotechnical, survey, hydraulic, environmental, traffic, safety, and temporary Work. The Contractor will identify in the QMP all applicable computer programs to develop and check designs.

The QMP will describe how the design team schedules the design efforts, including task force meetings, design reviews, constructability reviews, design meetings, independent design checks, and a schedule for Released for Construction Documents and As-Built Documents.

The Contractor will identify in the QMP design input requirements. The Contractor will perform ongoing audits of the design input requirements. The Contractor will maintain an accessible, centrally controlled design manual, database, or list that contains all relevant design inputs to be used by design personnel for the Project. The Contractor will provide a process in the QMP to ensure that the design inputs are communicated to, and accessible by, the relevant designers responsible for incorporating design inputs into the design. The Contractor will include in the QMP how changes to design inputs are identified, reviewed, and Approved by authorized personnel prior to their implementation. The QMP will also include:

- Procedures to control and independently ensure that the design meets the requirements of the Contract Documents, including provisions for Subconsultant's designs and configuration management Activities.
- Procedures to identify and track Design Document deliverables.
- Procedures for approval, tracking and recording Revisions to Released for Construction Documents. The Contractor will have a formal procedure for comment resolution included in the QMP.
- Procedures for approval of Released for Construction Documents.

The Contractor's Design Quality Assurance Program will include:

a) Task Force Meetings

The Contractor will conduct weekly task force meetings to coordinate the design development within the Contractor's organizations and with CDOT and other affected agencies. As a minimum, the

Contractor will prepare an agenda and conduct each meeting to discuss the status of the design, coordinate the design development between design disciplines, discuss constructability issues, and identify any questions associated with design requirements. The Contractor will take meeting minutes for all task force meetings and provide draft minutes to CDOT 4 Working Days after each meeting.

b) Design Progress Review Meetings

The Contractor will hold design progress review meetings at certain stages of the design development process (e.g., 60%, 90% packages) and invite CDOT to attend. The design progress meetings will be scheduled, conducted, and documented by the Contractor. The meetings minutes will be taken by the Contractor and submitted to CDOT within 5 Working Days after each meeting.

c) Released for Construction Documents and Revisions to Released for Construction Documents

These Documents allow the Contractor to initiate construction in advance. The Documents will include a MTIP. This plan will give testing quantities and frequencies, and Quality Assurance inspection hold points to confirm minimum QMP requirements have been met. The Contractor's Quality Manager will approve these Documents prior to release for construction. One copy of the Documents will be submitted to CDOT or made available to CDOT electronically prior to the Contractor beginning construction. The Contractor's Quality Assurance process for the Documents will be thoroughly documented in the Contractor's QMP.

Prior to release of Released for Construction Documents for structure construction, the following items will be required:

- The independent design check will have been completed per the current CDOT Bridge Design Manual and the original final structural design calculations will be revised and corrected based on comments from the independent design check for the structural element to be constructed.
- The Rating Package as defined in the CDOT Rating Manual will be completed prior to release of the superstructure construction drawings.

d) As-Built Documents

As-Built Documents will be submitted to CDOT for Acceptance. CDOT may audit As-Built Documents to ensure completeness and compliance with the requirements of the Contract Documents. CDOT will not Accept As-Built Documents until the Contractor has addressed, resolved, and incorporated, to the satisfaction of CDOT, any prior Contractor or CDOT comments. The Contractor will ensure and provide documentation to CDOT that all review comments have been addressed. The As-Built Documents submittal will include:

- All plans reflecting Released for Construction Documents or Revisions to Released for Construction Documents
- Resolution of noncompliance
- Design calculations
- Design reports
- Specifications

- Electronic CADD files, as specified elsewhere in the Contract Documents
- The Contractor will include in the QMP a process for a Licensed Engineer in responsible charge for the design to prepare, review, and approve all changes, including field design changes, Released for Construction Documents, and As-Built Documents. The Contractor will maintain a master list of approved design changes. The QMP will include a process to communicate design changes to the construction Site on a timely basis consistent with the progress of construction Activities.

The Contractor will include in the QMP a process for a Licensed Engineer in responsible charge for the design to prepare, review, and approve all changes, including field design changes, Released for Construction Documents, and As-Built Documents. The Contractor will maintain a master list of approved design changes. The QMP will include a process to communicate design changes to the construction Site on a timely basis consistent with the progress of construction Activities.

2) CONSTRUCTION QUALITY ASSURANCE

The Contractor will be responsible for performing and documenting all required construction QA/QC Activities necessary to control the Work. The QMP will extend to both permanent and temporary Work (erosion control, traffic control, etc.). Records of inspection and testing activities will be submitted to a CDOT-provided Quality Records Database (QRD), a secure web-based application. CDOT will provide user accounts and training. Materials test reports will also require entry of meta-data fields for analysis and comparison to CDOT Verification Test results.

As a minimum, the Contractor's Construction Quality Assurance Program will include the elements defined below:

a) Certification

The Contractor will include in the QMP a process to certify to CDOT that the Work produced meets the requirements of the Contract Documents.

b) Inspection

The Contractor will include in the QMP, and submit to CDOT for Approval, a MTIP that will include detailed inspection procedures to be used in cases where inspections are to serve as the basis for verifying compliance with the requirements of the Contract Documents. The Contractor will submit all records of inspection and testing to the CDOT-provided QRD. The Contractor will conduct each inspection in accordance with the Approved QMP. The Contractor will document whether the inspections passed or failed based on the "pass/fail criteria" established in the procedure and the requirements of the Contract Documents; (e.g., concrete depth checks on deck pours, rebar clearance/size, locations, elevations, stationing etc.). The Contractor will include failing inspection results, when applicable, in the inspection documentation.

c) Testing

At a minimum, the Contractor will follow the CDOT Field Materials Manual and its Frequency Guide Schedule for Minimum Materials Sampling, Testing, and Inspection requirements identified under the column titled "Project Verification Sampling & Testing Frequency" for all Quality Assurance tests required. The Contractor will document the results in the QRD and show if the test passed or failed based on the "pass/fail criteria" established in the Contract Documents. The Contractor will include failing tests results in the test documentation. Independent Laboratories will submit signed and certified test reports to the

Contractor not more than 14 Working Days after completion of the tests for all tests which require an independent Laboratory. CDOT may witness any test conducted for Independent Assurance purposes. The Contractor will develop and maintain a current Test log for all tests required by the Contract Documents. As a minimum, the Contractor will document results of tests in report format. Include the following:

- Contract or Project Identification Number
- Identification of items tested
- Quantity
- Date and time test conducted
- Location of items tested
- Test procedure used
- Name of technician
- Acceptance criteria
- Results - Acceptance or rejection
- Authorized signature

d) COCs / CTRs

The Contractor will include in the QMP a method of handling and documenting Work/products accepted in the Work by COC or CTR.

The Contractor will obtain COCs / CTRs prior to incorporation in the Work and before inclusion on the Monthly Invoice (Book 2, Section 2.1.2, Cost Management), and maintain a complete log of all COCs and CTRs. The Log and all COCs / CTRs will be available for Owner Verification at any time.

The Contractor will include in his COC/CTR log, signed certification that all Materials represented by each COC/CTR was installed in the Work. Certification will be according to Book 2, Section 20 (Section 106.12 and 106.13), Modifications to Standard Specifications.

e) Quality Reviews

The Contractor's Quality Manager or designated representative will document formal reviews to verify that the Approved QMP is being effectively implemented.

3) MATERIALS TESTING AND INSPECTION PLAN (MTIP)

The QMP will include an MTIP describing all of the proposed inspections and tests procedures, including products provided by Suppliers during the manufacturing, receiving, and installation process, to ensure the requirements of the Contract Documents are met. The MTIP will identify all inspections and tests required including, at a minimum, reference to the requirements of the Contract Documents, frequency of the inspections and tests, and the Contractor-developed Quality Assurance processes. Where no inspections or test standard exists in any of the CDOT manuals, the MTIP will develop criteria in writing based upon the best-available industry standard information and technology.

The MTIP will include procedures for delivery, handling, and storage of furnished products ensuring that they are properly handled and stored to prevent damage, deterioration, or theft. It will also

document procedures for stored items and Materials consistent with the expected duration and type of storage, and procedures for monitoring special processes utilized in fabrication, assembly, and testing of specified products. Special processes are those requiring qualified/certified production, inspection, and test personnel to perform highly skilled Work, such as welding, brazing, soldering, non-destructive testing, machining, coating, or plating.

The MTIP will describe all Quality Assurance inspection and test Activities to be carried out including Quality Assurance hold points, and establish authority within the Contractor's organization for releasing Work beyond the hold point. While the Contractor will notify CDOT when Work has progressed to a hold point, it will be the responsibility of the Contractor's Quality Assurance Manager (or designee) to verify that all requirements have been met prior to allowing the Work to progress.

The MTIP will include a summary of Activity-specific Material quantities to document that the minimum sampling, testing, and inspection requirements have been met. This summary will be performed and provided to CDOT monthly. (The Contractor may follow the CDOT Form 250 as a minimum basis for their Materials documentation record.)

The MTIP will include processes to control, calibrate, and maintain test equipment to ensure it meets industry standards and other applicable requirements. Test equipment used by the Contractor will be of a quality and capacity that ensures that measurements made are to levels of accuracy and precision that are required by the test procedure. The MTIP will:

- Identify the test required and the accuracy required, and select the appropriate test equipment.
- Define procedures to calibrate all test equipment prior to initial use and at prescribed maintenance intervals against certified equipment and measurement standards of the National Institute of Standards and Technology or other similar recognized technical standards customarily accepted in the industry. Where no standard exists, the basis for calibration will be developed in writing based upon the best-available information and technology.
- Identify test equipment with a suitable indicator to show the calibration status of the test equipment.
- Maintain current calibration records for test equipment.
- Define procedures to ensure that environmental conditions are suitable for calibrating test equipment.
- Define procedures to ensure that the handling and storage of test equipment is such that the accuracy and fitness for use is maintained.
- Define procedures to safeguard test equipment, including test hardware and test software, from adjustments that would invalidate calibration settings.

4) REPORTING AND RECORD-KEEPING OF CONSTRUCTION QUALITY ASSURANCE DOCUMENTATION

The Contractor will maintain construction workmanship and materials quality records of all inspections and tests performed per the Approved QMP. These records will include factual evidence that the required inspections or tests have been performed, including type and number of inspections or tests involved; results of inspections or tests; nature of Nonconforming Work and causes for rejection, etc.; proposed remedial action; and corrective actions taken. These records will cover both conforming and nonconforming Work, and will include a statement that all supplies and materials incorporated in the Work are in full compliance with the Contract Documents.

The Contractor's Quality Manager will ensure that quality records are properly prepared, completed, maintained, and delivered to CDOT, as required by the Contract Documents, to provide evidence of quality Activities performed and quality results achieved.

The Contractor will submit all Quality Assurance test measurements and test results, including failing results, and inspection records. The Contractor will submit test data and approved test results to CDOT using the QRD within 24 hours following the inspection or test. The responsible technician and the technician's supervisor will sign the daily test reports.

The Contractor's Quality Manager will also maintain a daily log of all inspections performed for both Contractor and Subcontractor operations. The daily inspection reports will identify inspections conducted, dates of inspections, results of inspections, locations and nature of defects found, causes for rejection, and remedial or corrective actions taken or proposed. The responsible technician and the technician's supervisor will sign the daily inspection reports. These daily inspection reports will document the day's events, Activities, and discussions in a format consistent with the requirements contained within CDOT's Field Materials Manual and Construction Manual.

To enhance coordination of CDOT's Independent Assurance Activities during construction, the Contractor will provide CDOT with a weekly look ahead of specific scheduled construction Activities designating location and planned quantities of materials to be placed, and protocols for identifying completed Work. The Contractor will provide CDOT with the actual construction Activities conducted during the previous week, designating location and quantities of materials that were placed.

D. NONCONFORMING WORK

The Contractor will include in the QMP procedures to develop and maintain a system to identify, control, remedy and report Nonconforming Work, including Nonconforming Work identified by CDOT. The QMP will include procedures to identify Nonconforming Work and to withhold progress payment requests on the monthly Invoice until the Nonconforming Work is remedied. The Contractor will remedy Nonconforming Work in accordance with the Approved QMP procedures. The responsibility for review and for the disposition of Nonconforming Work will be established in the QMP. The Contractor will identify Nonconforming Work by completing a Nonconformance Report (NCR). A NCR will include:

- Identification of Nonconforming Work, including tagging Work products
- Evaluation of the Nonconforming Work
- Recommendation for "repair" or "use as is" dispositions
- Cause of Nonconforming Work
- Proposed corrective action to prevent recurrence
- Responsibility for accomplishing corrective action
- Schedule of Work with a date of remedy completion
- Signature lines for the Quality Assurance Manager and CDOT verifying that the Nonconforming Work has been completed in accordance with the approved disposition

The Contractor's Engineer will approve the recommended remedy for the Nonconforming Work prior to submittal to CDOT for Acceptance. The Contactor will not perform the recommended remedy prior to Acceptance by CDOT for "repair" and "use as is" dispositions.

The Contractor will develop and maintain a Nonconforming Work log to track and identify the status of Nonconforming Work. An updated log will be submitted to CDOT weekly and will be used by the Contractor to look for Nonconforming work trends to determine if corrective actions are needed.

All NCRs will be recorded by the Contractor and provided to CDOT.

The Contractor will include in the QMP procedures for controlling the use of Nonconforming Work including the tagging of Nonconforming Work products. Nonconforming Work product tags will only be removed by the originator of NCR or the originator's supervisor, and only when the Contractor demonstrates to CDOT that the Nonconforming Work product meets the requirements of the Contract Documents or is Approved for use by CDOT.

1) CORRECTIVE AND PREVENTATIVE ACTION

The QMP will describe corrective and preventative action procedures that the Contractor will use to identify and improve processes that produce, or may produce, systemic Nonconforming Work identified by the Contractor or by CDOT. The Contractor's corrective and preventative action procedures will include:

- Methods to investigate the cause of systemic Nonconforming Work and to determine what corrective action is needed to prevent recurrence
- Methods to analyze all processes, Work operations, quality records, service reports, and CDOT audits to detect and eliminate the possibility of systemic Nonconforming Work from occurring
- Methods to prioritize corrective and preventive action efforts based upon the level of risk to the quality of the Work
- Controls to ensure that effective corrective and preventative actions are taken when the need is identified
- Methods to implement and record changes in procedures resulting from corrective and preventative actions

2) PUNCH LIST WORK

The Contractor will develop a Punch List and Punch List Log as required in the Contract. The Punch List and Punch List Log will be completed by Quality Control and Quality Assurance personnel. CDOT and other affected agencies will be invited by the Contractor to attend walks of the Work to include items on the Punch List. The Contractor Punch List and Punch List Log will be provided to CDOT.

E. CDOT OWNER VERIFICATION REVIEWS

CDOT's Owner Verification will use a sampling approach to assess the Contractor's compliance with the requirements of the Contract Documents. CDOT reviews of sampled Work for Contract compliance are defined as Verification reviews. The four types of CDOT Verification reviews are:

- Design Verification Reviews: Design Verification reviews will be performed on the products of design (drawings, specifications, and other design deliverables). Design Verification reviews are performed on an ongoing basis during the Project.
- Construction Verification Inspections: Construction Verification Inspections will be performed on construction Activities.

- Construction Verification Testing: CDOT will perform sampling and testing of Materials to validate the Contractor Quality Assurance testing program. Verification test results will be stored in the QRD.
- Process Audits: Process Audits will be performed on the implementation of all Contactor Work Activities, excluding design and construction. Such activities may include the requirements of the Contract Documents, such as public information, Maintenance of Traffic, environmental compliance, safety, project management processes, and meeting the requirements of the Approved QMP.

Verification reviews will entail the collection and documentation of objective evidence to determine whether the requirements of the Contract Documents have been met. The results of CDOT Verification reviews will be recorded by CDOT and will be documented within the Quality Management Oversight (QMO) database, a secure web-based application. Any NCNs identified by CDOT require a response within the QMO database.

1) CDOT VERIFICATION TESTS

CDOT will perform periodic Verification tests to ensure that the Contractor's Materials meet the requirements of the Contract Documents. CDOT will enter Verification test results in the Quality Records Database (QRD). CDOT will perform a statistical analysis to ensure that the Contractor's Quality Assurance test results correlate statistically with the CDOT Verification test results and meet the requirements of the Contract Documents. If CDOT determines that the compared test results do not correlate, CDOT will perform Independent Assurance tests to determine the cause of the differences.

2) CDOT INDEPENDENT ASSURANCE

CDOT will perform Independent Assurance reviews and tests to ensure that:

- Contractor Quality Assurance personnel are trained and certified and demonstrate that they understand the test procedures they are performing.
- The test equipment used by the Contractor Quality Assurance personnel is calibrated.
- Split sample test results correlate.

Independent Assurance test results will also be used as referee tests to assess statistically significant differences, determined by CDOT in its sole discretion, between Contractor Quality Assurance tests and CDOT Verification test results.

3) GOVERNMENTAL PERSON INSPECTIONS

Governmental Persons will have the right to inspect the Work, provided that the Governmental Person has jurisdiction over the Work and as required by Applicable Law.

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12. ENVIRONMENTAL COMPLIANCE

The CDOT Environmental Manager is responsible for assuring CDOT's Environmental commitments are met. The Contractor must comply with all requirements of all applicable environmental laws, Environmental Approvals, and Governmental Approvals issued there under, whether obtained by CDOT or the Contractor.

The Contractor must submit to CDOT for Acceptance an Environmental Compliance Work Plan that specifically identifies all of the environmental compliance requirements for the Project and the Contractor's approach for complying with the requirements. The Environmental Compliance Work Plan includes:

1. All elements of the Construction Management Plan defined in Table D-1 of Appendix D of the *US 36 Corridor Phase 1 Record of Decision* (ROD) in Book 3 Contract Documents.
2. Description of means and methods to meet all commitments defined in the 2011 US 36 NEPA Reevaluation in Book 3 Contract Documents.
3. Description of the process for tracking environmental commitments throughout design and construction in the Contractor's Document Control System (DCS).

The Contractor's Environmental Compliance Manager leads a field review with CDOT environmental staff to discuss environmental issues every two weeks, and has the authority to stop construction if Work activities jeopardize environmental laws, policy, or human health and safety. The Environmental Compliance Work Plan is updated every quarter, and documents any pertinent discussions that occur during the environmental field reviews.

A. ENVIRONMENTAL RESOURCES REQUIREMENTS

The environmental resources requirements for this project are detailed in the Contract Documents and any NEPA Reevaluations prepared for the project. The Contractor is responsible for any permitting and mitigation identified in the documents and required by the governing resource agencies. Environmental resources that are to be addressed include, but are not limited to:

- Air Quality
- Noise
- Historical Resources
- Parks and Recreation
- Vegetation
- Visual

The Contractor is responsible for the requirements and conditions of the CDOT Reevaluation Form (#1399). The Form must be submitted to CDOT for Approval for changes to design, impacts, or mitigation that were not approved as a part of the ROD and 2011 Reevaluation. FHWA concurrence of the reevaluation depends on the severity of the proposed change. CDOT Approval of the reevaluation must occur before the proposed change from the ROD can be performed.

B. ENVIRONMENTAL PERMITS

The Contractor is responsible for obtaining all governmental and agency permits required for the Work, not otherwise obtained by CDOT, including but not limited to the environmental permits identified in the table below. The most recent specifics related to these permits are detailed in the Design-Build Contract and take precedence over anything stated in this PMP.

REQUIRED ENVIRONMENTAL PERMITS	
Permits/Approvals	**Permitting Agency**
Construction Dewatering Permit	Colorado Division of Public Health and Environment (CDPHE) Water Quality Control Division
Air Pollution Emission Notice and Construction Permit	CDPHE Air Pollution Control Division (APCD)
Demolition permits	CDPHE, BNSF and all applicable local jurisdictions
Construction Noise Permit	All applicable local jurisdictions
Colorado Discharge Permit System (CDPS) Stormwater Construction Permit	CDPHE Water Quality Control Division
Subterranean Groundwater Permit	CDPHE Water Quality Control Division
Black Tailed Prairie Dog Removal Permit	City and County of Broomfield Colorado Division of Wildlife
Nest Take Permit	U.S. Fish and Wildlife Service (USFWS)
Construction permits	All applicable local jurisdictions
Other local permits (stormwater, railroad, building, utility, survey, tree removal, work in parks and on trails)	Local agencies or railroad company
Site-specific modifications to the Programmatic Biological Assessment/ Biological Opinion	USFWS
Letter of Approval for impacts to historic resources	State Historic Preservation Officer (SHPO)
New development and redevelopment programs for MS4 Phase I and II areas	Follow requirements of local jurisdiction's MS4 permits and CDOT MS4 permit
SB 40 Certification (impacts to stream banks, stream channels, and riparian areas)	Colorado Division of Wildlife
Construction waste material and transportation of solid wastes	CDPHE Hazardous Materials and Waste Management Division
Generation of contaminated materials during construction	CDPHE Hazardous Materials and Waste Management Division
Generation of hazardous waste per the Resource Conservation and Recovery Act (RCRA)	CDPHE Hazardous Materials and Waste Management Division
Stationary Source Air Quality Permit	CDPHE APCD
Section 404 Permit Amendments	U.S. Army Corps of Engineers

The Contractor must obtain applicable permits from all directly affected Local Agencies, as required. For this projects, specific permits may be required from the City of Westminster and the City and County of Broomfield.

C. WILDLIFE

Specific requirements related to wildlife that may be impacted by this project are detailed in the Contract Documents. The Contractor is responsible to submit plans of action to CDOT for Approval for construction to avoid and/or mitigate any impacts to wildlife. Specifics in the Contract Documents include:

- Black-Tailed Prairie Dogs
- Wildlife Crossings
- Raptors and Migratory Birds
- Fisheries and Aquatic Resources
- Special Status and Sensitive Species

D. RECOGNIZED HAZARDOUS MATERIALS

The CDOT Environmental Manager is responsible for overseeing the Contractor related to activities surrounding recognized hazardous materials (RHM). Recognized hazardous materials (RHM) are defined as the presence or suspected presence of hazardous substances which may require management and/or disposal. Hazardous substances may exist on the surface or subsurface, in groundwater or surface water, or on structures to be demolished; and may be mixed with soil, water, building matrices, and/or other waste materials.

RHMs have been identified within the Project area. The Contractor will review the Phase I Environmental Site Assessment (October 2004), the FEIS Hazardous Materials Technical Report Addendum (April 2009), the US 36 Corridor Final Environmental Impact Statement (October 2009), and the NEPA Reevaluation (October 2011), as well as other applicable Contract Documents, for information related to the RHMs. The Contractor will develop a Materials Management Plan (MMP), Health and Safety Plan (HASP), and Spill Prevention Control and Countermeasures (SPCC) Plan to be submitted for approval by CDOT within 21 Days prior to NTP2. The Contractor will comply with all provisions set forth within the approved MMP, HASP, and SPCC.

The Contractor has a review meeting with CDOT prior to submittal of the MMP and HASP to discuss the MMP and HASP. The Contractor's Environmental Manager and the Contractor's Safety Manager representative will be present at the meeting. The Contractor will incorporate modifications into the submitted MMP, HASP, and SPCC agreed to during this meeting.

The Contractor maintains documentation of all Activities related to the MMP and the HASP during construction and makes all such documentation available to CDOT upon request. The Contractor maintains records consistent with the requirements of Book 1 of the Contract Documents.

The Contractor must comply with all applicable requirements, including, but not limited to, all federal, state, and local laws and regulations; CDOT Standard Specifications for Road and Bridge Construction, Section 250, Environmental, Health and Safety Management for the management and disposal of the RHMs.

The Contractor must coordinate all remediation Activities through CDOT and must not discuss or negotiate with any regulatory agencies or third parties on behalf of CDOT. The Contractor must notify CDOT within 24 hours if contacted by any regulatory agencies or third parties concerning RHM associated or potentially associated with the Project.

The Contractor maintains documentation of all pertinent certifications of all Subcontractors and makes them available to CDOT upon request.

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13. RIGHT-OF-WAY

CDOT's Right-of-Way (ROW) personnel are acquiring the ROW for this Project. The anticipated ROW Acquisition Schedule is in Appendix G of this PMP and will be updated as the Project proceeds.

The CDOT Region 6 Right-of-Way Manager is responsible to assure the timely completion of all CDOT-acquired parcels as identified in the Contract Documents to minimize any adverse impacts to the Contractor's schedule. At the level of design completed at the issuance of this document, it has been determined that this Project will be constructed on or within existing CDOT ROW and the additional ROW, as defined in the ROW plans in Book 4 of the Contract Documents, being acquired.

However, in the event that the Contractor requests additional ROW acquisition and CDOT Approves such request (Contractor Acquisitions), all Contractor Acquisitions, if needed, will be performed by the Contractor in compliance with the requirements of the Contract Documents. Such Contractor Acquisitions include additional ROW acquisition for Additional Requested Elements (ARE) included in the Work. The Contractor is responsible for completion of all steps in the ROW acquisition process for Contractor Acquisitions, except for condemnations (if needed). The Colorado Attorney General's Office will file and prosecute all condemnations needed for Contractor Acquisitions.

The Contractor will retain a ROW Manager ROW acquisition by the Contractor (Contractor Acquisitions) is Approved by CDOT. The Contractor's ROW Manager is responsible for all ROW coordination and compliance requirements. The Contractor's ROW Manager will be qualified and Approved by CDOT for both acquisition and relocation services. The Contractor's ROW Manager must coordinate all acquisition and relocation activities with CDOT.

A. ACQUISITION AND RELOCATION STANDARDS

All ROW acquisition and relocations for Contractor Acquisitions are performed in accordance with all applicable federal and state laws, including:

- The federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, including regulations promulgated pursuant to such Act, which appear at 49 CFR Part 24, as amended.
- Right of Way Requirements for Design/Build Projects, 23 CFR 710.313.
- The Colorado Relocation Assistance and Land Acquisition Policies Act, Section 24-56-101, et seq., C.R.S., as amended.
- The Colorado Eminent Domain Act, Section 38-1-101, et seq., C.R.S., as amended.
- CDOT's Right of Way Manual, as amended.
- CDOT's authority to acquire property and to acquire through eminent domain, if necessary, is set forth in Section 43-1-208, 210 and 43-3-106, C.R.S., as amended.
- If the acquisition of additional ROW by the Contractor is Approved by CDOT (Contractor Acquisitions), all appraisal, acquisition negotiation, and relocation will be done by CDOT-Approved consultants.
- All Contractor Acquisitions will be acquired in CDOT's name.

Some ROW for the Project will be obtained from the Regional Transportation District (RTD) by Use and Occupancy Agreements, which function as follows:

- RTD retains title to the parcels needed for the Project.
- The Use and Occupancy define the rights and responsibilities of CDOT and RTD relevant to the Project.

B. ADMINISTRATIVE REQUIREMENTS

CDOT retains possession of each parcel and all improvements, if any, made thereon by the Contractor. The Contractor's access and use of the ROW arises solely from the permission granted by CDOT under the Contract.

The Colorado Attorney General's Office files and litigates all required condemnation actions on behalf of CDOT through the Contractor. For any required condemnation action, the Contractor prepares and submits for CDOT approval, a Condemnation Memorandum and Checklist in accordance with the instructions contained in the CDOT *Right of Way Manual*.

For all Contractor Acquisitions, the Contractor prepares and submits a record of each parcel acquired (parcel acquisition file) that includes, but may not be limited to, offer letters, fair market value determinations or value findings, fully executed deeds and/or easement documents or agreements, a signed negotiator's diary, a signed closing statement from the property owner's acknowledging receipt of payment in full, all necessary lien release documentation, all required relocation forms, and notices if applicable.

C. POLICIES AND PROCEDURES

Specific policies and procedures related to appraisals, acquisitions, relocations, demolitions, construction/utility easements are detailed in the Contract Documents. The Contractor is responsible to report to CDOT regarding any parcels that may need to be required or to request approval to obtain easements required to construct the project.

14. SAFETY AND SECURITY

A. POLICY

The Project fully adheres to CDOT's policy regarding the safety of workers and the traveling public. These policies are more fully delineated in CDOT Policy Directive 80 and in Standard Specifications.

- The Contractor is solely responsible for health and safety in performance of the Work.
- Receipt of the Contractor's Project Safety Management Plan (PSMP) by CDOT will not impose any liability upon CDOT, nor will receipt of the Contractor's PSMP relieve the Contractor of any responsibilities under the Contract or applicable local, state, or federal safety statutes and regulations.
- The Contractor is responsible for Project security and public safety by maintaining a secure and safe Site.

B. SAFETY MANAGEMENT

1) PROJECT SAFETY MANAGER

The Contractor has a designated Project Safety Manager responsible for the establishment, control, direction, and implementation of the Project Safety Management Plan (PSMP). The Project Safety Manager has a high degree of program visibility. The Project Safety Manager has the authority to perform independent safety evaluations, and to ensure that safety issues are acted on in a timely manner.

2) PROJECT SAFETY MANAGEMENT PLAN

The Contractor's Project Safety Management Plan (PSMP) (CDOT Standard Specifications for Road and Bridge Construction, 107.06) must be submitted for review and Acceptance prior to receiving NTP2.

The PSMP is a living document and is updated when a process, method, chemical or other Work criteria changes that affects the safety of a person or property. The updated portion of the PSMP must be submitted to CDOT for review.

The PSMP must answer the "who, what, and how" based upon the technical requirements contained within Book 2 of the RFP and the 12 elements identified in the CDOT Standard Specifications for Road and Bridge Construction, 107.06), which establishes administrative and technical means for accident prevention, requirements, and policy planning, management, and implementation for safety on the Project.

The objective of the PSMP is to eliminate or control accident risks to personnel, associated equipment facilities, the general public, and environment. Required activities include planning, management, hazard analyses, auditing, training, and documentation.

The Contractor must follow the provisions of Book 2, Section 20 Revision of 107 Performance of Safety Critical Work. The Contractor's detailed Construction Safety Critical Plan must include an erection plan, a bridge removal plan, and a removal of portion of bridge plan, as applicable, as well as other requirements specified in Revision of 107. The detailed Construction Safety Critical Plan must be included in the Contractor's Project Safety Management Plan.

Project staff must be trained on the elements of the Contractor's accepted PSMP.

a) Safety Management Plan Requirements

The Contractor's SMP includes incremental updates required to reflect planned Activities. The program is approved (signed) by a member of the Contractor's executive management team. The SMP is job-specific and includes work to be performed by Subcontractors and measures that must be taken to control hazards.

The Contractor's SMP:

- Includes a statement of safety and health policy.
- Delineates administrative responsibilities for implementing the SMP.
- Identifies responsibilities and accountability.
- Requires the Contractor to conduct safety orientation for all employees prior to their entering the Project Site.

C. REPORTING

1) ACCIDENT REPORTS

The Contractor provides verbal notification and a written report to CDOT of any and all accidents whatsoever arising out of or in connection with the performance of the Work, whether on or adjacent to the Site, which cause death, personal injury or property damage. In cases of death or serious injury, verbal notification to CDOT is immediate and under no circumstance does notification exceed four hours from time of occurrence. Verbal notification includes date and time, location, brief description, extent of property damage, and extent of injuries. A written accident report is prepared by the Project Safety Manager and furnished to CDOT within 72 hours of the occurrence. The written accident report is signed and includes the date and time, individual(s) involved, affiliation(s), location, and all other pertinent data regarding the accident.

2) MONTHLY ACCIDENT SUMMARY REPORTS

The Project Safety Manager provides a written monthly accident summary report to CDOT within 7 Days of the last day of the month. The report includes the following minimum information:

- A summary of the previous month's accident history.
- A summary, to date, of the Project's accident history.
- Copies of accident reports for the previous month.
- Copies of OSHA logs.
- Status update of corrective actions.

D. SAFETY CRITERIA

1) APPLICABLE STANDARDS

The Contractor will conduct all Work in accordance with the requirements herein. Should the requirements conflict, the most stringent requirement will apply. The Contractor will meet the following requirements which will be incorporated into the Contractor's SMP:

- FPA 101, Life Safety Code
- Uniform Fire Code

- Local jurisdiction fire and building codes
- NFPA 70, National Electric Safety Code
- 29CFR1910, Federal Occupational Safety and Health Standards (General Industry)
- 29CFR1926 Federal Occupational Safety and Health Standards (Construction Industry)

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15. TRAFFIC MANAGEMENT

A. ROLES AND RESPONSIBILITIES

CDOT will be responsible for reviewing and approving the Contractor's Traffic Management Plan (TMP). The Contractor will be responsible to establish a plan to conduct all Work necessary to meet the requirements associated with traffic management, including provisions for the safe and efficient movement of people, goods, and services through and around the Project while minimizing impacts to local residents and business and commuters.

1) PERIODIC REPORTING

Maintenance of Traffic Task Force meetings will be held to monitor the TMP, the Incident Management Plan and the Travel Demand Management Program. The Maintenance of Traffic Task Force will include, at a minimum, the Contractor's Public Information Officer, Traffic Control Supervisor, Superintendent, CDOT, RTD, 36 Commuting Solutions, and Local Agency representatives.

The Contractor reports to CDOT monthly, at a minimum, on the status of traffic management. Exact reporting requirements will be established once the Contractor has submitted the Project TMP.

B. TRAFFIC OPERATIONS

Note: This section was taken from the US 36 US 36 Managed Lane/BRT Project RFP. It will be updated once the Traffic Management Plan has been accepted by CDOT.

1) MAINTENANCE OF TRAFFIC TASK FORCE

The Contractor establishes and maintains a MOT Task Force to assure proper coordination with affected agencies. The MOT Task Force includes, at a minimum, the Contractor's Public Information Officer, Traffic Control Supervisor, Superintendent, CDOT, RTD, US 36 Commuting Solutions, and Local Agency representatives. The Contractor submits the proposed list of task force members to CDOT for Acceptance within 30 Days after NTP1.

The MOT Task Force meets weekly, and is an integrated element of the Public Information Plan (PIP).

Within 14 Days after Acceptance of the MOT Task Force members, the Contractor holds a Traffic Management Plan (TMP) kick-off meeting. Attendees will develop agreement upon the level of detail required for the TMP.

An initial task for the MOT Task Force will be to develop the TMP.

2) TRAFFIC MANAGEMENT PLAN (TMP)

The Contractor's TMP defines the strategic plan for traffic management on the Project. The TMP is submitted to CDOT for Acceptance at least 30 Days prior to NTP2. No Work that impacts traffic will commence until the TMP is Accepted.

The TMP addresses major aspects of the Work for individual construction areas, phases, and stages. These aspects will include, but are not limited to:

- Detailed approach to the development of Traffic Control Plans (TCP) and Methods of Handling Traffic (MHT) on the Project.
- List of known or potential road, ramp, and lane closures.

- Description of the proposed detour routes including the information described below.
- An approach to Travel Demand Management (TDM) strategies
- Approach to the use of Intelligent Transportation System/Variable Message Sign (ITS/VMS) boards and traffic signals, including coordination with the affected local agency's Traffic Management Center or the CDOT Traffic Operations Center (TOC), and the Contractor's representative.
- Approach to PI.
- An approach to coordination and cooperation with construction being performed by projects adjacent to the Project limits.
- An approach to coordination with RTD.
- An approach to traffic access management, including restrictions, bicycles, pedestrians, and potential impacts to handicapped mobility.
- Relevant portions of the Incident Management Plan (IMP), described below.
- An approach to special event coordination.
- Typical section requirements
- Emergency requirements
- Temporary closure scenarios
- Access

3) CDOT TRAFFIC MANAGEMENT CENTER (CTMC) COORDINATION

Routine requests for use of the CTMC VMS boards are be submitted to CDOT by 10:30 a.m. on Thursday of the week prior to when the VMS boards will be needed (Monday through Sunday of the following week). Requests for routine use of the VMS will be reviewed by noon Friday of the same week of the submittal. The Contractor coordinates directly with the CTMC following review by CDOT.

For after-hours operations only, the Contractor coordinates directly with the CDOT Traffic Management Center (CTMC). The CTMC is available to the Contractor to modify VMS messages 24 hours a day, 7 days a week.

The Contractor coordinates with CDOT and the CTMC for emergencies in accordance with the Accepted Incident Management Plan.

4) INCIDENT MANAGEMENT PLAN (IMP)

The Contractor develops a detailed Incident Management Plan (IMP) as a companion to the TMP to manage traffic incidents and emergency operations on the Project Site. The IMP complies with the CDOT Guidelines for Developing Traffic Incident Management Plans for Work Zones and be consistent with the existing US 36 Incident Management Plan included in Book 3 of the Contract Documents.

The IMP is to be submitted to CDOT for Acceptance at least 30 Days prior to NTP2. No Work that impacts traffic will commence until the IMP is Accepted.

At a minimum, the IMP includes the following components:

- Coordination with the Public Information Plan (PIP)
- Incident detection and identification
- Incident response
- Incident site management
- Incident clearance
- Dissemination of traveler information regarding incidents
- Courtesy patrol
- Emergency services notification, including local area Police Departments, the Colorado State Patrol (CSP), local area fire departments, ambulance services, and any other emergency response providers.
- Notification of local school districts about possible impacts to school bus routes, student drop-offs, and/or pedestrian facilities
- Geographic and other special constraints
- Available resources
- Operational procedures

5) TRAVEL DEMAND MANAGEMENT PROGRAM (TDM)

The Contractor develops a TDM program to reduce travel demand and improve traffic operating conditions during the construction period. The Contractor submits the TDM program to CDOT for Acceptance within 30 Days after NTP2.

The TDM program specifies:

- Coordination with 36 Commuting Solutions.
- A TDM marketing plan.
- A plan to evaluate the effectiveness of the TDM program.
- Additional TDM strategies which would complement current corridor and regional strategies facilitated by 36 Commuting Solutions and DRCOG.

6) ADDITIONAL PROCEDURES

Detailed requirements for managing the following are included in the Contract Documents.

- Business and Private Access
- Maintenance of Traffic Variance Process
- Contractor Response Time
- Special Events
- Coordination with RTD Transit System
- Coordination with Adjacent Projects

C. DESIGN REQUIREMENTS

Note: This section was taken from the US 36 US 36 Managed Lane/BRT Project RFP. It will be updated once the Traffic Control Plan has been accepted by CDOT.

The Contractor's Professional Engineer in responsible charge of the MOT design prepares, reviews, and approves field design changes; Released for Construction documents; and TCP and MHT plans.

1) TRAFFIC CONTROL PLANS

The Contractor prepares a TCP to control traffic on the Project. The TCP generally describes all lane and shoulder configurations including widths, traffic control signing, pavement markings, traffic control devices, temporary signalization, construction access, emergency access, work areas, and pedestrian/bicycle requirements necessary for each construction phase.

2) METHODS OF HANDLING TRAFFIC (MHT)

The Contractor prepares MHTs in accordance with the Project Special Provisions of Book 2, Section 16, of the Contract Documents.

Temporary traffic signals are to be installed in conformance with standards set forth in Book 2, Section 14, Signing, Pavement Marking, Signalization & Lighting, of the Contract Documents.

3) DESIGN SPEED AND POSTED SPEED

Minimum design and posted speeds for Work zones will conform to the following table:

Location	Design Speed (mph)	Posted Speed (mph)
36 Mainline	55	45
36 Ramps and Frontage Roads	25	25
Local Streets	25**	25**

** The Contractor will provide existing design and posted speed whenever it can be reasonably maintained on the local system.

4) MINIMUM LANE REQUIREMENTS

The Contractor is required to design the following items to the specifications detailed in the Contract Documents.

- Lane Restrictions
- US 36 Lane Restrictions
- Ramps and Frontage Roads
- Local Roads
- Queue Lengths During Construction
- Working Time Violations Incidents
- Abandonment of Roads

5) INTERCHANGE CLOSURES

The Contractor is required to follow the specifications detailed in the Contract Documents. Temporary or permanent interchange closures will not be allowed.

Interchanges

Construction at all interchanges will be consistent with the CDOT Regions 4 and 6 Lane Closure Strategies.

The Contractor will coordinate phasing of the construction at Wadsworth Parkway, so as to provide uninterrupted access to all quadrants of the interchange during construction.

Ramp Closures

The CDOT Region 6 Lane Closure Strategy states, "NO INFORMATION AVAILABLE," for the US 36 at Sheridan Boulevard westbound on-ramp and eastbound off-ramp.

- The eastbound off-ramp closure schedule will be consistent with the eastbound on-ramp times listed in the CDOT Region 6 Lane Closure Strategy.
- The westbound on-ramp closure schedule will be consistent with the westbound off-ramp times listed in the CDOT Region 6 Lane Closure Strategy.

6) DETOUR ROUTES

Unless otherwise specified, only State Highways will be used for detour routes. Local Agency roadways to be used as detours must be approved by the Local Agency. All detour routes will be the shortest length possible.

7) TRAIL AND PEDESTRIAN IMPACTS

Existing trail systems, temporary trails, sidewalks, and pedestrian routes must be maintained at all times. The Contractor will meet all requirements of ADA as specified in Book 1 Section 2.2. The following restrictions will apply to existing trail systems in the vicinity of the Project:

- No trail closures will be allowed from 5:00 a.m. to 8:00 p.m. any day of the week.
- Temporary trail detours will be allowed under the following conditions:
  - PIP requirements will be identified and appropriate public notifications provided.
  - The Contractor will comply with the CDOT Construction Detour Standards for Multi-Use Trails.

8) EMERGENCY PULLOUTS

The Contractor will provide emergency pullouts on US 36 for disabled vehicles, staging of incident management, and law enforcement vehicles when shoulder widths are less than 8 feet. Emergency pullouts will be provided between each interchange or at .5-mile spacing, whichever is less. Interchange distance will be measured from ramp gore to ramp gore in the same direction of travel. The minimum pullout length will be 150 feet, not including transitions. Transitions will be made at 15:1 or greater. The minimum pullout width will be 12 feet measured from 2 feet beyond the travel lane. The pullouts will be signed for emergency parking only, will have a paved surface, will include advance signing in compliance with the *Manual on Uniform Traffic Control Devices* (MUTCD), and will not be subject to ponding or other weather-related conditions that could render them unsafe or ineffective. Snow removal in emergency pullouts is the responsibility of the Contractor.

9) COURTESY PATROLS

The Contractor will provide courtesy patrols within the Project limits as part of the implementation of the IMP. Region 6 currently has an existing courtesy patrol service (Mile High Courtesy Patrol (MHCP)) that patrols between I-25 and Wadsworth Parkway from 6:30 to 9:00 AM and 3:30 to 6:30

PM, Monday through Friday. The Contractor will coordinate with the MHCP operator in providing service for the Project in areas and time periods as defined below. The Contractor's courtesy patrol will comply with all terms of the Mile High Courtesy Patrol Scope included in the Reference Documents, in performing this work.

D. CONSTRUCTION REQUIREMENTS

Note: This section was taken from the US 36 US 36 Managed Lane/BRT Project RFP. It will be updated once the Traffic Control Plan has been accepted by CDOT.

The Contractor will provide installation, maintenance, and removal of all temporary traffic control devices.

1) TEMPORARY TRAFFIC CONTROL DEVICES

a) Construction Signing

Construction signing within the Project limits and all detours will comply with CDOT *Standard Specifications*, the MUTCD and all other applicable standards set forth herein.

Wood signposts conforming to CDOT *Standard Specifications* will be allowed for installation of temporary signs.

b) Temporary Traffic Signals

Temporary traffic signals will comply with Book 2, Section 14, Signing, Pavement Marking, Signalization & Lighting. Upon discovery of a signal malfunction, the Contractor will immediately notify the entity responsible for the signal.

c) Temporary Marking Paint and Signs

The Contractor will furnish, apply and remove temporary pavement marking paint in accordance with CDOT Standard Specifications. Temporary paint striping will meet the conformity of lines (including no overspray), dimensions, patterns, locations and details established in the Contractor's TCP and MHT.

- Temporary pavement paint striping will be re-striped once a month, or as required to maintain safe traffic operations.
- Epoxy-based paint will not be allowed on concrete pavement surfaces for temporary striping.
- Hydro blasting, or other methods that do not result in scaring of permanent pavements will be used for removal of temporary striping.

d) Glare Shields

The Contractor will evaluate the applicability of glare shields in all crossovers.

2) MAINTENANCE OF TEMPORARY TRAFFIC CONTROL DEVICES

The Contractor will be responsible for the maintenance of all temporary traffic control devices within the Project limits, including the local street system.

3) DETOUR PAVEMENT

The Contractor will provide a paved surface for all detours. Detour pavement locations will be generally described in the Contractor's TMP and detailed in the Accepted TCP. The Contractor will determine the type and thickness of pavement that will be used to accommodate existing traffic loadings.

The Contractor will maintain the detour pavement for the entire period that it is open to the traveling public, including all temporary approaches, accesses, crossings, and intersections with adjacent roads and streets. Detour pavements will be maintained in good operating condition devoid of potholes, uneven surfaces, and rutting. CDOT may direct the Contractor to repair or replace detour pavements if, in CDOT's sole discretion, detour pavements are determined to be in poor condition. Detours that use existing streets pavements will be subject to pavement repair or replacement where it is determined that the condition of the existing pavement has noticeably deteriorated over the duration of its use as a detour. The Contractor will obtain written approval from the affected Local Agency prior to use of any local streets for detours.

The Contractor will be responsible for the complete removal and disposal of all temporary detour pavement.

4) TEMPORARY LIGHTING

The Contractor will maintain temporary lighting at a level equivalent to existing lighting provided within the Project limits.

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16. PROJECT COMMUNICATIONS (MEDIA AND PUBLIC INFORMATION)

A. ROLES AND RESPONSIBILITIES

CDOT is responsible for reviewing and approving the Contractor's Public Information Plan (PIP).

B. PUBLIC INFORMATION PLAN

Note: This section was taken from the US 36 US 36 Managed Lane/BRT Project RFP. It will be updated once the PIP has been accepted by CDOT.

The Contractor will prepare and maintain a Public Information Plan (PIP), in coordination with CDOT, to communicate information to and from the public regarding the Project. This PIP will be used for the duration of the Work by the Contractor to manage and implement the public information process. The Contractor's final PIP will be submitted to CDOT for Approval prior to NTP2.

As significant components of the PIP, there are categories of information that will be communicated and coordinated between CDOT and the Contractor. These are messages that communicate the following:

1) THE VISION OF THE PROJECT

Answers to questions such as why the Project is needed, what work will be done, how the Project will benefit customers, how the Project fits into the community, and how the Project fits into broader transportation plans.

2) THE PROJECT'S PROGRESS

Ongoing messages to keep people informed about how the Project is moving forward, whether it is on schedule and on budget and the status of the Project goals.

3) COPING DURING THE PROJECT WORK

Coping information helps people deal with inconveniences caused by the Project, such as details regarding detours, lane closures, closed ramps and access impacts, information resources available to people, including Transportation Demand Management (TDM) strategies, and other Activities that affect residents and businesses.

The Contractor's PI Officer coordinates with the CDOT Project PI Liaison to provide coping information to the public, including utilization of the checklist according to requirements of Book 2, Section 16, Maintenance of Traffic.

The Contractor will be accessible 24 hours a day, 7 days a week, for Activities associated with public information and will have experience in this area. The Contractor will provide contact information, including home, fax and mobile numbers; and email addresses to CDOT for Acceptance (which may include Directors of Communication, Project Managers, and the appropriate Public Information Officer) at NTP1. The Contractor will hold weekly coordination meetings with CDOT to provide Project Schedule, accomplishments, and planned activities, for the upcoming week.

4) PUBLIC INFORMATION TASK FORCE

As soon as is practical after NTP1, the Contractor will initiate a Public Information Task Force to implement the Contractor's PIP and integrate with the Public Information efforts of CDOT. At a minimum, this Task Force will include the Contractor's PI Officer, the Contractor's Project Manager, and CDOT. Upon the first meeting, the Task Force will establish a regular meeting schedule.

Coping information helps people deal with inconveniences caused by the Project, such as details regarding detours, lane closures, closed ramps and access impacts, information resources available to people, and other activities that affect residents and businesses.

C. PUBLIC INFORMATION PLAN UPDATES

The Contractor will schedule and hold PIP review meetings with CDOT to review, assess input, and/or modify the Contractor's PIP. These meetings will be held quarterly after the initial PIP is established and Approved by CDOT.

D. PUBLIC OPINION RESEARCH

CDOT may gather public and Stakeholder input from a variety of customer groups, primary research and other sources that will be affected by construction. CDOT may continue to conduct such formal and informal public opinion research regarding the Project to ascertain the public's sentiment. The Contractor will make use of this research, if available, in developing and updating the PIP quarterly. CDOT will review the PIP quarterly to ensure that it is responsive to the results of any research.

E. STAKEHOLDERS

CDOT has identified the Stakeholders listed below as audiences requiring Contractor outreach. The Contractor will describe in the PIP its approach to communicating with these stakeholders and coordinating with CDOT. The Stakeholders include, but are not limited to:

- Area residents
- Property owners and property management companies
- Commuters
- Transportation management/advocacy organizations
- The traveling public
- Commercial vehicle operators, Ports of Entry and Denver Permit Office, and Colorado Motor Carriers Association
- Local, regional, and state government officials
- Business owners, employees, and customers
- Neighborhood associations
- Emergency response agencies, such as the Colorado State Highway Patrol, and the local police departments, sheriff departments, fire departments, ambulance service providers, and hospitals
- Local community organizations
- Tourist destinations and organizations

- Delivery and courier services
- CDOT employees and other internal team members, including CDOT Headquarters, the Public Relations Office and the Government Relations Office
- Mass transit agencies/companies
- Utility owners
- School districts/universities
- Railroad

F. CRISIS COMMUNICATIONS

In an event of a crisis, CDOT is the lead agency to handle communication with the media, public, CDOT staff, etc. The Contractor is available to help coordinate with CDOT and provide information necessary to respond to the crisis.

The PIP includes a crisis communications plan for the Contractor's response to emergencies and incidents during the Project. The Contractor coordinates this approach with the Contractor's overall Incident Management Plan.

The Contractor's crisis communication approach will include:

- Designated staff to respond to the emergency.
- Types of potential emergencies.
- Approaches of addressing potential emergencies.
- Cause of specific disruptions (i.e., whether construction-related or not).
- Actions being taken to alleviate the problem.
- Impact to the public and notification procedures.
- Anticipated duration of the disruption.

The Contractor provides specific details on internal coordination and communication that occur with other Contractor groups, CDOT, and other Stakeholders.

G. EMERGENCY INFORMATION DISSEMINATION – TELEPHONE TREE

The Contractor will establish and manage an emergency response telephone tree. All appropriate personnel will be included on this telephone tree for immediate response in the event of an emergency. The telephone tree will be divided into areas of expertise so the proper people are called for specific emergency situations. CDOT, CDOT public information staff, and the Contractor's Engineer will be included on the telephone tree for notification of any emergency that may arise. The Contractor will develop and maintain a contact list of emergency service providers as part of its crisis communications approach. The Contractor will provide information to emergency service providers as outlined in the communication matrix.

H. DATA COLLECTION AND MANAGEMENT

The Contractor's PIP will include a data collection and management plan that accounts for the ongoing information needs of the Project Stakeholders. For example; residents, commuters, and most other Stakeholders will need information about the construction schedule, what roads will be affected and/or closed by construction, what efforts will be taken for noise mitigation during construction, and the hours construction will take place. Likewise, commercial vehicle operators will need specific information on any conditions that would restrict or prevent commercial vehicles from using roadways under construction. Emergency response providers will need to know if designated routes for emergency vehicles are altered. All Project Stakeholders will require reliable, accurate, accessible, and timely information on when and where construction is taking place.

1) DATA COLLECTION AND MANAGEMENT STRATEGIES APPROACH

The Contractor will develop a process to collect construction information to be provided to CDOT for use on the Project public web site and to CDOT for other uses.

The Contractor will include, as part of its data collection activities that will arise during the Project, lane and ramp closures, shoulder work, pothole repair, dust mitigation, and other maintenance work.

In all events the Contractor will be responsible for the accuracy and reliability of the information it forwards to CDOT as soon as it becomes available.

The Contractor will track changes (including changes to short-term construction-related closures, unexpected construction activities, emergency closures, and scheduled construction Activities), and report on all changes as quickly as possible (see Section 4.6.1 below). The Contractor will update the construction information and make the information available to CDOT for its use. The Contractor will update the project hotline and provide information to CDOT immediately in order to update the website and media outlets.

2) INFORMATION MANAGEMENT AND REPORTING

The Contractor will be responsible for collecting, processing, and providing to CDOT several types of coping information that impact the Project. Outlined below are some, but not all, of the types of information necessary to inform the public regarding the Project. The Contractor will include the following types of information and minimum performance expectations when developing the various components of the PIP:

a) Construction Activities

- Description of the activity.
- The start of the activity.
- The end of the activity.
- Any updates to the above that will be disseminated to CDOT at weekly meetings.

b) Maintenance of Traffic

The Contractor will issue information to CDOT that it can use for notices regarding the Maintenance of Traffic for the entire Project for commuters, emergency services agencies, residents, and businesses within four blocks of the limits of construction, or any other stakeholders who will be impacted by the Project at least 30 Days prior to any construction in an area that affects the residents or businesses.

The Contractor will include, at a minimum, the following elements within the notifications:

- Residents and businesses impacted or affected.
- Proposed alternative routes and detours.
- The Contractor's contact for further information.
- Project public web site address for further information.

c) **Commercial Vehicle Access and Restriction Information.**

The Contractor will inform CDOT of information that it can use to inform the Colorado State Patrol, CDOT Regions, and CDOT Transport Permit Office for notification of construction events that will include at least:

- Description of the activity.
- The start of the activity.
- The end of the activity.
- Any updates to the above

d) **Bicycle, Pedestrian, Handicapped Mobility, and Access.**

The Contractor will clearly define and communicate to CDOT information that it can use to inform the public and other associated stakeholder groups its plans for maintaining bicycle access, pedestrian access, and handicapped mobility. The Contractor may be required to assist CDOT in the development and distribution of materials.

e) RTD Transit System

The Contractor will issue information to CDOT that it can use to inform the public and other associated Stakeholder groups for any impacts to the existing RTD transit system by the Project at least 30 Days prior to any construction. This information will include at a minimum:

- Description of the Activity
- The anticipated start date of the Activity
- The anticipated end date of the Activity
- RTD routes, stations, and services affected by the Activity

I. DISSEMINATION OF INFORMATION

The Contractor's PIP will include an approach for providing accurate information to CDOT for it to establish an effective working partnership with the Project's Stakeholders, including procedures for all public information dissemination elements (i.e., newsletters, flyers, fact sheets, faxes, e-mails, collateral materials, ads, etc.).

1) SCHEDULE FOR INFORMATION DISSEMINATION

The Contractor will provide construction Activity information to CDOT for review according to the following schedule:

- 30 Days prior to the beginning of the following construction Activities in any area of the Project:
  - Bridge demolitions.
  - Road or ramp closures, alley and driveway access impacts, detours, and major traffic impacts lasting seven days or longer.
- 7 Days prior to the beginning of the other remaining types of construction Activities in any area of the Project.
- As soon as known (must have at least 24 hours notice), the Contractor will provide CDOT with construction updates that directly impact the public (e.g., cancellation of planned closures, additional lane closures, closure removals, major traffic shifts, etc.).

2) COMMUNICATION MATRIX

As part of the Contractor's PIP, the Contractor will develop and use a communication matrix listing the stakeholders and the information tools to be used to address each group of Stakeholders' informational needs. The Contractor will develop a communications matrix for Stakeholder groups, and individuals and businesses with special needs, which will identify:

- The customer group(s) that require information.
- Location or region of customer group(s).
- What information is needed.
- When information is needed.
- Tools to be used for disseminated information.
- Results of information dissemination.

J. PUBLIC CONTACT

The Contractor will track all public contacts made from residents, businesses, and government offices, etc. At a minimum, this will include the names, addresses, email addresses, fax and phone numbers, questions, comments, concerns, date of contact, and the response provided will be documented. Reports detailing public contacts will be provided to CDOT on a monthly basis.

The Contractor will work with the Public Information Task Force to develop a master distribution list of contacts to be used for general public information, publications, and informational flyers/newsletters. CDOT's "govdelivery.com" system will be used as the basis for development of this list/database. This list or database will be presented to CDOT for review, prior to NTP2. Through the Contractor's data gathering process, the Contractor will assist CDOT in supplementing govdelivery.com.

K. TELEPHONE HOTLINE AND EMAIL ACCOUNT

The Contractor will implement a telephone hotline and an email address prior to NTP2 as a means of receiving community input, answering questions, and prompting possible solutions regarding Project-related activities. The hotline will be available to the public 24 hours a day, 7 days a week, and will be publicized in all Project information materials and signage throughout the Project. The hotline must be handicap-accessible and a free call for the public. Additionally, the hotline will be staffed during major construction Activities, such as bridge demolitions and special events. CDOT will provide the specific special events and game days needing hotline staffing in conjunction with the Contractor's major construction Activities. An immediate response is preferable for all calls, although a voice mail option is permissible. However, all voice mail messages will be replied to within 24 hours of receipt, including weekends and Holidays.

All calls and resulting actions from this hotline will be tracked and integrated into the Project's electronic database and made available to CDOT Media Relations

Media relations efforts will be initiated by CDOT, including news releases, traffic advisories, editorial, feature stories, etc.

During the Work, the Contractor will immediately notify CDOT of any situations involving the media, and all communication requests will be tracked by CDOT. The Contractor will be familiar with, and comply with, CDOT News Media Communications Guidelines, which outlines required protocol when contacted by media representatives.

L. MEDIA RELATIONS

Media relations efforts will be initiated by CDOT, including news releases, traffic advisories, editorial, feature stories, etc.

During the Work, the Contractor will immediately notify CDOT of any situations involving the media, and all communication requests will be tracked by CDOT. The Contractor will be familiar with, and comply with, the CDOT *News Media Communications Guidelines*, which outlines required protocol when contacted by media representatives.

M. COMMUNITY AND BUSINESS RELATIONS

The Contractor will develop and implement community and business relation strategies that communicate coping messages to the public. Coping strategies will focus on providing the public with the information they need to make short-term and long-term decisions about how they can deal with the work with as little disruption as possible.

N. GOVERNMENT RELATIONS

CDOT will develop and implement a comprehensive government relations program. The Contractor will assist in giving timely information to CDOT regarding construction Activities, and will participate in meetings as requested.

Throughout the Work, all communication requests received by the Contractor from government entities will be immediately referred to CDOT (not including those requests related to project management or coordination for City permits, or are the Contractor's responsibilities under the Contract Documents).

O. TOOLS FOR DISSEMINATING INFORMATION

To convey a consistent identity and message throughout the Project, the various tools for dissemination will comply with the Project branding requirements, as set forth by CDOT.

At a minimum, the Contractor will utilize the tools in the following Sections for information dissemination and minimum performance expectations when developing the various components of the PIP.

1) PROJECT IDENTIFICATION BOARDS AND SIGNAGE

Public information and warning signage will be maintained for the duration of the Work. All signage will be coordinated and comply with the requirements outlined in the Contract Documents. As part of the communications matrix, the Contractor will include signage as one of the communication tools to be used.

2) WEB SITE INFORMATION DISSEMINATION

CDOT will host the web site on CDOT server and provide use of a CDOT template to create, update, and maintain the Project public web site. The web site will be used to provide Project construction information provided by CDOT and the Contractor. The Contractor will provide, at minimum, construction information, commercial vehicle restrictions, and regular input for a community/construction calendar of events, Stakeholders use, and other relevant information for direct input onto the Project public web site. CDOT will be responsible for updating the web site.

P. PUBLIC MEETINGS AND PERSONAL CONTACT

1) PUBLIC INFORMATION MEETINGS

The Contractor will host at least three public meetings prior to the commencement of construction. The meetings will be held in a convenient location for community and business groups. Depending upon the Contractor's proposed Traffic Control Plan (TCP), and areas impacted within each phase, other meetings may be required. The Contractor's PIP will outline its approach to these construction information meetings.

Public meetings will provide construction schedules, impacts, traffic management plans, and other coping information. A member of the Contractor's management team or PI team, and CDOT will attend all meetings. The Contractor and CDOT will jointly organize and conduct, all meetings and extend invitations to appropriate participants. The Contractor will be responsible for invitation dissemination.

2) PERSONAL CONTACTS

A member of the Contractor's PI team will manage and implement door-to-door, email, and phone contact during the duration of the Work. CDOT will assist the Contractor with email communications and responding to phone communications. The Contractor will be responsible for all door-to-door communications. These contacts will be necessary to keep the public aware of all issues pertaining to the Project, such as all road and driveway closures and utility disruptions. Contact will occur as outlined in Section 4.6.1 above and will consist of information explaining the planned Work, impacts, the expected duration of the Work, contact information, and answering questions. These contacts will be conducted within a minimum one-block radius of the Activity following the four-block radius initial notifications outlined in Section 4.5.3, above.

3) COMMUNITY FORUMS

Building on the work of earlier efforts, CDOT may hold regular community forums. These forums will comprise various stakeholder groups, including state and local government officials and staff, neighborhood members, emergency service providers and others; and they will be a forum for community representatives to provide substantive input and feedback on the Project. CDOT will arrange the meetings and set the agenda. CDOT will facilitate all community forum meetings. The Contractor will participate with CDOT on any community forums throughout the duration of the Work (maximum of three per quarter). The Contractor will provide appropriate technical staff as required.

4) TOURS OF THE DESIGN-BUILD PROJECT

The Contractor will provide CDOT the opportunity to give all media, businesses, government officials and residents tours of the construction areas, as CDOT deems necessary. In addition to the tours led by CDOT, a Contractor representative who is knowledgeable of construction activities and schedules may be requested to assist with the Project tours. The Contractor's representative will be able to describe the components of construction and why that activity is taking place at that time. CDOT will coordinate the tours with the Contractor. The Contractor will supply personal protective equipment, including but not limited to, hard hats, glasses, and vests on all tours led by the Contractor.

Q. ENVIRONMENTAL MITIGATION

In addition to the requirements of Section 5, Environmental Requirements, the Contractor will coordinate any mitigation requirements, as they pertain to the public, with CDOT to ensure the public is aware of and participates in those areas where their input is required.

1) NOISE

The Contractor will communicate the scheduling of noise wall construction with individual property owners and impacted communities. The Contractor will work with all impacted municipalities and individuals to comply with mitigation requirements.

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17. CIVIL RIGHTS PROGRAM

A. POLICY

CDOT is a direct recipient of federal dollars to be used on this Project. Consequently, CDOT is charged with the responsibility to implement, monitor, and enforce federally mandated programs and Contract provisions.

The Project Director is responsible for assuring the Contractor complies with all civil rights requirements. In doing so, he is supported by the existing Civil Rights Program at CDOT. This includes the following:

1) CENTER FOR EQUAL OPPORTUNITY

The Center for Equal Opportunity reports directly to the Director of the Division of Human Resources and Administration. The Center for Equal Opportunity provides direct and supportive services for multiple civil rights programs and requirements, including the On-the-Job Training Program, the Disadvantaged Business Enterprise Program, Title VI, and equal opportunity compliance.

2) LABOR AND CONTRACT COMPLIANCE MANAGER

The Labor and Contract Compliance Manager is located in the Contracts and Market Analysis Branch of the Division of Engineering and Maintenance. The Labor and Contract Compliance Manager has the administrative responsibility of the Contractor Compliance Program. The Branch, in conjunction with the Center for Equal Opportunity, is directly responsible to the Federal Highway Administration (FHWA) for labor and Contract compliance, including statewide reporting and annual accomplishments of the program.

3) REGION CIVIL RIGHTS MANAGER/EO COMPLIANCE OFFICER

CDOT has established six engineering Regions across the state in order to decentralize many of its design, construction, and maintenance project functions. As part of this decentralization, each Region employs a Region Civil Rights Manager. In partnership with Headquarters, the Region Civil Rights Manager is responsible for the monitoring and enforcement of requirements in the areas of equal employment opportunity, labor standards, and program development and monitoring at the project level. Because of the scale of this Project, CDOT has assigned a EO Compliance Officer to fulfill the duties usually assumed by a Regional Civil Rights Manager. The EO Compliance Officer's sole duties are to assure compliance with Civil Rights related requirements in the Contract.

B. EQUAL EMPLOYMENT OPPORTUNITY

1) EQUAL EMPLOYMENT OPPORTUNITY POLICY

Under the terms of the Contract, the Contractor confirms that it has an equal employment opportunity policy ensuring equal employment opportunity without regard to race, color, national origin, sex, age, religion or handicap; and that it maintains no employee facilities segregated on the basis of race, color, religion or national origin. The Contractor must comply with CDOT's Equal Employment Opportunity Policy and the requirements set forth in the Affirmative Action Requirements – Equal Employment Opportunity Special Provision, Materials and Labor Used, Form FHWA-47 Special Provision, Minimum Wages, Colorado, U.S. DOL Decision Nos. CO030014 and CO030015 Special Provision, On the Job Training Special Provision, and FHWA Form 1273, all in Exhibit C, Federal Requirements. This confirmation is also required of every Subcontractor for a Subcontract over $10,000 (including purchase orders).

2) WORKFORCE DEVELOPMENT PROGRAM

CDOT and RTD have collaborated to develop a unique initiative for this Project, which combines CDOT's federally-mandated On the Job Training (OJT) Program and RTD's Workforce Initiative Now (WIN) Program. Under this initiative, the Contractor must commit to meeting both professional services and skilled craft training goals. Additionally, the Contractor must develop a training plan, making every reasonable effort to incorporate women and minorities in the Project.

C. NON-DISCRIMINATION

1) AFFIRMATION BY THE CONTRACTOR AND ALL SUBCONTRACTORS

The Contractor must comply with all applicable Legal Requirements that enumerate unlawful employment practices including discrimination because of race, religion, color, gender, age, disability, or national origin, and that define actions required for affirmative action and minority/disadvantaged business programs. The Contractor must not discriminate against any employee or applicant for employment because of race, color, national origin, religion, sex, age or handicap. The Contractor must affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, national origin, religion, gender, age or handicap. Such action includes the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

The Contractor must include this provision in every Subcontract over $10,000 (including purchase orders), and will require that it be included in all Subcontracts over $10,000 at lower tiers, so that such provisions will be binding upon each Subcontractor.

2) COMPLAINT PROCESS

CDOT's Title VI complaint process is available to the public online at:

http://www.coloradodot.info/business/equal-opportunity/equal-access-programs.

D. DISADVANTAGED BUSINESS ENTERPRISE (DBE)

1) OVERALL GOAL

Pursuant to 49 CFR Part 26, CDOT's DBE Program Plan and goal methodology was submitted to and approved by FHWA. CDOT has established an overall goal of 13.29% for the Project, which includes 2.14% race-neutral participation and 11.15% race- conscious participation.

2) RACE-CONSCIOUS PARTICIPATION

CDOT has established a DBE Contract goal of 12% for this Project. The Contractor must meet the DBE Goal or demonstrate a good faith effort to do so in order to be awarded the Contract. Additionally, in accordance with the Contract terms, CDOT may impose sanctions for the Contractor's failure to meet the DBE goal on this Project or demonstrate post-award good faith efforts to do so.

3) RACE-NEUTRAL PARTICIPATION

CDOT and RTD both administer race-neutral small business programs: CDOT Emerging Small Business (ESB) Program and RTD Small Business Enterprise (SBE) Program. As a means to

generating small business participation on this Project and increasing race-neutral DBE participation, CDOT is offering a financial incentive for the Contractor's commitments to small business utilization on this Project.

4) SERVICES

CDOT maintains a public directory of certified DBEs and ESBs. RTD maintains a public directory of certified SBEs. Additionally, CDOT offers supportive services to both ESBs and DBEs and encourages the Contractor to recommend these services to ESBs and DBEs during the Project.

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18. CLOSEOUT PLANS

A. PROJECT COMPLETION

1) NOTICE BY CONTRACTOR

As a prerequisite to Segment Completion(s) or Project Completion, the Contractor must provide written notice to CDOT when all of the following have occurred with respect to the Project:

- The Contractor has completed all Work (except for Punch List items, final cleanup and other items only included in the requirements for Segment Acceptance or Final Acceptance).
- The Contractor has ensured that the Work has been performed in accordance with the requirements of the Contract Documents.
- The Contractor has received all applicable Governmental Approvals required for the Project.
- The Contractor has furnished to CDOT certifications from the Contractor's Design Manager, in form and substance satisfactory to CDOT, certifying that the Design Documents meet the requirements of the Contract Documents.
- The Contractor has furnished to CDOT certifications from the Contractor's Project Manager, in form and substance satisfactory to CDOT, certifying that the construction meets the requirements of the Contract Documents.
- The Contractor has furnished to CDOT certifications from the Contractor's Construction Quality Manager, in form and substance satisfactory to CDOT, certifying that there are no outstanding non-conformances other than those identified on the Punch List.
- The Contractor has ensured that the Segment or Project may be used without damage to the Project or any other property on or off the Site, and without injury to any Person.
- The Contractor has obtained all applicable third-party approvals relating to the Work (including Utility Owners as required under any applicable PSURAs and Section 6 of Book 2 of the Contract Documents), and all third parties have completed all work that involves obligations by the Contractor (including Utility Owners under any applicable PSURAs and Section 6 of Book 2 of the Contract Documents).
- The Contractor has ensured that the Segment or Project is ready to be opened for traffic and that no further work is required which would involve any lane or shoulder closure.

2) CORRECTION OF DEFECTS

CDOT will conduct such inspections, surveys, and/or testing as CDOT deems desirable. If such inspections, surveys, and/or tests disclose that any Work does not meet the requirements of the Contract Documents, CDOT will promptly advise the Contractor as to Nonconforming Work (including incomplete Work) necessary to be corrected as a condition to Segment Completion or Project Completion, Nonconforming Work (including incomplete Work) which may be corrected as Punch List items and/or whether the Contractor will reassess the accuracy and completeness of its notice

3) CONDITIONS TO AFFIDAVIT OF FINAL COMPLETION

The Contractor will provide to CDOT an executed sworn Affidavit of Segment Completion or Final Completion in when all of the following have occurred:

- CDOT has received all Released for Construction Documents, Design Documents, As-Built Documents, ROW record maps, surveys, test data, and other deliverables required under the Contract Documents for the Segment or Project, whichever is applicable.
- All special tools, equipment, furnishings, and supplies purchased by and/or used by the Contractor, as provided in the Contract Documents, have been delivered to CDOT and all replacement spare parts have been purchased and delivered to CDOT free and clear of liens.
- All of the Contractor's and Subcontractors' personnel, supplies, equipment, waste materials, rubbish, and temporary facilities have been removed from the Site, the Contractor has restored and repaired all damage or injury arising from such removal to the satisfaction of CDOT, and the Site is in good working order and condition.
- The Contractor has furnished to CDOT certifications from the Contractor's Design Manager, in form and substance satisfactory to CDOT, certifying that the Design Documents meet the requirements of the Contract Documents.
- The Contractor has furnished to CDOT certifications from the Contractor's Project Manager, in form and substance satisfactory to CDOT, certifying that the construction is in accordance with the Contract Documents.
- The Contractor has furnished to CDOT certifications from the Contractor's Construction Quality Manager, in form and substance satisfactory to CDOT, certifying that there are no outstanding non-conformances.
- The Contractor has delivered to CDOT a notice of completion for the Project in recordable form and meeting all statutory requirements.
- The Punch List items have been completed to the satisfaction of CDOT.
- All of the Contractor's other obligations under the Contract Documents (other than obligations which by their nature are required to be performed after Final Acceptance as determined by CDOT) have been satisfied in full or waived in writing by CDOT.

4) INSPECTION AND ISSUANCE OF NOTICE OF FINAL ACCEPTANCE

Upon CDOT's receipt of the Affidavit of Final Completion, CDOT will make final inspection and CDOT will either issue a Notice of Final Acceptance or notify the Contractor regarding any Work remaining to be performed

5) OVERPAYMENTS; NO RELIEF FROM CONTINUING OBLIGATIONS

Final Acceptance will not prevent CDOT from correcting any measurement, estimate or certificate made before or after completion of the Work, or from recovering from the Contractor, the Surety(ies) or both, the amount of any overpayment sustained due to failure of the Contractor to fulfill the obligations under the Contract. A waiver on the part of CDOT of any breach by the Contractor will not be held to be a waiver of any other or subsequent breach. Final Acceptance will not relieve the Contractor from any of its continuing obligations hereunder, or constitute any assumption of liability by CDOT.

B. LANDSCAPING AND WETLANDS

CDOT will not give the notice of Landscape Acceptance for plants until the end of the landscape establishment period specified. CDOT will not give the notice of Wetland Acceptance for wetlands until the end of the establishment period specified.

C. OPENING OF SECTIONS OF PROJECT TO TRAFFIC

1) PLAN FOR OPENING TO TRAFFIC

The Contract Schedule will set forth the Contractor's plan for completing Sections of the Project and opening them to traffic. CDOT may request that the Contractor expedite certain Sections of the Project, and the Contractor will accommodate such requests to the extent that it can do so without significant disruption to its schedule or a significant increase in its costs

2) DIRECTION TO OPEN FOLLOWING CONTRACTOR FAILURE TO PERFORM

If the Contractor is delinquent in completing shoulders, drainage structures or other features of the Work, CDOT may, but is not obligated to, order all or a portion of the Project opened to traffic notwithstanding such incomplete elements. The Contractor will then conduct the remainder of the construction operations, minimizing obstruction to traffic.

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19. PROJECT DOCUMENTATION

A. DOCUMENT CONTROL

CDOT requires the use of Aconex on this Project because of a history of successful project management using Aconex during past major projects by our partner RTD. The following items explain the usage of Aconex on the Project.

- To ensure efficient information management on the Project, Aconex will be the only recognized method of transmittal for formal project correspondence, documents and information. Where it is necessary to transmit original signed documents, these shall be acceptable forms of correspondence only when they have been issued via Aconex first.
- The Contractor must agree to use Aconex when communicating with CDOT and RTD on the Project. This includes use for all purposes related to Document Control and email for the duration of the Project. The Aconex system will be used by all participants engaged on this Project, including Subcontractors, Sub-subcontractors, suppliers and their legal successors in title. It is the Contractor's responsibility to ensure this is the case.
- Access to the Aconex system for the Project will be provided to the Contractor, Subcontractors and Subconsultants free of charge for the duration of the Project. Once the Project is closed out, a DVD of the documentation can be provided.
- All correspondence between the Contractor, CDOT, RTD and their representatives to the Project will be completed within Aconex and refer to the US 36 Managed Lane Project by name along with the specific subject of the letter. All replies shall refer specifically to the prior correspondence to which it relates. Per the terms of the Contract, the Contractor will also use a data management application specified by CDOT. The tool chosen for this project is Aconex. Aconex will also be used by the Contractor for Requests for Information and all submittals.
- At the end of the Project, all records pertaining to correspondence, submittals, reviews and requests for information will be in one location and can be easily saved for future reference.

B. CORRESPONDENCE DELIVERY

The Contractor must use the Aconex web-based collaboration system to communicate all formal matters with CDOT, RTD, and other Consultants and Subconsultants in relation to the Project and its execution. The Contractor will register and transmit all drawings and documents and all amendments to documents for the Project on the Aconex web-based collaboration system.

C. SERVING NOTICES

A notice, consent, information or request that must or may be given or made to a Party under this Agreement must be delivered to that Party using the web-based collaboration system.

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20. PROJECT MANAGEMENT PLAN ENDORSEMENT

NH 0361-093

US 36 MANAGED LANES PROJECT

Denver, Colorado Metropolitan Area
Project Management Plan

Submitted Pursuant to:

Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
Section 1904(a)
By the

Colorado Department of Transportation

The Colorado Department of Transportation (CDOT) has developed this Project Management Plan (PMP) for the US 36 Corridor, in coordination with the Federal Highway Administration - Colorado Division (FHWA) and in accordance with USDOT Major Project requirements under SAFETEA-LU, Section 1904(a). The PMP provides guidelines for CDOT, FHWA and our partners to execute the delivery of this Project in a safe, timely, cost efficient, high quality, and environmentally sound manner. CDOT believes this Plan provides a sound basis upon which to achieve the above objectives, and is in compliance with FHWA's Project Management Plan Guidance, February 6, 2007.

CDOT understands this PMP is a living document and it is expected to evolve as the Project progresses through its various stages. Prior to the issuance of Notice to Proceed 1, it is the intent of CDOT to have the PMP signed by the Chief Engineer.

In accordance with the language of this PMP, I have affixed my signature and request your concurrence in moving forward with PMP implementation per your signature.

Respectfully,

Timothy J. Harris

Timothy Harris, P.E.
Chief Engineer
Colorado Department of Transportation

3/1/12
Date

John M. Cater

John M. Cater
Colorado Division Administrator
Federal Highway Administration

3/1/12
Date

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APPENDIX A

US 36 Basic Configuration Typical Sections

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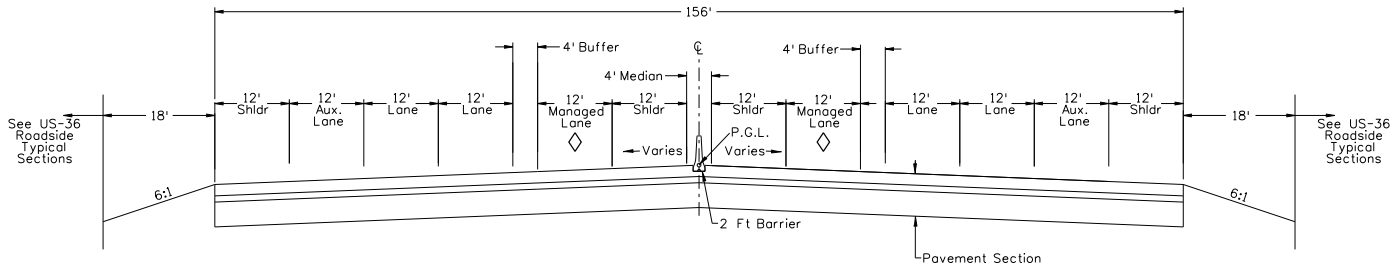

US-36
Typical Section
Interlocken Loop to Wadsworth Pkwy

P.G.L. ~ Profile Grade Line

Note: See safety edge detail for pavement construction details.

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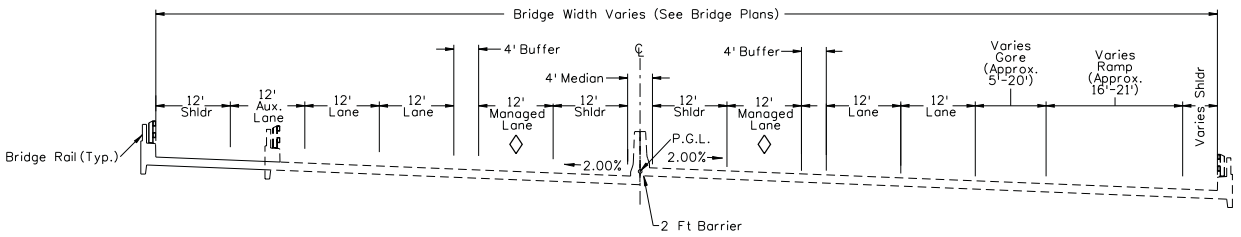
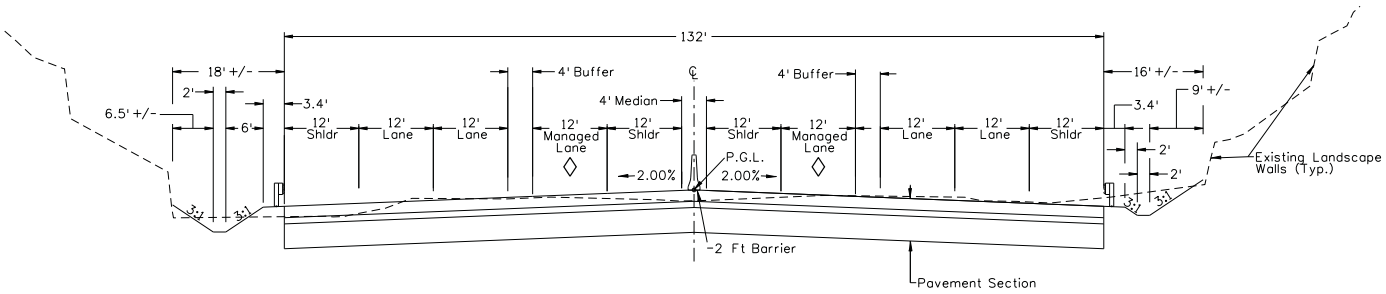


US-36
Typical Section
Over East Flatirons Crossing Dr.

P.G.L. - Profile Grade Line



US-36
Typical Section
Under Interlocken Loop

Note: See safety edge detail for pavement construction details.

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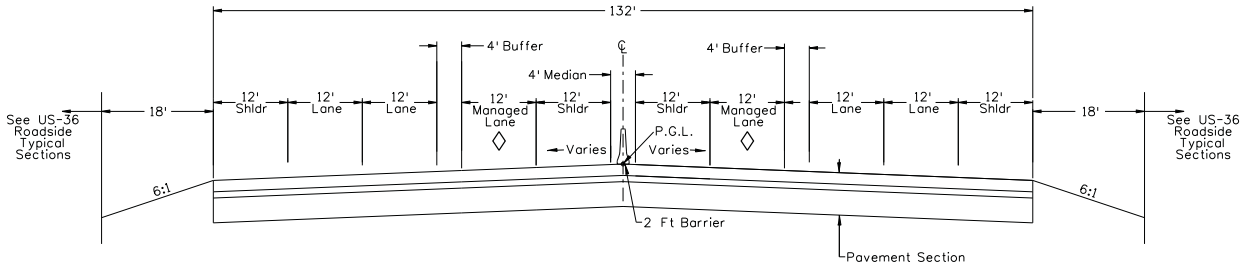
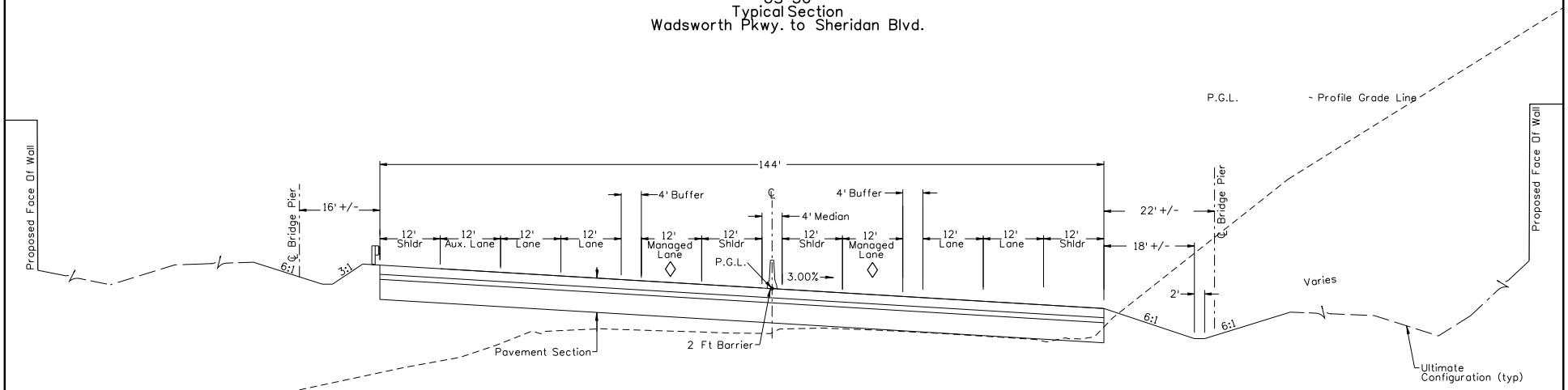


US-36
Typical Section
Wadsworth Pkwy. to Sheridan Blvd.



US-36
Typical Section
Under Wadsworth Pkwy.

Note: See safety edge detail for pavement construction details.

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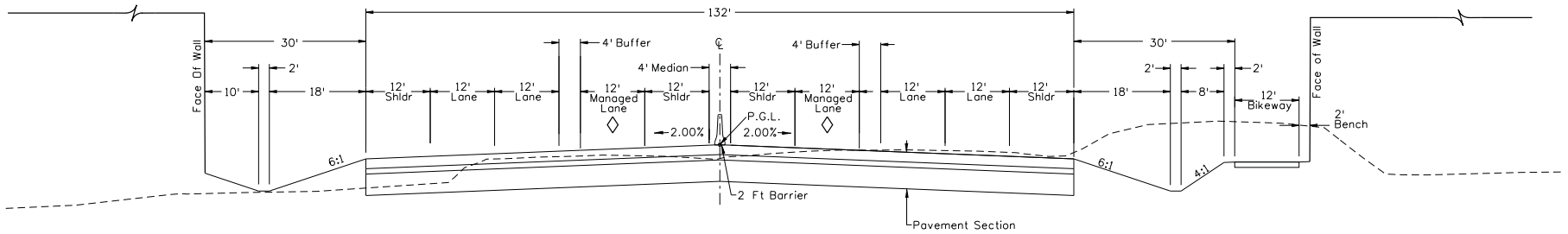
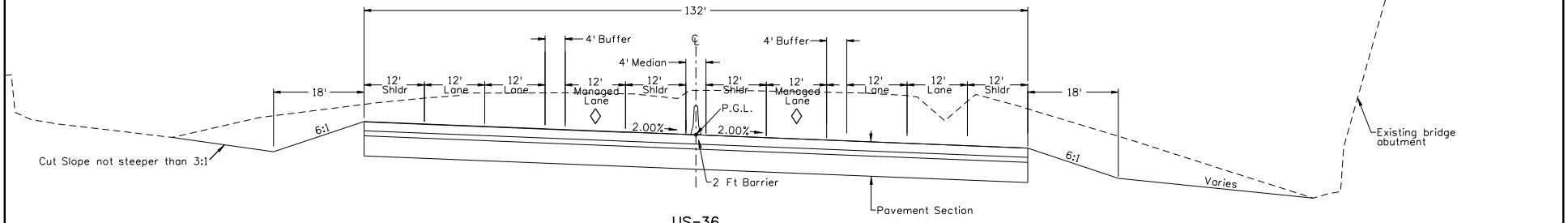


US-36
Typical Section
Under 112th Ave.

P.G.L. - Profile Grade Line



US-36
Typical Section
Under 120th Ave.

Note: See safety edge detail for pavement construction details.

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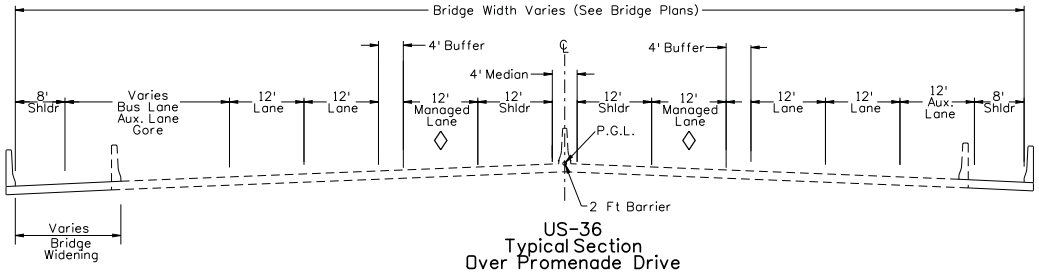
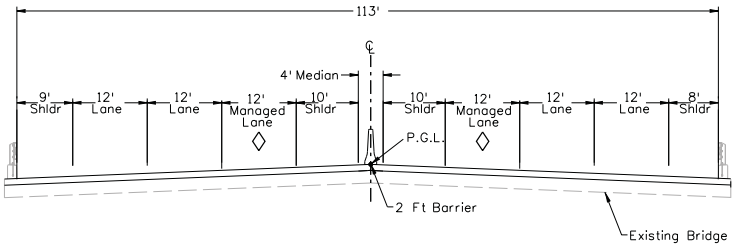


US-36
Typical Section
Over Promenade Drive

P.G.L. - Profile Grade Line



US-36
Typical Section
Over BNSF Railroad

Note: See safety edge detail for pavement construction details.

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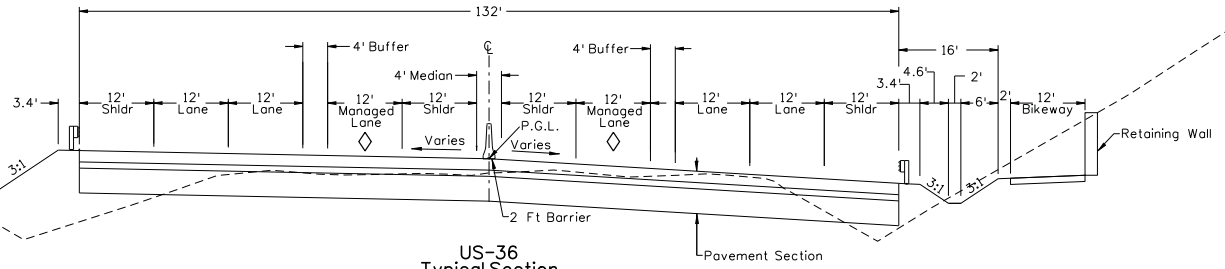
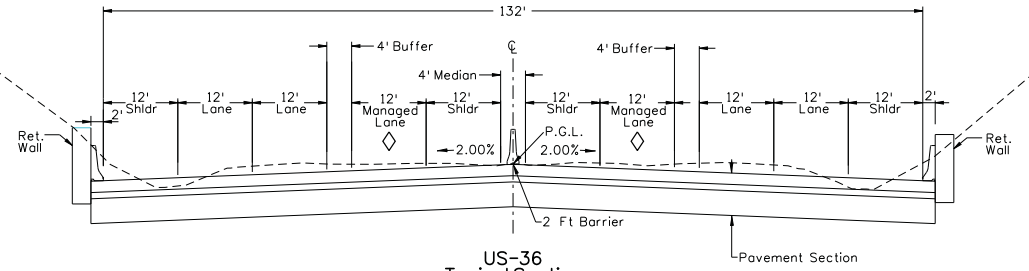


US-36
Typical Section
Under Westminster Blvd.

P.G.L. ~ Profile Grade Line



US-36
Typical Section
Under Church Ranch Blvd.

Note: See safety edge detail for pavement construction details.

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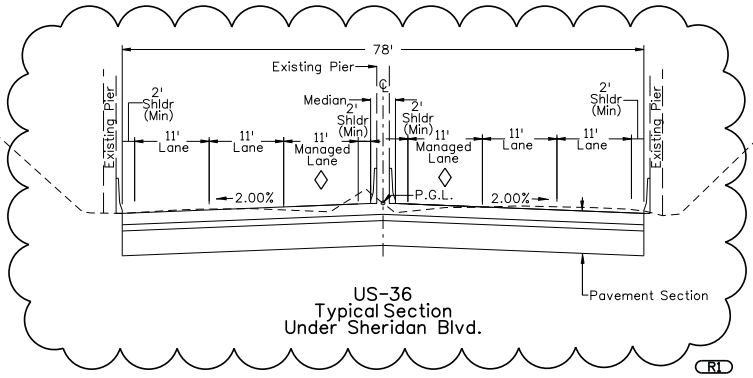
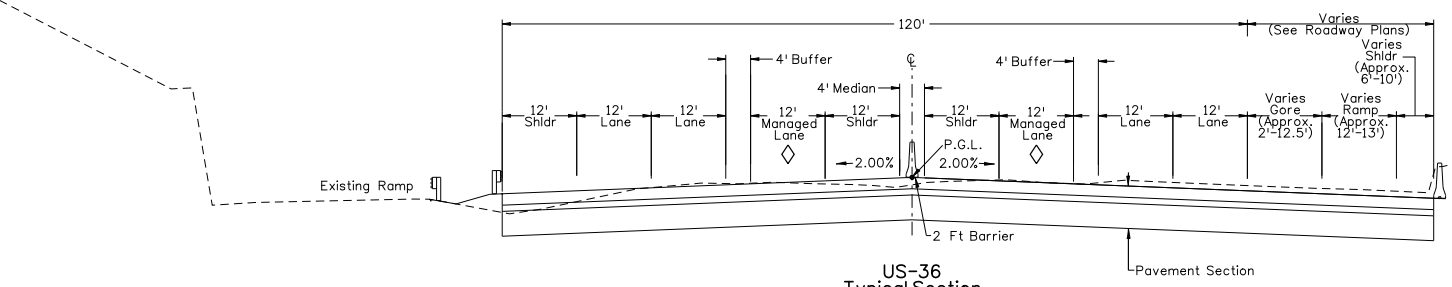


US-36
Typical Section
Under Sheridan Blvd.

P.G.L. ~ Profile Grade Line



US-36
Typical Section
Under 92nd Ave.

Note: See safety edge detail for pavement construction details.

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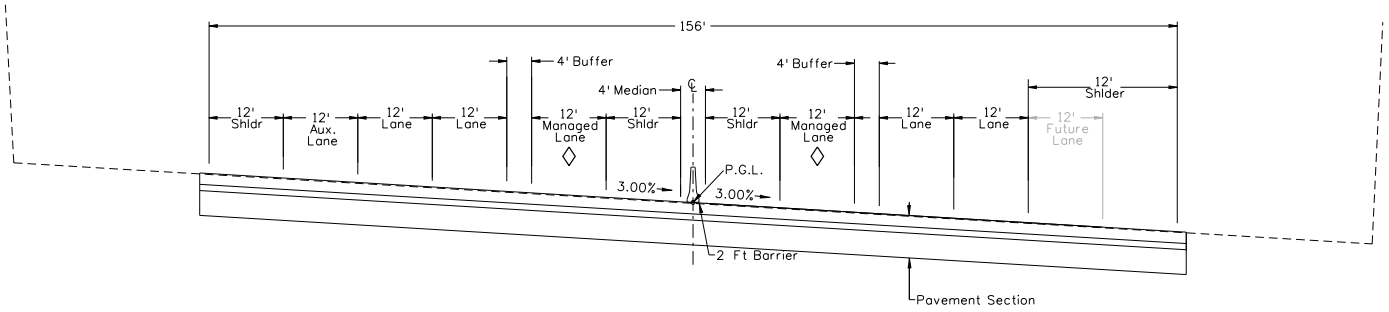

US-36
Typical Section
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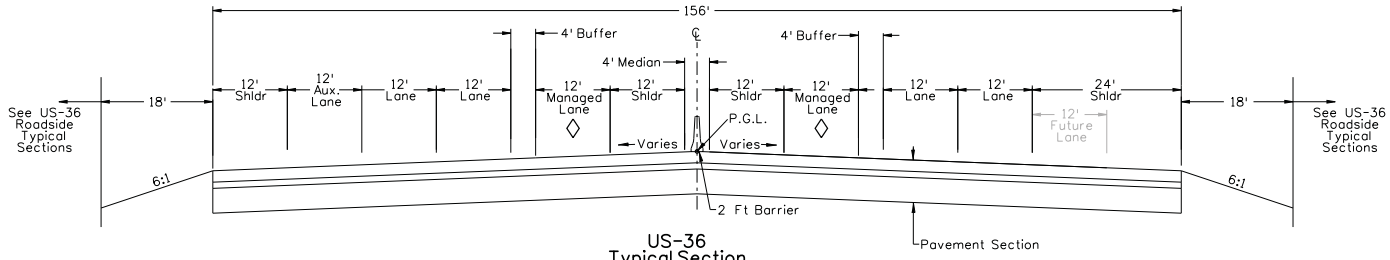
P.G.L. ~ Profile Grade Line



US-36
Typical Section
Sheridan Blvd. to Federal Blvd.

Note: See safety edge detail for pavement construction details.

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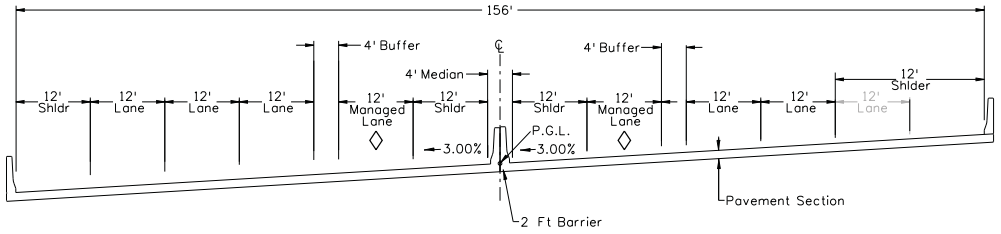

US-36
Typical Section
Over Lowell Blvd.

P.G.L. ~ Profile Grade Line

Note: See safety edge detail for pavement construction details.

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							Sheet Subset: TYP	Subset Sheets: 9 of 16	

APPENDIX B
Roadway Design Criteria

Roadway Design Criteria						
DESIGN DATA	**US 36**	**Ramps** (A)	**Wadsworth Parkway (SH 121)**	**112th Avenue** (B), (C)	**Wadsworth Boulevard** (B) (D)	**Remarks**
Roadway Classification	Freeway	-	Principal Arterial	Minor Arterial	Connector	
Location	Federal Blvd. to McCaslin Blvd.	Various	-	-	-	
Design Speed (MPH)	65 (DE-3)	45	50	40	25	
Posted Speed (MPH)	65	45	**35**	35	25	
GEOMETRIC STANDARDS						
Horizontal Geometry						
Min Radius (ft.)	1660	643	833	575	260	
Emax (%)	6%	6%	6%	4%	-	
Pivot Point	Centerline	Varies	Centerline	Centerline	Centerline	
Vertical Geometry						
Minimum Profile Grade (%)	0.5%	0.5%	0.5%	1%	1%	
Maximum Profile Grade (%)	4% (DE-4)	4%	7%	5%	7%	
Min. Rate of Vertical Curve (K) Crest	193	61	84	80	30	
Min. Rate of Vertical Curve (K) Sag	157	79	96	70	40	
Sight Distance						
Min. Stopping Sight Distance (ft)	645	360	305	305	200	
Vertical Clearance						
Below Structure (ft)	16.5	16.5	16.5	16.5	N/A	

Roadway Design Criteria						
DESIGN DATA	**US 36**	**Ramps** (A)	**Wadsworth Parkway (SH 121)**	**112th Avenue** (B), (C)	**Wadsworth Boulevard** (B) (D)	**Remarks**
Below Structure (Rail Road) (ft)	23.5	23.5	23.5	23.5	N/A	
Below Structure (Pedestrian Bridge) (ft)	17.5	17.5	17.5	17.5	N/A	
Horizontal Clearance						
CROSS SECTION						
Lanes						
Lane Widths (ft.)	12 (DE-2)	15 for single lane, 2-12 for 2-lane	12	13	10	
Managed Lane Widths	12	-	-	-	-	
Managed Lane Buffer	4 (DE-1, DE-2)	-	-	-	-	
Bike Lane Widths	-	-	4	4	-	
Parking Lane	-	-	-	-	6’	
Shoulders						
Shoulder Widths - LT/ Median (ft.)	12 (DE-1DE-2)	4	6 minimum median	-	-	
Shoulder Widths - RT/ Median (ft.)	12 (DE-2)	8	-	-	-	
Shoulder Surface	Paved	Paved	Paved	Paved	Paved	
Curb and Gutter						
Curb and Gutter Required	No	No	Yes (Northbound)	Yes	Yes	
Gutter Width - Outside (in)	-	-	24	24	24	
Gutter Width - Inside (in)	-	-	12	12	-	
Sidewalk						
Width Left (ft)	-	-	0	8	8 or 5	
Width Right (ft)	-	-	6	8	8 or 5	
Median						
Median Width (ft)	4	-		4 min.	-	
Treatment	Concrete Barrier	-	Raised	Planted Raised	-	
Intersection at Grade						

Roadway Design Criteria						
DESIGN DATA	**US 36**	**Ramps** (A)	**Wadsworth Parkway (SH 121)**	**112th Avenue** (B), (C)	**Wadsworth Boulevard** (B) (D)	**Remarks**
Min. Curb radius (ft)	-	-	-	Max 35		
Design Vehicle	WB-65	WB-65	WB-65	WB-50	WB-50	

(DE-X) See Table 13.2-1 for specific Geometric Exceptions to this criteria
(A) Ramps will meet or exceed design criteria unless noted in Exhibit 13-1A – Acceptable Minimum Criteria for Entrance and Exit Ramps
(B) City of Broomfield Standards
(C) 112th Avenue will meet or exceed design criteria unless noted in Exhibit 13-1B – Acceptable Minimum Criteria for 112th Avenue.
(D) Wadsworth Boulevard will meet or exceed design criteria unless noted in Exhibit 13-1C – Acceptable Minimum Criteria for Wadsworth Boulevard.

Exhibit 13-1A – Acceptable Minimum Criteria for Entrance and Exit Ramps					
DESIGN DATA	**Wadsworth Pkwy** Westbound on-ramp (from NB Wadsworth Pkwy)	**Wadsworth Pkwy** Westbound on-ramp (from SB Wadsworth Pkwy)	**Church Ranch Blvd** Eastbound on-ramp	**Sheridan Blvd** Westbound off-ramp	**Remarks**
Design Speed (mph)	30 to 65	30 to 65	40 to 65	75 to 30	
Controlling Vertical Curve K Value	45 (sag)	27 (crest)	61 (sag)	38 (sag)	

Exhibit 13-1B – Acceptable Minimum Criteria for 112th Avenue (Initial Condition)		
Design Data	**112th Avenue**	**Remarks**
Pivot Point	Varies	Ultimate Centerline
Min. Rate of Vertical Curve (K) Crest	44	Meets AASHTO criteria
Bike Lane Widths	4	No Bike Lane in initial condition
Lane Widths (ft.)	12	2' Shoulders also provided
Curb and Gutter Required	No	No C&G in initial condition
Sidewalk	Select locations	Sidewalk provided from the beginning of alignment to proposed bridge (LT) only in initial condition.
Median	No	No median in initial condition

Exhibit 13-1C – Acceptable Minimum Criteria for Wadsworth Boulevard		
Design Data	**Wadsworth Boulevard**	**Remarks**
Curb and Gutter Required	No	
Lane Widths	12’ and 11’	2’ shoulder also provided
Parking Lane	No	
Sidewalk	No	

Exhibit 13-1D – Acceptable Minimum Criteria for Lowell Boulevard and Turnpike Drive Per City of Westminster			
DESIGN DATA	**Lowell Boulevard**	**Turnpike Drive**	**Remarks**
Design Speed (MPH)	35	35	
Posted Speed (MPH)	30	30	
GEOMETRIC STANDARDS			
Horizontal Geometry			
Min Radius (ft.)	N/A	512	
Emax (%)	Normal Crown	Normal Crown	
Vertical Geometry			
Minimum Profile Grade (%)	1.33%	1.14%	
Maximum Profile Grade (%)	6.27%	3.40%	
Min. Rate of Vertical Curve (K) Crest	-	19	
Min. Rate of Vertical Curve (K) Sag	42	56	
Sight Distance			
Min. Stopping Sight Distance (ft)	232	260	
Vertical Clearance			
Below Structure (ft)	14.5	N/A	Per City of Westminster
Horizontal Clearance			
CROSS SECTION			
Lanes			
Lane Widths (ft.)	12	12	
Bike Lane Widths	N/A	N/A	
Curb and Gutter			
Curb and Gutter Required	Yes	Yes	
Gutter Width - Outside (in)	24	24	
Sidewalk			
Width Left (ft)	10	8	
Width Right (ft)	10	N/A	
Intersection at Grade			

Exhibit 13-1D – Acceptable Minimum Criteria for Lowell Boulevard and Turnpike Drive Per City of Westminster			
DESIGN DATA	**Lowell Boulevard**	**Turnpike Drive**	**Remarks**
Min. Curb radius (ft)	22.5	25	
Design Vehicle	SU-30	SU-30	

Exhibit 13-2 – Bikeway Design Criteria			
Element	**Final Bikeway Criteria**	**Source***	**Interim Bikeway Criteria****
Bikeway Width	12’	FEIS (AASHTO Bike Design Guide page 35-36 recommends 10’ for two way path with 8’ minimum under specifically defined conditions)	10’ desirable, 8’ minimum where ROW or topography constrained
Bikeway Shoulder Width (Clear Zones)	3’	FEIS (AASHTO Bike Design Guide page 35 specifies 2’ minimum and 3’ desirable with a max slope of 1:6)	2’ minimum
Bikeway Material	6” Depth Concrete	FEIS	6” Depth Concrete
Minimum separation from edge of nearest US 36 travel lane to edge of concrete bike path that requires no barrier between US 36 and bike path	30’	FEIS	30’
Minimum separation from edge of on/off ramp travel lanes to edge of concrete bike path	Varies	AASHTO Clear zone requirements for the ramp design speed will be applied. If the path is located within the clear zone, barrier separation will be provided	Same as Final
Cross Slope/Superelevation	2% Max	ADA Requirements	2% Max
Vertical Clearance to overhead obstructions	10’	AASHTO Bike Design Guide Page 55 (10’ was shown in exhibits at EIS public meetings)	8’ minimum
Underpass width	14’	AASHTO Bike Design Guide Page 55 (recommended minimum 10’ path width + 2’ clear zone on each side- this width was also shown in exhibits at EIS public meetings)	12’ minimum
Desirable Minimum Horizontal Curvature Radii	100’	AASHTO Bike Design Guide Page 38 (based on 15 deg lean angle and 20mph design speed)	36’ minimum (based on 15 deg lean angle and 12 mph design speed)
Maximum Desirable Grade	5%	AASHTO Bike Design Guide Page 39	5%

Exhibit 13-2 – Bikeway Design Criteria			
Element	**Final Bikeway Criteria**	**Source***	**Interim Bikeway Criteria****
Maximum Grade	ADA Compliant	ADA Requirements	6-11% based on length: AASHTO Bike Design Guide Page 39
Minimum Stopping Sight Distance	See Figure 19 page 42	AASHTO Bike Design Guide Page 42	Same as Final
Minimum Length of Crest Vertical Curve	See Table 3 page 44	AASHTO Bike Design Guide Page 44	Same as Final
Minimum Lateral Clearance for Horizontal Curves	See Table 4 page 46	AASHTO Bike Design Guide Page 46	Same as Final
Minimum Rail Height on Structures	42”	AASHTO Bike Design Guide Page 55	42”

*Source: *US 36 Corridor Final Environmental Impact Statement* and AASHTO *Guide for the Development of Bicycle Facilities* (1999).

** Interim criteria are based on minimum AASHTO standards.

APPENDIX C

Organizational Chart

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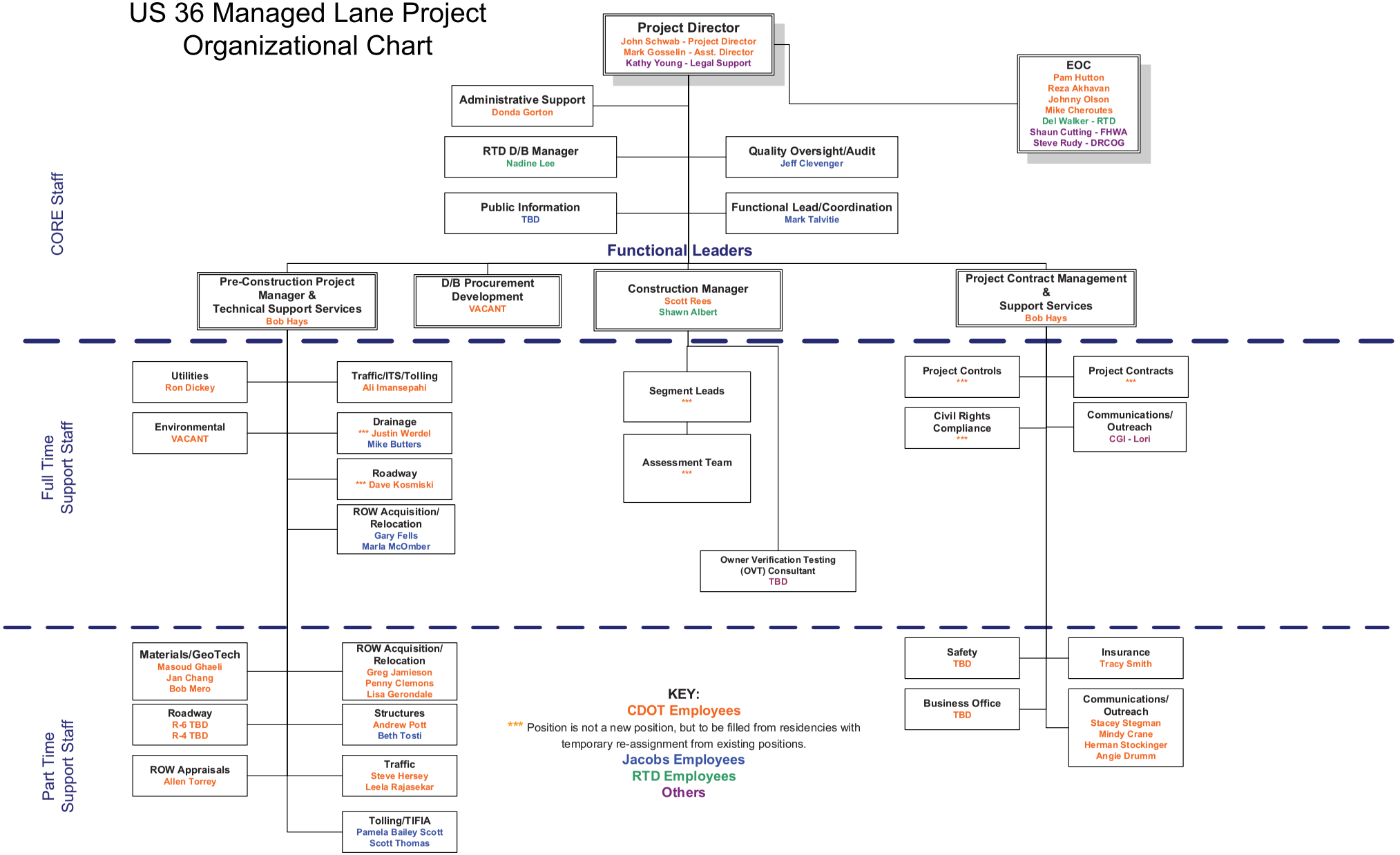
US 36 Managed Lane Project Organizational Chart



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APPENDIX D

CDOT/RTD/ US 36 IGA
August 2011

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US 36 MANAGED LANE PROJECT – SEGMENTS 1 AND 2
August 2011
CDOT, HPTE, and RTD

INTERGOVERNMENTAL AGREEMENT

THIS INTERGOVERNMENTAL AGREEMENT made this 30th day of August 20__, by and between the State of Colorado for the use and benefit of the Colorado High Performance Transportation Enterprise (HPTE), a division of the Colorado Department of Transportation (CDOT), CDOT, an executive agency of the State of Colorado, and the Regional Transportation District (RTD) a political subdivision of the State of Colorado, 1600 Blake Street, Denver, CO 80202, FEIN: 840597392, and hereinafter collectively referred to as the "Parties."

RECITALS

1. RTD's FasTracks Plan (FasTracks), approved by voters in 2004, includes funding for a Bus Rapid Transit (BRT) along US 36 connecting the existing I-25 HOV lane with managed lanes for buses and autos to Table Mesa in Boulder, Colorado (US 36 Project).

2. RTD and CDOT jointly prepared an Environmental Impact Statement (EIS) under the direction of the Federal Highway and Federal Transit Administrations (FHWA and FTA) for the US 36 Project. A Record of Decision (ROD) was signed by FHWA on December 22, 2009 and FTA on December 22, 2009.

3. RTD, CDOT and HPTE previously entered into an Intergovernmental Agreement dated May 31, 2006 and amended on June 1, 2011 (the I-25 HOV Agreement) for the use of revenues from the managed lane facility on I-25 and, with the authorization of FHWA and FTA, wish to provide for the integration and long term funding and operation of managed lane facilities on US 36 and I-25 and to address the dedication of certain revenues for that purpose.

4. The ROD provides for phased implementation of managed lanes on US 36. RTD, CDOT and HPTE desire to provide for the design, construction, funding and operation of the US 36 Managed Lane Project – Segments 1 and 2 ("Project"), which is a subset of Phase 1 of the ROD, pursuant to the terms and conditions set forth below.

CONDITIONS

A. STATUS OF THE PARTIES

1. The recitals set forth above are incorporated herein by reference.

2. HPTE has applied for a loan from the United Stated Department of Transportation pursuant to the Transportation Infrastructure Financing and Innovation Act (TIFIA) that if awarded will provide sufficient available funds to construct the Project. The Project will

extend from the terminus of the existing managed lanes on US 36 at approximately Pecos Boulevard to Interlocken Boulevard in Broomfield, or further if funds allow, as depicted on **Exhibit A** attached.

3. HPTE was created and authorized pursuant 43-4-806 C.R.S. as amended, in order to finance managed lanes such as those planned for the Project. HPTE will enter into a Master Trust Indenture, dated as of September 1, 2011 ("MTI"), and a TIFIA Loan Agreement, dated as of September 1, 2011 ("Loan Agreement"), relating to the financing of the Project.

4. Pursuant to 43-4-806(i(c)(iii)) C.R.S. as amended, HPTE may contract with other governmental agencies to support HPTE functions.

5. RTD is responsible for developing, maintaining and operating a mass transportation system within the District, pursuant to Sections 32-9-106 and 32-9-107, et seq., C.R.S. as amended.

6. CDOT is a state agency authorized pursuant to 43-1-105 C.R.S. as amended, to plan, develop, construct, coordinate, and promote an integrated transportation system in cooperation with federal, regional, local and other state agencies.

B. ORDER OF PRECEDENCE

In the event of conflicts or inconsistencies between this Intergovernmental Agreement (IGA) and its exhibits, such conflicts or inconsistencies shall be resolved by reference to the documents in the following order of priority:

1. This IGA
2. Exhibit A – US 36 Project Map
3 The I-25 IGA
4. Exhibit B – RTD BRT Project Elements
5. Exhibit C - Concept of Operations for the US 36 Managed Lane
6. Exhibit D - Tolling and Use Policy
7. Exhibit E - Emergency Operations Procedures Manual
8. Exhibit F - RTD Staffing Plan
9. Exhibit G - ITS/Communications Systems Responsibility Requirements
10. Exhibit H – Performance Measures

C. CONSTRUCTION OF THE PHASE I PROJECT

I. CDOT RESPONSIBILITIES

1. CDOT will contract for the design and construction of the Project as generally described in the EIS and approved in the ROD. CDOT will ensure that the BRT elements

including Communications infrastructure and Queue Jumps described in **Exhibit B** attached and required by RTD for operation of the BRT system are included in the Scope of Work for the Project.

2. CDOT will coordinate the procurement process for the design and construction of the Project including preparation of RFP), evaluation criteria, scopes of work, reference documents, and review of all proposer submittals with HPTE and RTD. RTD and HPTE will have the opportunity to review all submittals in coordination with CDOT within the time allowed by the procurement schedule. The parties will agree on the prioritization of Additional Requested Project Elements in the RFP and in the evaluation of proposals. All Parties must approve the RFP prior to publication.

3. CDOT will award a contract for the design and construction of civil and Intelligent Transportation System ("ITS") elements of the Project in forms agreed upon by the Parties. Any contracts for the Project will name RTD and HPTE as third party beneficiaries of the Project. All contracts will require that RTD and HPTE be indemnified and insured to the same extent and in the same amounts as CDOT for all work performed on the Project. CDOT will include the RTD Communications Improvements and Queue Jump Elements specified on **Exhibit B** in contracts awarded for the Project. HPTE has entered into a separate agreement with E-470 Public Highway Authority to manage and maintain tolling customer accounts and perform toll violations processing once the Project is completed.

4. CDOT will provide the Parties with all documents, specifications, and requirements for any equipment required for installation of the elements included in **Exhibit B** to ensure compatibility with all BRT Communications Equipment.

5. CDOT will ensure that TIFIA loan requirements, as they relate to terms and conditions to be included in contracts for the design and construction of the Project, are met.

6. CDOT will be responsible for acquiring all rights of way necessary for the US 36 Project and for compliance with the Uniform Federal Relocation Assistance and Real Property Acquisition Policies Act (42 U.S.C.4601, et seq.) requirements.

7. CDOT will be responsible for ensuring compliance with Federal Disadvantaged Business Enterprise requirements in contracts for the Phase I Project. RTD's Workforce Initiative Now (WIN) program as it has been described in the Federal Transit Administration's Innovative Workforce Development Grant Program, and as approved by FHWA, will be included in any contracts awarded for the Phase I Project.

8. CDOT with RTD will provide design and construction management for the Project, and will ensure that all Parties have equal opportunity to participate in construction meetings, and safety meetings and to receive all contractor submittals, test reports, inspection reports, approvals, rejections and other contract and performance documents. CDOT will pay the Contractor(s) for approved work only after written concurrence from the RTD Project Manager.

9. CDOT will maintain all Project documents and make them available for inspection and review by RTD, HPTE and all federal agencies with an interest in the Project for a period of not less than 3 years from completion of the Project.

10. CDOT will ensure that any changes including but not limited to change orders, amendments, schedule adjustments, approved equals, to any contracts awarded for the Project are approved by RTD Project Manager before signing.

11. CDOT will issue final acceptance of work performed under contracts issued for the Project only after it has obtained approvals from RTD.

12. CDOT will require that as built drawings are delivered to RTD in accordance with the US 36 Phase I contract documents.

13. CDOT will designate a Project Director who will serve as liaison to RTD and HPTE who will have primary responsibility for all functions required of CDOT under this agreement except payment of financial obligations and receipt of notices.

II. RTD RESPONSIBILITIES

1. RTD will provide specific design requirements to CDOT for the Communications and Infrastructure and Queue Jumps to be included in the Project 30 days prior to the release of the Project Request for Proposal or as agreed to by both CDOT and RTD.

2. RTD will timely review all plans specifications and other documents submitted to it by CDOT or HPTE for the design and construction of the Project and provide written comments within Project schedule time frames.

3. RTD will designate a Project Manager who will serve as liaison to CDOT and HPTE who will have primary responsibility for all functions required of RTD under this agreement except payment of financial obligations and receipt of notices.

RTD will also designate additional staff as shown in **Exhibit F**. The fully burdened salary rate for the RTD staff assigned to the project are included as part of the original financial commitment from RTD to HPTE and CDOT for the Phase I project. The RTD staff and support costs for this first phase of the US 36 Project are a maximum of $2.3 million which will be reimbursed as Project costs in the amounts shown in **Exhibit F** on an annual basis on presentation of an invoice from RTD to CDOT.

RTD will assign the Deputy Assistant General Manager of Capital Programs as the RTD representative on the Executive Oversight Committee ("EOC"), with full participation in all EOC decision-making aspects of the Project.

4. RTD will inspect all RTD required improvements including those identified in **Exhibit B** to ensure compliance with plans and specifications.

5. RTD will endeavor to support CDOT and HPTE as necessary to obtain a TIFIA loan for the Project, to comply with federal requirements related to any aspect of the Project including EIS and ROD compliance, grant requirements if any are used, TIFIA loan requirements, and any other federal or state requirements necessary for implementation of the Project as a part of the US 36 Project as it was defined in the ROD.

6. RTD will support CDOT and HPTE in integration of the existing North I-25 HOV lane with the US 36 Project, however CDOT and HPTE must ensure the Project does not cause a violation of the level of service requirements of the existing North I-25 HOV lane and the policies and requirements outlined in the Tolling Exhibit, attached as **Exhibit D**.

7. RTD will pay $30 million per year, on or before December 31, 2011, 2012, 2013 and 2014 for a total amount of not more than $120 million for the Project. Payment by RTD shall be subject to annual appropriation by the RTD Board of Directors, and such payments will be included in the annual budget presented by RTD staff to the Board for adoption in November effective January 1 of the following calendar year. Payments will be made for design and construction of the US 36 Project. Contractor default, delay or suspension of the Project or non-payment of the Contractor for any reason in any calendar year will result in a proportional reduction in payments made for construction in that year based on the approved Project schedule and milestones, unless modified by change orders approved by RTD as required by Section I.8. above. CDOT or HPTE shall invoice RTD no later than November 1 of each of those calendar years and shall provide a progress report showing percentage of completed work for the year compared to percentage completion of all work required under contract documents, along with all contractor invoices for the year as back-up. Any delay of invoicing shall result in an equal delay of payment. If payments are delayed, CDOT or HPTE may invoice RTD in 2015 for remaining amounts owed.

RTD will also pay a total of $1.85 million in 2012 for the inclusion of the construction of civil improvements at interchange ramps at Church Ranch and Interlocken as depicted in **Exhibit B**.

8. RTD will be responsible for the operation of all BRT elements on the corridor including elements described in **Exhibit B**. CDOT shall transfer to RTD on final acceptance of the US 36 Project ownership of the fiber optic conduits, cabling, control cabinets and Programmable Information Display System elements specified in **Exhibit B** and assign all warranties associated with such elements to RTD.

9. RTD will provide use (including training and technical support) of Aconex and the RTD Quality Management Oversight (QMO) and RTD Quality Records Database (QRD) programs to CDOT and the Contractor for the duration of the Project. Upon completion of the Project, RTD will provide all quality records from the QMO and QRD to CDOT in a format agreed to by both Parties.

III. HPTE RESPONSIBILITIES

1. HPTE has prepared and submitted a budget and financial plan for the Project for the TIFIA loan agreement and project financing.

HPTE will be responsible for the administration of the TIFIA loan including all accounting, reporting, preparation of draws and other required submittals, document retention, and any and all reporting required thereunder. HPTE will make available to other parties at no cost copies of all TIFIA loan documentation including reports and draw requests.

2. HPTE will be responsible for the contracting for, supervision of and enforcement of all tolling requirements in the managed lanes of the Project.

IV. ADJUSTMENTS TO PROJECT SCOPE AND BUDGET

1. Positive or negative adjustments to the Project may be required due to change in loan amounts, timing of loans, interest rates, bids above or below estimate, or unanticipated events or conditions. Any material adjustments change in the Project budget will be noticed to the Parties through the (monthly) reporting. The Parties' Project Managers shall meet as needed to address changes to the budget that involve changes to the **Exhibit B** work or that require additional funding. Any material adjustments to Project scope or adjustments to budget requiring additional funds for the Parties that the Project Managers recommend will not be adopted unless the governing bodies of the Parties or there designated executives approve such changes and authorize funding.

D. OPERATION OF THE PROJECT

All Parties shall comply with the terms and procedures described in the Emergency Operations Procedures Manual appended hereto as Exhibit E.

I. HPTE RESPONSIBILITIES

1. HPTE shall be responsible for the operation of all tolling equipments and implementation of all tolling requirements on the Project. HPTE shall be responsible for continuing to develop with concurrence of the Parties and monitoring the Concept of Operations Plan appended hereto as **Exhibit C**.

2. HPTE shall be responsible for ensuring that tolling requirements for the Project coordinate with tolling requirements for the existing North I-25 Project and are more fully described in **Exhibit D**. The toll rates for a through trip between US 36/Flatirons and Denver shall not be less than RTD Regional fares during the Peak Period.

3. HPTE shall be responsible for use of and accounting for all revenues for the Project as required by its Master Trust Indenture (MTI) and not withstanding any amendment to the MTI will provide for the following:

- Toll collection cost provided costs are reasonable for the work and meet requirements of the MTI.
- Fees to toll enforcement contractor providing administrative and other services to facility.
- Loan repayment to USDOT (TIFIA), subject to the priorities of the MTI.

- Payment to CDOT Region 6 for services provided for maintenance of the Project consistent with the MTI.
- Creation of a Project Renewal and Replacement Account outlined in terms of the MTI.
- Creation of a System Surplus Fund out of US 36 Project Revenues only and not I-25 Project Revenues for use to complete Phase II of the US 36 Managed Lanes and then for use as described herein.

Any Existing I-25 Express Lanes Excess Revenues (as defined in the MTI dated September 1, 2011) in the I-25 Express Lanes Surplus Account (as defined in the MTI) shall be used as required by the I-25 HOV Agreement. Any Pledged Revenues (as defined in the MTI) in the System Surplus Account (as defined in the MTI) shall be used as required by the MTI; provided that no permitted use under State law then in effect, including for transit purposes in the US 36 corridor, may be made without the consent of RTD.

The TIFIA Loan Agreement dated September 1, 2011 between HPTE and the United States Department of Transportation and the MTI provide that certain revenues from the US 36 Managed Lanes Project, Phase I may be used to complete Phase II of the Project. The Parties agree that all construction of and use of the Phase II Project shall be subject to terms of Exhibits C, D and E and shall include additional compatible BRT elements designed to create a seamless BRT system for both phases. Award of any contract for the Phase II shall require an amendment to this IGA and approval of the Phase II contract by the Parties.

After completion of Phase II of the Project RTD consents to use of surplus revenues for prepayment of the TIFIA loan as provided in the MTI. Any surplus revenues after the TIFIA loan is prepaid will be used based on agreement of the Parties.

4. HPTE shall obtain audits of financial statements as performed by the State Auditor or an independent accounting firm selected and overseen by the State Auditor as required by the MTI. If requested HPTE shall allow any of the Parties, the Federal Transit Administration, the General Accounting Office or any entity under contract to any of them or any other agency of the federal government with oversight over the Managed Lanes to audit the Managed Lanes Facility finances and/or performance with cooperation of HPTE staff at no expense on not more than an annual basis.

5. HPTE shall collect performance data and shall make data available to the Parties monthly. HPTE shall report to RTD quarterly on bus travel times for the measurement area, revenues; vehicle usage by time; accidents; and HOV versus HOT Lane use.

6. HPTE will be responsible for the maintenance of the Managed Lanes portion of the Project except for the RTD Communications Infrastructure and associated station improvements as described in **Exhibit B** and the ITS/Tolling Infrastructure as outlined in **Exhibit G**. HPTE will present an annual proposed budget to RTD for review and comment at least 60 days prior to the start of each HPTE budget year

a. HPTE maintenance responsibilities shall include routine maintenance including but not limited to pavement patching, guard rail repair, barrier separation repair, sweeping, lighting and all other necessary maintenance for operation of the Express Lanes Facility. Snow removal shall be implemented according to the same standards as on all interstate highways maintained by CDOT. RTD and HPTE shall designate emergency maintenance contact personnel on an annual basis. Contact will be made during those events when maintenance performed on the Managed Lanes is not performed as required to maintain safe operations. If HPTE is unable to respond RTD may assume maintenance responsibility for that event. Additional emergency contacts for incident management shall also be designated on an annual basis. All designations shall be by notice pursuant to Notice provisions below.

b. Planned major maintenance which will be agreed upon by the parties as part of annual budget and 6 year capital program presented by HPTE to RTD.

Maintenance funds shall be set aside in a reserve fund maintained by HPTE as described in the original MTI. HPTE will not modify Operation and Maintenance Fund requirements of the MTI without agreement from the Parties.

II. CDOT RESPONSIBILITIES

CDOT will be responsible for the maintenance of the buffer, general purpose lanes and outside shoulder as shown in **Exhibit A.**

III. RTD RESPONSIBILITIES

1. RTD shall be responsible for implementation of the BRT elements shown in **Exhibit B**. RTD may, within its sole discretion, oversee the implementation of additional BRT elements through savings or in coordination with other services provided to service US 36 transit riders.

2. RTD will responsible for maintenance of its Communications Infrastructure and associated station improvements as described in **Exhibits B, and G, and I**.

3. RTD will report to the Parties information on bus travel times obtained from RTD's Automatic Vehicle Locator system provided CDOT and or HPTE informs RTD of the data points, days and times of days for which it wants RTD to collect information. RTD will also provide the information designated as their responsibility under **Exhibit H**. For other data points and times not ordinarily collected by RTD in the normal course of business the Parties shall confer on reasonable periods and frequencies for data collection.

E. USE OF THE MANAGED LANES

All vehicles may use the Managed Lanes under the following conditions:

1. Single occupancy vehicles will be allowed in the Managed Lanes at the toll rates established by HPTE to manage congestion and comply with the requirements of the MTI and this IGA.

2. Vehicles with two or more occupants will be allowed free of charge on the Managed Lanes HOV subject to the provisions of the MTI. Contracts will be entered into and funds provided in the operating budget to properly enforce the occupancy requirements.

3. RTD Buses, RTD ADA vehicles, and RTD contractor operated buses and ADA vehicles ("RTD Buses") will be allowed to use the Managed Lanes without any charge. All designated RTD Buses will be equipped by HPTE, at HPTE's cost, with transponders. Other RTD vehicles may use the Managed Lanes as described in **Exhibit D**.

4. If Managed Lane use exceeds projections and creates congestion on I-25 HOV lane in the such that travel times for RTD Buses fall below target travel times specified in the existing North I-25 HOV IGA Parties will meet and confer on the existing North I-25 Toll Rates and if necessary the US 36 lanes per Section (D)(I)(2) above.

5. CDOT, RTD and HPTE agree that RTD's funding is reasonably related to the overall cost of providing BRT infrastructure on the Project specified in Exhibit B and RTD's right to use the Managed Lanes in perpetuity as provided above. Although ownership of the Managed Lanes will not reside with RTD, RTD's financial contribution to the Project shall not be deemed a local grant to HPTE nor a part of the State's fiscal year spending limitation as described in Article X Section 20 of the Colorado Constitution. Rather, RTD's funds represent payment for BRT infrastructure and its perpetual interest in and right to on-going preferential use of the Managed Lanes for BRT service. Notwithstanding the foregoing, the Parties recognize and acknowledge that RTD's funds are eligible as local matching funds with respect to federal funds used for the Project.

Notwithstanding any other provisions of this IGA, neither payment of funds for construction or maintenance shall be deemed a grant by any of the parties to one another.

F. TERM

This IGA shall be effective on the date shown above. The term of this contract shall continue in perpetuity until amended in writing by the Parties.

G. TERMINATION PROVISIONS

This IGA may be terminated as follows:

Termination for Cause. If, through any cause, one of the Parties should fail to fulfill, in a timely and proper manner, its material obligations under this IGA, the non-violating Parties shall thereupon have the right to terminate this contract for cause by giving written notice to the defaulting party of its intent to terminate and at least thirty (30) days opportunity to cure the default or show cause why termination is otherwise not appropriate. In the event of termination, all finished or unfinished documents, data, studies, surveys, drawings, maps,

models, reports or other material prepared by the defaulting party under this IGA or required under the audit provisions shall be exchanged as required to complete audit and closeout. CDOT acknowledges that once RTD has paid all funds due under this IGA for construction of the managed lanes RTD will have fulfilled its material obligations and this agreement may not be terminated as to RTD's right's hereunder. CDOT and HPTE shall be limited to damages and or injunctive relief against RTD to require fulfillment of remaining obligations.

If after such termination it is determined, for any reason, that the defaulting party was not in default or that the defaulting party's action/inaction was excusable, such termination shall be treated as a termination for convenience, and the rights and obligations of the Parties shall be the same as if the contract had been terminated for convenience, as described herein.

H. LEGAL AUTHORITY

RTD, CDOT and HPTE warrant that they possess the legal authority to enter into this IGA and that they have taken all actions required by their procedures, by-laws, and/or applicable law to exercise that authority, and to lawfully authorize their undersigned signatory to execute this IGA and to bind each party to its terms. The person(s) executing this contract on behalf of each party warrants that such person(s) has full authorization to execute this IGA.

I. REPRESENTATIVES AND NOTICE

All communications relating to the day-to-day activities for the work shall be exchanged between the Project Managers designated by CDOT, HPTE and RTD. All communication, notices, and correspondence shall be addressed to the individuals identified below. Either party may from time to time designate in writing new or substitute representatives.

If to CDOT:

John Schwab
US 36 Project Director
200 S. Holly Street
Denver CO 80222

If to RTD:

Rick Clarke
Assistant General Manager for Capital Programs
RTD-FasTracks
1560 Broadway, Suite 700
Denver CO 80202

If to HPTE:

Michael Cheroutes
Director, HPTE
Colorado Department of Transportation
4201 E. Arkansas Ave.
Denver, CO 80222

J. SUCCESSORS

Except as herein otherwise provided, this contract shall inure to the benefit of and be binding upon the Parties hereto and their respective successor's government entities. No Party may assign its rights to any other person or entity without written authorization of the Parties. Any contractors for the design construction operation or maintenance of the Project shall be managed by the Party responsible for that aspect of performance designated above.

K. THIRD PARTY BENEFICIARIES

It is expressly understood and agreed that the enforcement of the terms and conditions of this IGA and all rights of action relating to such enforcement, shall be strictly reserved to CDOT, HPTE, and RTD. Nothing contained in this contract shall give or allow any claim or right of action whatsoever by any other third person. It is the express intention of the Parties that any such person or entity, other than CDOT, HPTE, and RTD receiving services or benefits under this contract shall be deemed an incidental beneficiary only.

L. GOVERNMENTAL IMMUNITY

Notwithstanding any other provision of this IGA to the contrary, no term or condition of this IGA shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protection, or other provisions of the Colorado Governmental Immunity Act, § 24-10-101, et seq., C.R.S., as now or hereafter amended. The Parties understand and agree that liability for claims for injuries to persons or property arising out of negligence of HPTE of Colorado, RTD or any of their departments, institutions, agencies, boards, officials and employees is controlled and limited by the provisions of § 24-10-101, et seq., C.R.S., as now or hereafter amended as to CDOT/HPTE and the risk management statutes, §§ 24-30-1501, et seq., C.R.S., as now or hereafter amended.

M. SEVERABILITY

To the extent that this IGA may be executed and performance of the obligations of the Parties may be accomplished within the intent of the contract, the terms of this IGA are severable, and should any term or provision hereof be declared invalid or become inoperative for any reason, such invalidity or failure shall not affect the validity of any other term or provision hereof.

N. WAIVER

The waiver of any breach of a term, provision, or requirement of this IGA shall not be construed or deemed as a waiver of any subsequent breach of such term, provision, or requirement, or of any other term, provision or requirement.

O. ENTIRE UNDERSTANDING

This IGA is intended as the complete integration of all understandings between the Parties. No prior or contemporaneous addition, deletion, or other amendment hereto shall have any

force or affect whatsoever, unless embodied herein by writing. No subsequent novation, renewal, addition, deletion, or other amendment hereto shall have any force or effect unless embodied in a writing executed and approved by the Parties.

P. SURVIVAL OF CONTRACT TERMS

Notwithstanding anything herein to the contrary, the Parties understand and agree that all terms and conditions of this IGA and the exhibits and attachments hereto which may require continued performance, compliance or effect beyond the termination date of the IGA shall survive such termination date and shall be enforceable by the parties as provided herein in the event of such failure to perform or comply by HPTE, CDOT, or RTD.

Q. MODIFICATION AND AMENDMENT

This IGA is subject to such modifications as may be required by changes in federal or State law, or their implementing regulations. Any such required modification shall automatically be incorporated into and be part of this IGA on the effective date of such change as if fully set forth herein.

The Parties may expand, revise or adjust the exhibits attached hereto by the initialing of substitute exhibits by all Parties without other action to effect such amendments to exhibits. On substitution, they shall be incorporated herein with the same effect as previous forms of exhibits.

Except as provided above, no modification of this contract shall be effective unless agreed to in writing by the Parties in an amendment to this IGA that is properly executed and approved in accordance with applicable law.

R. DISPUTES

Any provision of this agreement requiring concurrence, approval, agreement, or authorization (agreement) by any or all of the Parties, and for which agreement is not given within the time specified shall be resolved pursuant to this section. The Parties shall resolve disputes regarding all items in this IGA at the lowest staff level possible. The escalation process shall be:

- Project Director for CDOT and Project Manager for RTD
- CDOT Executive Director, RTD General Manager and HPTE Director
- RTD Board of Directors, CDOT Transportation Commission and HPTE Board of Directors

Resolution of any dispute that may result in loss of federal funds that may be used for the Project or request for return of funds by any federal agency including Federal Transit Administration or Federal Highway Administration shall require concurrence by the

appropriate federal agency(ies) in addition to RTD and CDOT and shall not be binding until concurrence is obtained.

THE PARTIES HERETO HAVE EXECUTED THIS CONTRACT

REGIONAL TRANSPORTATION DISTRICT

By: _____
Phillip A. Washington
General Manager

Approved as to legal form for RTD:

By: _____

HIGH PERFORMANCE TRANSPORTATION ENTERPRISE:

By: _____
Michael Cheroutes
Director

COLORADO DEPARTMENT OF TRANSPORTATION

By: _____
Donald Hunt
Executive Director

APPENDIX E

CDOT/E-470 IGA

June 2011

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Routing# 11HTC 33423
SAP 331000430

INTERGOVERNMENTAL AGREEMENT BY AND BETWEEN THE STATE OF COLORADO DEPARTMENT OF TRANSPORTATION HIGH PERFORMANCE TRANSPORTATION ENTERPRISE AND E-470 PUBLIC HIGHWAY AUTHORITY AMENDING AND RESTATING DECEMBER 13, 2005 INTERGOVERNMENTAL AGREEMENT BY AND BETWEEN THE COLORADO TOLLING ENTERPRISE AND E-470 PUBLIC HIGHWAY AUTHORITY

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1. PARTIES

This Intergovernmental Agreement (herinafter called "Contract") is entered into by and between E-470 PUBLIC HIGHWAY AUTHORITY (hereinafter called "E-470"), and the STATE OF COLORADO, for the use and benefit of the Department of Transportation, High Performance Transportation Enterprise (hereinafter called the "State" or "HPTE"). E-470 and the State hereby agree to the following terms and conditions.

2. RECITALS

A. Authority, Appropriation, and Approval

The High Performance Transportation Enterprise (referenced herein as "HPTE" or the "State") was created under C.R.S., Sections 43-4-801 *et seq.* in order to finance, construct, operate and regulate and maintain a system of tolled highways for the state of Colorado and HPTE is the successor entity to the Colorado Tolling Enterprise.

The E-470 Public Highway Authority ("E-470") was created pursuant to the Public Highway Authority Law, Sections 43-4-501 *et seq.*, C.R.S. and is empowered to finance, construct, operate and/or maintain all or a portion of a beltway or other transportation improvements in the Denver metropolitan region.

Pursuant to Section 43-4-806, C.R.S., HPTE is empowered to contract with local agencies to provide maintenance of highways that are part of the state highway system. Pursuant to Section 43-4-506(1)(c), C.R.S., E-470 is empowered to enter into contracts and agreements such as the Contract. Pursuant to Section 29-1-203, C.R.S., the Parties are both authorized to enter into intergovernmental agreements such as the Contract.

As the Parties are both public entities, all Contract funds have been budgeted, appropriated and otherwise made available and a sufficient unencumbered balance thereof remains available for payment. Required approvals, clearance and coordination, to the extent applicable, have been accomplished from and with appropriate agencies.

Through a review of capabilities and rates, the State selected E-470 to provide services outlined in **Exhibit A** to the State.

B. Consideration

The Parties enter into this Contract in consideration of the mutual promises and covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged as adequate to support this Contract.

C. Purpose

The Parties have entered into this Contract to specify the terms and conditions under which E-470 and E-470's operations E-470 will continue to maintain and provide "back-office" operation of HPTE's Express Lanes including establishing, managing and maintaining customer accounts and performing toll violations processing for the same using E-470's toll collection system ("TCS"), all according to the Section 5, Statement of Services Performed/Statement of Work Provided.

D. References

All references in this Contract to sections (whether spelled out or using the § symbol), subsections, exhibits or other attachments, are references to sections, subsections, exhibits or other attachments contained herein or incorporated as a part hereof, unless otherwise noted.

3. DEFINITIONS

The following terms as used herein shall be construed and interpreted as follows:

A. Budget

"Budget" means the budget for the Services and Work described in a Task Order.

B. Contract

"Contract" means this intergovernmental agreement between HPTE and E-470, its terms and conditions, attached exhibits, documents incorporated by reference under the terms of this Contract, and any future modifying agreements, exhibits, attachments or references incorporated herein pursuant to Colorado State law, Fiscal Rules, and State Controller Policies.

C. Contract Funds

"Contract Funds" means funds available for payment by the State to E-470 pursuant to this Contract and the Task Orders.

D. Evaluation

"Evaluation" means the process of examining E-470's Services and Work and rating it based on criteria established in **§6** and **Exhibit B.**

E. Exhibits and other Attachments

The following are attached hereto and incorporated by reference herein: **Exhibit A** (Statement of Services and Work), **Exhibit** B (Performance Standards), **Exhibit C** (Cost Allocation), and **Exhibit D** (Form of Task Order).

F. Managed Lanes

"Managed Lanes" means the electronic tolled lanes and HOV lanes which are or will be a part of HTPE's tolled or managed lane facilities and which are subject to Task Orders to be issued hereunder.

G. Party or Parties

"Party" means the State or E-470 and "Parties" means both the State and E-470.

H. Review

"Review" means examining E-470's Work to ensure that it is adequate, accurate, correct and in accordance with the criteria established in **§6** and **Exhibit A.**

I. Services

"Services" means those actions to be performed by E-470 in accordance with the Scope of Services and Work attached as **Exhibit A.**

J. Task

"Task" shall be those specific elements of the Services or Work which E-470 will perfrom pursuant to the Parties's specific agreement as documented in a signed Task Order.

K. Task Order

"Task Order" means a task order issued under this Contract pursuant to the process set out in **§6(D)**.

L. Work

"Work" means the physical elements of work including system integration and associated physical task and activities which E-470 shall perform as directed in a Task Order and in accordance with Exhibit A to fulfill its obligations under this Contract, Exhibit A, and each Task Order, including the performance of the Services and delivery of the Work Product.

M. Work Product

"Work Product" means the tangible or intangible results of E-470's Work, including, but not limited to, software, research, reports, studies, data, photographs, negatives or other finished or unfinished documents, drawings, models, surveys maps, materials, or work product of any type, including drafts.

4. TERM and TERMINATION

The Parties' respective performances shall commence on the latter of the date it is signed by representatives of HPTE, E-470, and the Colorado State Controller or his designee or July 1, 2011, "Effective Date". This Contract shall terminate on June 30, 2016 unless sooner terminated or further extended as specified in Section 5(B).

A. Early Termination

1. **Termination for Convenience.** In addition to other methods of termination, either Party may terminate this Contract at any time upon delivery of six (6) months written notice to the other Party, except to the extent a shorter or longer termination period is set forth in any Task Order issued hereunder.

2. **Termination for Cause.** If either Party shall fail to fulfill its obligations under this Contract, or if either Party shall default upon a term or condition of this Contract, the non-defaulting party shall have the right to terminate this Contract for cause by giving written notice of intent to terminate to the defaulting Party. For a period of ten (10) days after the date of the notice of intent to terminate, the defaulting Party shall have the opportunity to cure the default. Upon expiration of the ten (10) day period, if the default is not cured to the satisfaction of the non-defaulting Party then the non-defaulting Party shall deliver a notice of termination which shall be effective to terminate this Contract as the of the date thereof.

5. STATEMENT OF SERVICES PROVIDED AND WORK PERFORMED

A. Timing of Completion of Services or Work

E-470 shall complete the Services or Work and its other obligations as described herein and in **Exhibit A** or any delivery dates established in Task Orders. The State shall not be liable to compensate Contractor for any E-470 Work performed prior to the Effective Date or after the termination of this Contract. Likewise, E-470 shall have no obligation to perform further Services or Work upon termination.

B. Nature of Services and Work

E-470 shall provide the Services as particular described in **Exhibit A** (the "Scope of Services and Work") To the extent elements of physical work are needed in conjunction with the Services or in addition to the Services those elements of Work shall be provided in accordance with **Exhibit B** (Performance Standards).

E-470 shall provide Services and/or Work in accordance with approved Task Orders, using the Contract Funds and without increasing the maximum amount payable hereunder by the State.

C. No State Employees

E-470 shall perform Services or provide Work hereunder through its staff or its operations contractor. All persons performing Work under this Contract shall be E-470's employee(s) or E-470 contractors and shall not be employees of the State for any purpose as a result of this Contract.

D. Task Orders

Performance of all Services and/or Work under this Contract shall be accomplished pursuant to Task Orders which shall be in a form substantially similar to that attached hereto as **Exhibit D**. Each Task Order shall contain a not-to-exceed-amount and the State's financial obligation under such Task Order shall be limited to such amount. In any give year during the term of this Contract, the cumulative annual amount of all Task Orders shall not, in any event, exceed the amount budgeted by HPTE for such year for this Contract.

As specific tasks (items of Services or Work) are identified, the Parties shall agree on Task Order-specific statements of services and/or work and Task Order compensation. These items shall be documented in a Task Order which, following the parties' agreement thereto, shall be issued by the State.

Tasks shall be defined and ordered by agreement of the Parties based on the cost allocations established in **Exhibit C**. Immediately upon the execution of this Contract, the State shall

issue its first Task Order ("Task Order 1") for all Services described in **Exhibit A.** Changes to any provision hereunder, including, but not limited to the methodology of cost allocation established in **Exhibit C**, shall require a written amendment signed by the State Controller or designee and E-470, which amendment will be a Contract amendment and not a Task Order.

Task Orders issued hereunder shall be processed as follows. First, the State shall specify the desired Services and any requirements. E-470 shall propose a price using the methodology established in **Exhibit C**. The proposal shall be in a form acceptable to the State and include all pertinent information such as a Statement of Work, proposed time of performance, estimated number of hours, material costs, etc. Once the Parties agree regarding the foregoing, they shall prepare and execute a Task Order in a form substantially similar to that attached hereto as **Exhibit D**. Each Task Order shall contain a not-to-exceed-amount and the State's financial obligation under such Task Order shall be limited to such amount.

Performance of the obligations set forth in the Task Order are subject to the provisions of this Contract. E-470 will, as appropriate for the items of Work, warrant in the relevant Task Order that it will successfully complete its obligations under that Task Order within the time and for the price stated in the said Task Order. The State is not obligated to perform its obligations under the Task Order until the State Controller or designee approves it.

E-470's proposal shall be signed by a representative of E-470 who is authorized to contractually bind E-470 and shall constitute a firm offer to provide the Work on the basis set forth in the proposal. The State's issuance of a Task Order based on E-470's proposal shall constitute an acceptance of E-470's proposal and no further signature shall be required on the part of E-470.

6. REIMBURSEMENT

E-470, in the spirit of governmental cooperation, is not marking up for profit its actual costs for providing general back-office services to process the State's Express Lane tolls. E-470 is passing through to the State the State's proportional share of the E-470's toll and violations processing costs. These costs are those associated with processing the State's Express Lane tolls and toll violations. The State understands that these costs are to be born by the State in order that the transactions do not become a cost burden to E-470. Accordingly, the State will reimburse E-470 for costs incurred in processing the State's Express Lane toll transactions and violations as outlined in Section 6(B) and Exhibit C. .

A. Maximum Amount

The cumulative not-to-exceed amount which shall be reimbursed to E-470 by the State for all Task Orders issued pursuant to this Contract is $3,000,000 (three million dollars). The State's financial obligation is limited to this maximum amount and the State shall not issue Task Orders resulting in a cumulative amount in excess thereof. Increases or decreases to the not-to-exceed Contract amount set forth in this Section require a Contract amendment approved by the Parties.

B. Cost Reimbursement

The amounts and methods of cost reimbursement to E-470 for Services and Work are outlined in Exhibit C.

i. Interest

The State shall fully reimburse E-470 in accordance with each E-470 invoice within forty-five (45) days of receipt thereof if the amount invoiced appear to be accurate and

in accordance with the Contract. Uncontested amounts not reimbursed to E-470 by the State within forty-five (45) days shall bear interest on the unpaid balance beginning on the 46th day at a rate not to exceed one percent per month until paid in full; provided, however, that interest shall not accrue on unpaid amounts that are subject to a good faith dispute. E-470 shall invoice the State separately for accrued interest on delinquent amounts. The separate interest billing shall reference the delinquent reimbursement the number of days' interest to be paid and the interest rate.

ii. Available Funds-Contingency-Termination

The State is prohibited by law from making commitments beyond the term of the State's current fiscal year. Therefore, E-470's cost reimbursement beyond the State's current Fiscal Year is contingent upon the continuing availability of State appropriations as provided in the Colorado Special Provisions. Reimbursement to E-470s pursuant to this Contract shall be made only from available funds encumbered for a Task Order and the State's liability for such reimbursements shall be limited to the amount remaining of such encumbered funds. If State funds are not appropriated, or otherwise become unavailable to fund any Task Order, either E-470 or the State may terminate this Contract immediately, in whole or in part, without further liability in accordance with the provisions hereof.

iii. Erroneous Reimbursement

Reimbursements made to E-470 which the Parties agree were erroneous or otherwise in excess of the Contract's specifications, may be offset against the next reimbursement made to E-470.

C. Use of Funds

Contract Funds shall be used only for eligible fees and costs identified in a Task Order and/or in the budget for such Task Order.

7. E-470 REPORTING

E-470 shall provide daily transactional activity reports, including associated transactional revenue for the previous day's Express Lane transactions. E-470 will provide specific reporting as outlined in the relevant Task Order.

8. E-470 RECORDS

A. Maintenance

E-470 shall make, keep, maintain, and allow inspection and monitoring by the State of a complete file of all records, documents, communications, notes and other written materials, electronic media files, and communications, pertaining in any manner to the Work or the delivery of Services hereunder. E-470 shall maintain such records until the last to occur of: **(i)** a period of three years after the date this Contract expires or is sooner terminated, or **(ii)** final payment is made hereunder, or **(iii)** the resolution of any pending Contract matters, or **(iv)** if an audit is occurring, or E-470 has received notice that an audit is pending, until such audit has been completed and its findings have been resolved (collectively, the "Record Retention Period").

B. Inspection

E-470 shall permit the State, to audit, inspect or examine E-470's records related to this Contract during the Term of this Contract to assure compliance with the terms hereof or to evaluate performance hereunder.

.

9. CONFIDENTIAL INFORMATION-STATE RECORDS

E-470 and the State shall comply with the provisions on this **§9** if either Party becomes privy to confidential information in connection with its performance hereunder. Confidential information includes, but is not necessarily limited to, any state records, personnel records, and information concerning individuals. Such information shall not include information required to be disclosed pursuant to the Colorado Open Records Act, CRS §24-72-101, et seq.

A. Confidentiality

E-470 and the State shall keep all State and E-470 records and information confidential at all times and comply with all laws and regulations concerning confidentiality of information. Any request or demand by a third party for State or E-470 records and information in the possession of E-470 or the State shall be immediately forwarded to principal representative of the Party to whom the requested information relates.

B. Notification

E-470 and the State shall each notify their agent, employees, Subcontractors and assigns who may come into contact with State or E-470 records and confidential information that each is subject to the confidentiality requirements set forth herein, and shall provide each with a written explanation of such requirements before permitting them to access such records and information.

C. Use, Security, and Retention

E-470 shall follow its cyber security policy and ensure confidentiality of all State records and other confidential information wherever located.

10. INSURANCE

E-470 affirms that it maintains insurance as set forth in **Exhibit E** and agrees to maintain the same or similar insurance during the term of this Contract.

11. REMEDIES

The State, in its sole discretion, may exercise the following remedy in addition to other remedies available to it:

Withhold payment to E-470 until corrections in a specific item of E-470's Work, as described in a specific Task Order, are satisfactorily made and completed.

12. NOTICES and REPRESENTATIVES

Each individual identified below is the principal representative of the designating Party. All notices required to be given hereunder shall be hand delivered with receipt required or sent by certified or registered mail to such Party's principal representative at the address set forth below. In addition to, but not in lieu of a hard-copy notice, notice also may be sent by e-mail to the e-mail addresses, if any, set forth below. Either Party may from time to time designate by written notice substitute addresses or persons to whom such notices shall be sent. Unless otherwise provided herein, all notices shall be effective upon receipt.

A. State:

Michael Cheroutes
Director of HPTE
Colorado Department of Transportation, HQ
4201 East Arkansas Ave.
Denver, CO 80222
303-757-9607
Michael.Cheroutes@dot.state.co.us

B. E-470:

John McCuskey
Executive Director
E-470 Public Highway Authority
22470 6th Parkway, Suite 100 Aurora, Colorado 80018
jmccuskey@e-470.com

13. GOVERNMENTAL IMMUNITY

Liability for claims for injuries to persons or property arising from the negligence of the E-470 or the State of Colorado, its departments, institutions, agencies, boards, officials, and employees is controlled and limited by the provisions of the Governmental Immunity Act §24-10-101, et seq. and the risk management statutes, CRS §24-30-1501, et seq., as amended.

14. STATEWIDE CONTRACT MANAGEMENT SYSTEM

If the maximum amount payable to Contractor under this Contract is $100,000 or greater, either on the Effective Date or at anytime thereafter, this **§19** applies.

To the extent that CRS §24-102-205, §24-102-206, §24-103-601, §24-103.5-101 and §24-105-102, concerning the monitoring of vendor performance on state contracts and inclusion of contract performance information in a statewide contract management system, are applicable by their terms, E-470 agrees to abide by their terms.

15. GENERAL PROVISIONS

A. Amendment and Modification

This Contract may be amended through a Task Order or a formal amendment in writing signed by both Parties.

B. Binding Effect

All provisions herein contained, including the benefits and burdens, shall extend to and be binding upon the Parties' respective legal representatives, successors, and assigns.

C. Captions

The captions and headings in this Contract are for convenience of reference only, and shall not be used to interpret, define, or limit its provisions.

D. Counterparts

This Contract may be executed in multiple identical original counterparts, all of which shall constitute one agreement.

E. Entire Understanding

This Contract represents the complete integration of all understandings between the Parties and all prior representations and understandings, oral or written, are merged herein. Prior or contemporaneous additions, deletions, or other changes hereto shall not have any force or affect whatsoever, unless embodied herein.

F. Jurisdiction and Venue

All suits or actions related to this Contract shall be filed and proceedings held in the State of Colorado and exclusive venue shall be in the City and County of Denver.

G. Order of Precedence

The provisions of this Contract shall govern the relationship of the State and E-470. In the event of conflicts or inconsistencies between this Contract and its exhibits and attachments, including, but not limited to, those provided by E-470, such conflicts or inconsistencies shall be resolved by reference to the documents in the following order of priority:

i. The provisions of the main body of this Contract,
ii. Any Signed Task Order.
iii. Exhibit A – Statement of Services,
iv. Exhibit B – Performance Standards,
v. Exhibit C –Cost Reimbursement.

H. Severability

Provided this Contract can be executed and performance of the obligations of the Parties accomplished within its intent, the provisions hereof are severable and any provision that is declared invalid or becomes inoperable for any reason shall not affect the validity of any other provision hereof, provided that the Parties can continue to perform their obligations under this Contract in accordance with its intent.

I. Survival of Certain Contract Terms

Notwithstanding anything herein to the contrary, provisions of this Contract requiring continued performance, compliance, or effect after termination hereof, shall survive such termination and shall be enforceable by the State if E-470 fails to perform or comply as required.

J. Third Party Beneficiaries

Enforcement of this Contract and all rights and obligations hereunder are reserved solely to the Parties. Any services or benefits which third parties receive as a result of this Contract are incidental to the Contract, and do not create any rights for such third parties.

K. Waiver

Waiver of any breach under a term, provision, or requirement of this Contract, or any right or remedy hereunder, whether explicitly or by lack of enforcement, shall not be construed or deemed as a waiver of any subsequent breach of such term, provision or requirement, or of any other term, provision, or requirement.

16. COLORADO SPECIAL PROVISIONS

The Special Provisions apply to all Contracts except where noted in italics.

A. CONTROLLER'S APPROVAL. CRS §24-30-202 (1).

This Contract shall not be valid until it has been approved by the Colorado State Controller or designee.

B. FUND AVAILABILITY. CRS §24-30-202(5.5).

Financial obligations of the State payable after the current fiscal year are contingent upon funds for that purpose being appropriated, budgeted, and otherwise made available.

C. GOVERNMENTAL IMMUNITY.

No term or condition of this Contract shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protections, or other provisions, of the Colorado Governmental Immunity Act, CRS §24-10-101 et seq., or the Federal Tort Claims Act, 28 U.S.C. §§1346(b) and 2671 et seq., as applicable now or hereafter amended.

D. INDEPENDENT CONTRACTOR

E-470 shall perform its duties hereunder as an independent contractor. Neither E-470 nor any agent, employee or contractor of E-470 shall be deemed to be an agent, employee or contractor of the State. E-470 and its employees, contractors and agents are not entitled to unemployment insurance or workers compensation benefits through the State and the State shall not pay for or otherwise provide such coverage for E-470 or any of its agents or employees. Unemployment insurance benefits shall be available to Contractor and its employees and agents only if such coverage is made available by Contractor or a third party. Contractor shall pay when due all applicable employment taxes and income taxes and local head taxes incurred pursuant to this Contract. Contractor shall not have authorization, express or implied, to bind the State to any contract, liability or understanding, except as expressly set forth herein. Contractor shall **(a)** provide and keep in force workers' compensation and unemployment compensation insurance in the amounts required by law, **(b)** provide proof thereof when requested by the State, and **(c)** be solely responsible for its acts and those of its employees and agents.

E. COMPLIANCE WITH LAW.

E-470 shall strictly comply with all applicable federal and State laws, rules, and regulations in effect or hereafter established, including, without limitation, laws applicable to discrimination and unfair employment practices.

F. CHOICE OF LAW.

Colorado law, and rules and regulations issued pursuant thereto, shall be applied in the interpretation, execution, and enforcement of this Contract. Any provision included or incorporated herein by reference which conflicts with said laws, rules, and regulations shall be null and void. Any provision incorporated herein by reference which purports to negate this or any other Special Provision in whole or in part shall not be valid or enforceable or available in any action at law, whether by way of complaint, defense, or otherwise. Any provision rendered null and void by the operation of this provision shall not invalidate the remainder of this Contract, to the extent capable of execution.

G. BINDING ARBITRATION PROHIBITED.

The State of Colorado does not agree to binding arbitration by any extra-judicial body or person. Any provision to the contrary in this contact or incorporated herein by reference shall be null and void.

H. SOFTWARE PIRACY PROHIBITION. Governor's Executive Order D 002 00.

State or other public funds payable under this Contract shall not be used for the acquisition, operation, or maintenance of computer software in violation of federal copyright laws or applicable licensing restrictions. E-470 hereby certifies and warrants that, during the term of this Contract and any extensions, E-470 has and shall maintain in place appropriate systems and controls to prevent such improper use of public funds. If the State determines that E-470 is in violation of this provision, the State may exercise any remedy available at law or in equity or under this Contract, including, without limitation, immediate termination of this Contract and any remedy consistent with federal copyright laws or applicable licensing restrictions.

I. EMPLOYEE FINANCIAL INTEREST. CRS §§24-18-201 and 24-50-507.

The signatories aver that to their knowledge, no employee of the State has any personal or beneficial interest whatsoever in the service or property described in this Contract. E-470 has no interest and shall not acquire any interest, direct or indirect, that would conflict in any manner or degree with the performance of E-470's services and E-470 shall not employ any person having such known interests.

J. VENDOR OFFSET. CRS §§24-30-202 (1) and 24-30-202.4.

[***Not Applicable to intergovernmental agreements***] Subject to CRS §24-30-202.4 (3.5), the State Controller may withhold payment under the State's vendor offset intercept system for debts owed to State agencies for: (a) unpaid child support debts or child support arrearages; (b) unpaid balances of tax, accrued interest, or other charges specified in CRS §39-21-101, et seq.; (c) unpaid loans due to the Student Loan Division of the Department of Higher Education; (d) amounts required to be paid to the Unemployment Compensation Fund; and (e) other unpaid debts owing to the State as a result of final agency determination or judicial action.

K. PUBLIC CONTRACTS FOR SERVICES. CRS §8-17.5-101.

[Not Applicable to Agreements relating to the offer, issuance, or sale of securities, investment advisory services or fund management services, sponsored projects, intergovernmental Agreements, or information technology services or products and services] Contractor certifies, warrants, and agrees that it does not knowingly employ or contract with an illegal alien who shall perform work under this Contract and shall confirm the employment eligibility of all employees who are newly hired for employment in the United States to perform work under this Contract, through participation in the E-Verify Program or the State program established pursuant to CRS §8-17.5-102(5)(c), Contractor shall not knowingly employ or contract with an illegal alien to perform work under this Contract or enter into a contract with a subcontractor that fails to certify to Contractor that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Contract. Contractor (a) shall not use E-Verify Program or State program procedures to undertake pre-employment screening of job applicants while this Contract is being performed, (b) shall notify the subcontractor and the contracting State agency within three days if Contractor has actual knowledge that a subcontractor is employing or contracting with an illegal alien for work under this Contract, (c) shall terminate the subcontract if a subcontractor does not stop employing or contracting with the illegal alien within three days of receiving the notice, and (d) shall comply with reasonable requests made in the course of an investigation, undertaken pursuant to CRS §8-17.5-102(5), by the Colorado Department of Labor and Employment. If Contractor participates in the State program, Contractor shall deliver to the contracting State agency, Institution of Higher Education or political subdivision, a written, notarized affirmation, affirming that Contractor

has examined the legal work status of such employee, and shall comply with all of the other requirements of the State program. If Contractor fails to comply with any requirement of this provision or CRS §8-17.5-101 et seq., the contracting State agency, institution of higher education or political subdivision may terminate this Contract for breach and, if so terminated, Contractor shall be liable for damages.

L. PUBLIC CONTRACTS WITH NATURAL PERSONS. CRS §24-76.5-101. E-470, if a natural person eighteen (18) years of age or older, hereby swears and affirms under penalty of perjury that he or she **(a)** is a citizen or otherwise lawfully present in the United States pursuant to federal law, **(b)** shall comply with the provisions of CRS §24-76.5-101 et seq., and **(c)** has produced one form of identification required by CRS §24-76.5-103 prior to the effective date of this Contract.

SPs Effective 1/1/09

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17. SIGNATURE PAGE

THE PARTIES HERETO HAVE EXECUTED THIS CONTRACT

*** Person(s) signing for E-470 hereby swear and affirm that they are authorized to act on E-470's behalf and acknowledge that the State is relying on their representation to that effect.**

E-470 PUBLIC HIGHWAY AUTHORITY

By: John D McCarthy
Name of Authorized Individual

Executive Director
Official Title of Authorized Individual

*Signature

Date: 6-21-11

STATE OF COLORADO
John W. Hickenlooper GOVERNOR
Department of Colorado

By Michael Cheroutes, HPTE Director

Date: 6/23/11

APPROVED AS TO FORM:

ICENOGLE | SEAVER | POGUE
A Professional Corporation

Tamara R. Seaver
General Counsel

Director of Finance

DATE APPROVED BY THE BOARD OF DIRECTORS: June 9, 2011

LEGAL REVIEW
John W. Suthers, Attorney General

By: Kathryn E. Young
Signature - Assistant Attorney General

Date: 6-28-11

ALL CONTRACTS REQUIRE APPROVAL by the STATE CONTROLLER

CRS §24-30-202 requires the State Controller to approve all State Contracts. This Contract is not valid until signed and dated below by the State Controller or delegate. E-470 is not authorized to begin performance until such time. If E-470 begins performing prior thereto, the State of Colorado is not obligated to pay E-470 for such performance or for any work product and/or services provided hereunder.

STATE CONTROLLER
David J. McDermott, CPA

By: Robert Jaros
Colorado Department of Transportation

Date: 6-29-11

Exhibit A
Scope of Services and Work

As applicable, all Services and work will be performed according to the business rules for toll charges, violations and operational hours for the Express Lanes mutually agreed to by the Parties.

Services:

1) General

The E-470 Public Highway Authority (E-470) will maintain and operate the Colorado High Performance Transportation Enterprise's (HPTE) Express Lanes in locations described in specific Task Orders issued under the Contract as well as provide and manage customer account establishment billing functions and violation processing using E-470's Toll Collection System (TCS), all subject to reimbursement from HPTE in accordance with the Contract. E-470 may perform the all Services directly or through its operations contractor.

2) Management

a) E-470 will employ (directly or through its contractor) management staff to oversee all obligations of this Statement of Services and Work.
b) E-470 will manage and maintain the TCS software used for electronic toll collection and violation processing in the Express Lanes.

3) Lane Maintenance

E-470 will employ (directly or through its operations contractor) a toll system technician who will be responsible for maintaining the lane equipment and system hardware needed to operate the electronic toll collection equipment in HPTE's Express Lanes. The costs of all such equipment, including but not limited to: vehicles, hand tools, uniforms, insurance, fuel, lane equipment, rental equipment and similar expenses will be billed to HPTE in accordance with the Contract.

The Technician will:

- Perform regular maintenance inspections;
- Perform preventative maintenance functions;
- Repair equipment problems within his technical skills level;
- Coordinate the repair solution for other equipment problems;
- Notify HPTE and E-470 when new equipment is needed;
- Price new equipment;
- Procure new equipment using the Equipment Procedures;
- Install new equipment as necessary;
- Coordinate lane closures and repair functions with CDOT;
- Notify HPTE and E-470 of incidents requiring a toll adjustment for customers;
- Perform emergency on-call duties.

4) Customer Account Maintenance

E-470 will maintain all EXpressToll and License Plate Toll accounts in its Customer Service Center. Customers using the Express Lanes will be charged the proper toll via their account. Account data will be used by Customer Service Representatives who will utilize the TCS software. Job functions include:

- Working with customers on the phone, in person or via the internet regarding new and existing account updates, payments, violations and other information;
- Processing customer requests for new or additional transponders and transponder accessories;
- Processing mail and e-mail from customers;
- Payment processing.

No data from a customer's account will be released except under E-470's policy regarding criminal investigation or court ordered information.

5) Transaction Processing

E-470 will maintain and operate the HPTE's Express Lanes on I-25 and other locations designated by Task Orders as well as provide and manage customer account establishment, billing functions and violation processing using E-470's TCS. During all phases of these services may be provided by, E-470 directly or through is operations contractor. More specifically:

a) EXpressToll Transactions

E-470, using toll collection equipment installed at the Express Lanes, will capture active transponders in vehicles and post the transactions to valid EXpressToll accounts in the TCS. Payment to HPTE will occur the following business day after the transaction has been posted to a valid EXpressToll account. Business rules affecting this process may be modified, changed and improved from time to time by E-470. HPTE will be notified of these changes.

b) License Plate Toll Transactions

E-470, using toll collection equipment installed at the Express Lanes, will capture photographs of license plates when a valid transponder is not detected in a vehicle, the image will be reviewed either electronically using optical character recognition (OCR) or by a person. If the license plate is not already associated with an account in the TCS, registered owner information will be obtained and an account will be established. Once the account is established, or if there was already an existing account, the transactions will be posted to the account in the TCS. License Plate Toll transactions will be billed once a month on the anniversary date (date of establishment) of the account. Payment to HPTE will occur the following business day after payment is posted to an LPT account for invoiced transactions. Business rules affecting this process may be modified, changed and improved from time to time by E-470. HPTE will be notified of these changes.

c) Hybrid Vehicle Lane Usage

E-470, using its TCS program installed at the Express Lanes, will capture and post lane usage information for hybrid vehicles equipped with transponders and traveling in the Express Lanes.

d) Non-Revenue Transaction Posting

E-470, using its TCS program installed at the Express Lanes, will capture and post all valid non-revenue vehicles. Business rules affecting this process may be modified, changed and improved from time to time. HPTE will be notified of these changes by E-470.

6) Violation Processing

E-470 will process all toll violations that occur in the HPTE Express Lanes. Transactions that are not paid after the first or second License Plate Toll bill and have not responded to collections efforts for 90-days will become violations. These transactions will be aggregated and sent on a civil penalty notice in accordance with applicable state law.

Violations not resolved within the allowed time frame will be further processed for legal action through the administrative hearing process discussed below.

7) Funds Transfer to HPTE

E-470 will transfer funds to HPTE only for those transactions that have been posted to a customer's EXpressToll account or have a valid License Plate Toll payment. Transactions which E-470 is not able to post to an EXpressToll account will not be paid to HPTE by E-470. Automated clearing house (ACH) transfers will be made for those previous day's collections not already paid. All effort will be made to make payments on each business day. When payment cannot be made on a regular business day, E-470 shall notify HPTE and provide the circumstances for the delay.

Violation payments will be paid to HPTE by means of (ACH) transfer only when funds are received by E-470 for such violations in the Express Lanes. E-470 shall not be responsible for payment to HPTE for violation fees and tolls that are billed to the violator, but not paid.

8) Reimbursement

E-470 shall be reimbursed for all of the costs assocated with the Services. E-470 shall bill reimburseable sums to HPTE monthly in accordance with the Contract. HPTE's Reimbursement obligation will be a direct cost pass-through calculated by formula, based upon E-470's costs associated with the Services described in Exhibit C. E-470's cost formulas may, from time-to-time, be adjusted by E-470 based on changes in E-470's actual costs. E-470's operations contractor's overhead and profit will be included in all cost allocations as such are components of cost to E-470. E-470 Services may include charges for

personnel involved in the Express Lane support operation. All of E-470's invoices will be supported with such back-up material as is directed in the relevent Task Order. Management fees will be assessed in proportion to EXpressToll Service Center usage by E-470, HPTE, the Northwest Parkway and other future users. HPTE shall not unreasonably withhold payment to E-470, as provided in the Contract. Reimbursement for services shall include:

a) Back Office Service (image processing, bills mailed, EXpressToll Account Usage, and Customer service.
b) Toll System Technician

9) Administrative Law Court

E-470 shall establish, organize and operate an administrative adjudicative system for the determination of alleged toll evasion violations in the Express Lanes. Such system shall be consistent with statutory requirements, constitutional protections of due process, the PHA Law, and such rules and policies as may be adopted by E-470.

E-470 shall retain one or more impartial administrative hearing officers which may be state-employed administrative law judges or independent administrative law judges who will conduct hearings and render decisions based upon evidence presented at the hearings. E-470 shall establish and maintain hearing facilities in the nature of a courtroom(s) for the conduct of toll enforcement hearings.

E-470 shall recover the costs of administering and operating its toll evasion and administrative adjudication process by assessing fees set out in rules and policies as adopted by E-470's Board. HPTE shall also reimburse E-470 for HPTE's proportional share of administrating the administrative court process, with such reimbursement provided as described in Exhibit C.

10) Audit and Special Requests for Data

HPTE may audit E-470's Toll Collection System functions and reports performed under this Contract. E-470 may bill HPTE for all research requests regarding special or historical data or information related to any HPTE audit request.

Work:

1) Equipment and Software Changes on Existing Facilities

HPTE shall pay for equipment and software changes to existing facilities in accordance with the following steps:

a) When equipment is needed, either party may notify the other in writing;
b) When new equipment or a software change is required, the initiating party will furnish the cost estimate for the material and installation to the other party;

c) If HPTE approves of the equipment procurement and installation, HPTE will authorize the equipment purchase or installation through the use of a Task Order.
d) Installation costs will be paid as described in Exhibit C.

2) Implementation and Installation

E-470 will install and implement toll collection equipment on any new HOV or managed lane facility for HPTE. Each implementation and installation will be authorized by HPTE through the use of a Task Order. Costs for this work will be applied as described in Exhibit C.

3) Business Rule Changes

Business rules for toll charges, violations and operational hours for the Express Lanes are established by HPTE with concurrence by E-470 and all as relative to the existing TCS capabilities. HPTE may make special requests applicable solely to the HPTE lanes that may require specialized code or software changes. These requests should be submitted to E-470 for approval and, if approved, E-470 will develop and implement these changes. HPTE will reimburse to E-470 all costs associated with the development and implemenation of these changes.

Exhibit B
Performance Standards

Rating possibilities are "Above Standard," "Standard," or "Below Standard."

1) Quality Measures:

   E-470 shall provide quality Services pursuant to terms of this Contract.

2) Timeliness Measures:

   E-470 shall submit reports in a timely manner as set forth in each Task Order.

3) Pricing Measures:

   E-470 shall adhere to the pricing agreed upon in the Contract.

4) Business Relationship Measures:

   E-470 shall maintain a consistently professional attitude and open lines of communication.

5) Specific Requirements Included in Scope of Work:

   E-470 shall maintain all requirements as outlined in the Scope of Services and Work, **Exhibit A**.

Exhibit C
Cost Reimbursement

Reimbursement for Services included in Task Orders:

1) Back Office Service

HPTE's Reimbursement rate will be a direct cost pass-through from E-470's operations contractor based upon the four back office functions (image processing, bills mailed, account usage and customer service). E-470's operations contractor's management fees, overhead and profit will be included in all cost allocations as such are components of cost to E-470. The rate will be calculated annually on June 1st for the fiscal year starting annually on July 1st. It will be based on actual monthly costs for the previous 12 month period, beginning in June ending in May, for the four areas of back office services.

a) Image Processing

E-470 will combine all costs associated with image review for each month and divide that sum by the total number of images processed during that month to come up with a per image cost for that month. A twelve month average will be calculated to determine the amount charged per image processed for the upcoming fiscal year. Each image processed during the fiscal period for HPTE will be charged the per image rate. This amount will be included on a monthly invoice to HPTE.

b) Bills Mailed

E-470 will combine all costs associated with mailing bills for each month and divide that sum by the total number of bills mailed during that month to come up with a per bill cost for that month. A twelve month average will be calculated to determine the amount charged per bill mailed for the upcoming fiscal year. Each bill mailed during the fiscal period that contains only HPTE transactions will pay 100% of the per bill cost, if there are transactions for more than one agency HPTE will be charged 50% of the per bill rate. This amount will be included on a monthly invoice to HPTE.

c) EXpressToll Account Usage

E-470 will combine all costs associated to account usage for each month and divide that sum by the total number of active EXpressToll accounts in the TCS during that month to come up with an EXpressToll account usage charge for that month. A twelve month average will be calculated to determine the amount charged per EXpressToll account used for the upcoming fiscal year. Each EXpressToll account used during the fiscal period that contains only HPTE transactions will pay 100% of the EXpressToll account usage rate, if there are transactions for more than one agency HPTE will be charged 50% of the EXpressToll account usage rate. This amount will be included on a monthly invoice to HPTE.

d) Customer Service

E-470 will combine all costs associated to customer service for each month and divide that sum by the total number of accounts with activity during that month to come up with the customer service charge for that month. A twelve month average will be calculated to determine the amount charged for customer service for the upcoming fiscal year. Each account used during the fiscal period that contains only HPTE transactions will pay 100% of the customer service rate, if there are transactions for more than one agency HPTE will be charged 50% of the customer service rate. This amount will be included on a monthly invoice to HPTE.

2) Toll System Technician

All costs associated with work performed by the toll system technician will be reimbursed to E-470 by HPTE. Labor costs will include those paid to an E-470 employee or a subcontractor of E-470 to perform the work of the toll system technician. They will include salary and burden for the technician. Additionally, the costs of all such equipment, including but not limited to: vehicles, hand tools, uniforms, insurance, fuel, lane equipment, rental equipment and similar expenses will be billed to HPTE each month.

Reimbursement for Work included in Task Orders:

1) Equipment and Software Changes

a) Equipment

E-470 will request reimbursement for all costs associated with procuring and installing new equipment. These costs include but shall not be limited to:

i) Costs paid by E-470 for new equipment (including all costs associated with shipping and handling)
ii) Labor and burden for E-470 employees based on hours worked on the HPTE job
iii) Equipment rental
iv) Miscellaneous parts and supplies for installation
v) Any other costs directly associated with procurement and installation

b) Software Changes

E-470 will request reimbursement for all costs associated with developing and implementing software changes. These costs include but shall not be limited to:

i) Requirements gathering
ii) Design
iii) Development, testing and deployment
iv) Any other costs directly associated with software changes

Exhibit D
Sample Task Order

Date:	State Fiscal Year:	Task Order Letter #	Routing #

In accordance with Section Section Ref of the original Contract routing number ROUTING # between the State of Colorado, Department of Transportation, and E-470 name beginning _____ and ending on _____, the provisions of the Contract and any amendments thereto affected by this Task Order are modified as follows:

1) **Task Order Description.** E-470 shall perform the name of task as follows:

_____

_____

2) **Reimbursement Amount.** The maximum amount reimbursable to E-470 by the State for performance of this Task Order is _____.

3) **Performance Period.** E-470 shall complete its obligations under this Task Order by_____.

4) **Effective Date.** The effective date hereof is upon approval of the State Controller.

THE PARTIES HERETO HAVE EXECUTED THIS TASK ORDER

*** Persons signing for E-470 hereby swear and affirm that they are authorized to act on E-470's behalf and acknowledge that the State is relying on their representations to that effect.**

E-470	STATE OF COLORADO John W. Hickenlooper GOVERNOR
By: _____ Name of Authorized Individual	Department of Transportation
Title: _____ Official Title of Authorized Individual	By: _____ (For) , Donald E. Hunt, Executive Director
	Date: _____

ALL CONTRACTS REQUIRE APPROVAL BY THE STATE CONTROLLER

CRS §24-30-202 requires the State Controller to approve all State Contracts. This Contract is not valid until signed and dated below by the State Controller or delegate. E-470 is not authorized to begin performance until such time. If E-470 begins performing prior thereto, the State of Colorado is not obligated to reimburse E-470 for any Work performed and/or Services provided hereunder.

STATE CONTROLLER
David J. McDermott, CPA

By: _____
Department of Transportation

Date: _____

Exhibit E
Insurance

OP ID: BD

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 01/19/11

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Olympus Insurance Agency PO Box 65608 Salt Lake City, UT 84165-0608 F. David Child, Jr. 801-486-1373 801-485-6943	CONTACT NAME: PHONE (A/C, No, Ext): FAX (A/C, No): E-MAIL ADDRESS: PRODUCER CUSTOMER ID #: E470060
INSURED E 470 Public Hwy Authority 22470 East 6th Parkway #100 Aurora, CO 80018	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A: Scottsdale Indemnity INSURER B: National Casualty Company INSURER C: Illinois Union Insurance Co. INSURER D: INSURER E: INSURER F:

COVERAGES — CERTIFICATE NUMBER: — REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	GENERAL LIABILITY X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE / OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY / PRO-JECT / LOC			PEI0005638	12/31/10	12/31/11	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG Emp Ben.	$ 1,000,000 $ 100,000 $ 5,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $ 1,000,000
A	AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS X HIRED AUTOS X NON-OWNED AUTOS			WAI0002386	12/31/10	12/31/11	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
B	UMBRELLA LIAB / OCCUR EXCESS LIAB / CLAIMS-MADE DEDUCTIBLE X RETENTION $ 10,000			UMO0033030	12/31/10	12/31/11	EACH OCCURRENCE AGGREGATE	$ 10,000,000 $ 10,000,000
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N N/A If yes, describe under DESCRIPTION OF OPERATIONS below						WC STATU-TORY LIMITS / OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ $ $
C	Privacy/Network SL			G24872038 002	12/31/10	12/31/11	Occ. Agg	1,000,000 5,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER	CANCELLATION
PROOFOF Proof of Insurance	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE F. David Child, Jr.

ACORD 25 (2009/09) — The ACORD name and logo are registered marks of ACORD

APPENDIX F

Risk Management Plan

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US 36 Managed Lanes Project
Phase 1 - US 36 Reconstruction
(Federal to Interlocken Loop)

Risk Management Plan

Prepared by:
the Colorado Department of Transportation
in Consultation with:
the Regional Transportation District
and the Federal Highway Administration

February 29, 2012

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1. PURPOSE

This document describes how Risk Management will be structured and performed on this project. The risk management plan includes methodology, roles and responsibilities, budgeting, timing, risk categories, definitions of risk probability and impact, probability and impact matrix, reporting formats, and tracking. The Caltrans Project Risk Management Handbook will be utilized as primary reference and guideline.

Approved By:

John Schwab, Project Director — Date 12/29/12

2. INTRODUCTION

The US 36 Managed Lane/BRT Project (Project) was developed by the Colorado High Performance Transportation Enterprise (HPTE), the TIFIA sponsor, in partnership with the Colorado Department of Transportation (CDOT) and the Regional Transportation District (RTD). The HPTE is a government-owned business that operates as a division of CDOT. The Project is part of RTD's FasTracks Program, a multibillion dollar comprehensive transit expansion plan, in cooperation with Denver Regional Council of Governments (DRCOG); Colorado Bridge Enterprise (CBE); City and County of Broomfield; the Cities of Westminster, Boulder, and Louisville; Town of Superior; Boulder County; Adams County; and BNSF Railway (BNSF).

CDOT is managing this Project under a Design-Build delivery method.

The Design-Build, multimodal, toll-integrated Project includes the following elements:

- Reconstruction of approximately 10.1 miles of the US 36 mainline.
- Reconstruction of existing pavement, including widening to accommodate a new buffer-separated Express Lane in each direction of US 36 and12-foot-wide shoulders.
- Construction of retaining walls and sound walls.
- Replacement of the Wadsworth Parkway, Wadsworth Boulevard, and Lowell Boulevard bridges.
- Reconstruction of portions of the Wadsworth Parkway interchange.
- Installation of Intelligent Transportation Systems for tolling, transit information, and incident management. Toll systems installation and integration will be provided by others.
- Construction of portions of a commuter bikeway along the reconstructed section of the US 36 Corridor to provide a continuous commuter bikeway by connecting to or using existing facilities.

3. RISK MANAGEMENT PLAN

The Design-Build process is based on risk assessment, assignment, and allocation. Understanding and allocating risk is necessary to determine ownership and responsibility for individual tasks. Design-Build uses performance provisions that allow CDOT to assign and allocate risk to the party most capable to manage the risk. Table 1 defines the allocation of project risk between CDOT and the Design-Build contractor.

TABLE 1: Allocation of Risk

DESIGN-BUILD RISKS		OWNER	DESIGN-BUILDER
DESIGN			
1	Definition of scope	**X**	
2	Project definition	**X**	
3	Establishing performance requirement		**X**
4	Preliminary survey/base map	**X**	
5	Geotechnical investigation-based on preliminary design in RFP	**X**	

6	Geotechnical investigation-based on proposal		**X**
7	Establish/define initial subsurface conditions	**X**	
8	Initial project geotechnical analysis/report-based on preliminary design	**X**	
9	Proposal-specific geotechnical analysis/report		**X**
10	Plan conformance with regulations/guidelines/RFP/proposal		**X**
11	Plan accuracy		**X**
12	Design criteria	**X**	
13	Conformance to design criteria		**X**
14	Design review process	**X**	**X**
15	Owner review time	**X**	
16	Design quality control		**X**
17	Design quality assurance		**X**
18	Changes in scope	**X**	
19	Constructability of design		**X**
20	Efficacy of design		**X**
21	Contaminated materials	**X**	**X**
RIGHT-OF-WAY as Identified in the RFP			
22	Establishing ROW limits	**X**	
23	Access hearings/findings and order	**X**	
24	ROW plan approval	**X**	
25	Appraisal/review	**X**	
26	Establish just compensation	**X**	
27	Acquire right-of-way	**X**	
28	Construction easements	**NA**	
29	Permanent easements	**X**	
30	Condemnation	**X**	
31	Complete relocation	**X**	
32	Take possession	**X**	
33	Certification	**X**	
34	Additional ROW purchase due to alignment change	**NA**	

RIGHT-OF-WAY –Additional ROW required by the Contractor			
35	Establishing ROW limits		**X**
36	Access hearings/findings and order		**X**
37	ROW plan approval	**X**	
38	Appraisal/review		**X**
39	Establish just compensation		**X**
40	Acquire right-of-way		**X**
41	Construction easements		**X**
42	Permanent easements		**X**
43	Condemnation	**X**	
44	Complete relocation		**X**
45	Take possession		**X**
46	Certification		**X**
47	Additional ROW purchase due to alignment change		**X**
ENVIRONMENTAL			
48	Define initial project environmental impacts	**X**	
49	Define parameters for impacts	**X**	
50	Environmental investigation	**X**	
51	Environmental permits		**X**
52	Environmental mitigation	**X**	**X**
53	Environmental compliance		**X**
54	Known hazardous waste-mitigation		**NA**
55	Unknown/undefined hazardous waste-mitigation	**X**	**X**
56	Obtain environmental approvals-construction related		**X**
UTILITY RELOCATION, LOCAL AGENCY PERMIT, THIRD PARTY, PUBLIC			
57	Identification of initial local agency impacts	**X**	
58	Obtaining initial local agency permits		**X**
59	Establishing initial local agency requirements		**X**
60	Establishing final/actual local agency impacts		**X**

61	Modifications to existing local agency permits		**X**
62	Identification of initial utility impacts in RFP	**X**	
63	Identification of initial utility impacts from preliminary design		**X**
64	Establish initial utility locations/conditions	**X**	
65	Defining required utility relocations in RFP	**X**	
66	Defining required utility relocations from preliminary design	**X**	
67	Relocation of utilities before contract	**NA**	
68	Relocation of utilities under agreement during contract		**X**
69	Execute agreement with private utility	**X**	
70	Executed agreement with public utility	**X**	
71	Damage to utilities under construction		**X**
72	Payment to utility owners		**X**
73	Verification of utility locations/conditions		**X**
74	Coordination with utility relocation efforts during contract		**X**
75	Unforeseen delays due to utility owner and third party		**X**
76	Utility/third-party delays resulting from proposal/modified design		**X**
77	Betterment to utility		**X**
78	Other work/coordination		**X**
79	Third-party agreements (Federal, local, private, etc.)	**X**	
80	Coordinating with third parties under agreement		**X**
81	Coordination/collection for third-party betterments		**X**
82	Coordination with other projects		**X**
83	Coordination with adjacent property owners		**X**
84	Performance of utility work		**X**

85	Coordinating with other government agencies (FHWA, etc.)	**X**	**X**
86	Community relations	**X**	**X**
87	Public safety	**X**	**X**
CONSTRUCTION			
88	Disadvantaged business enterprise compliance		**X**
89	Safety/safety QA		**X**
90	Construction quality/workmanship		**X**
91	Schedule		**X**
92	Materials quality		**X**
93	Materials documentation		**X**
94	Material availability		**X**
95	Initial performance requirements of QA plan		**X**
96	Final construction/materials QC/QA plan		**X**
97	Construction/materials QA		**X**
98	Construction QC		**X**
99	Construction QA procedural compliance auditing		**X**
100	Construction independent assurance (IA) testing/inspection	**X**	
101	Construction staking		**X**
102	Erosion control		**X**
103	Spill prevention		**X**
104	Accidents within work zone/liability		**X**
105	Third-party damages		**X**
106	Operations and maintenance during construction		**X**
107	Maintenance under construction-new features		**X**
108	Maintenance under construction-existing features		**X**
109	Extraordinary maintenance		**X**
110	Maintenance of traffic		**X**
111	Damage to utilities under construction		**X**
112	Falsework		**X**

113	Shop drawings		X
114	Equipment failure/breakdown		X
115	Work methods		X
116	Early construction/at-risk construction		X
117	Community relations	X	X
118	Performance of defined mitigation measures		X
119	Warranty		X
FORCE MAJEURE/ACTS OF GOD			
120	Strikes/labor disputes-onsite labor		X
121	Ordinary weather condition		X
122	Extraordinary weather condition	X	
123	Tornado/earthquake	X	
124	Epidemic, terrorism, rebellion, war, riot, sabotage	X	
125	Archaeological, paleontological discovery	X	X
126	Suspension of any environmental approval	X	
127	Changes in law	X	
128	Lawsuit against project	X	
129	Storm/flooding		X
130	Fire or other physical damage		X
DIFFERING SITE CONDITIONS/CHANGED CONDITIONS			
131	Changed conditions	X	X
132	Differing site conditions	X	X
COMPLETION AND WARRANTY			
133	Establishment/definition of any risk pool		X
134	Long-term ownership/final responsibility		X
135	Insurance		X

4. ROLES AND RESPONSIBILITIES

1) PROJECT DIRECTOR RESPONSIBILITIES INCLUDE:

- Incorporate the resources and time required to execute the Risk Management Plan in the project budget and schedule

- Develop, distribute and implement this Risk Management Plan
- Develop and update the Risk Register with the support of the Project Team and incorporate it into the work plan
- Coordinate with the risk owners to monitor risks and implement risk response strategies

2) PROJECT MANAGER RESPONSIBILITIES INCLUDE:

- Support the Project Manager in developing and updating the Risk Management Plan and the Risk Register
- Maintain updates to the Risk Management Plan and the Risk Register

3) PROJECT TEAM RESPONSIBILITIES INCLUDE:

- Identify the risk and describe it
- Assess the probability that a risk will occur and specify the criteria used to assess the probability
- Assess the impact of risks on project cost, time, scope, and quality objectives, and specify the criteria used to assess the impact
- Help identify the risk owners and assist in developing the risk response strategies (Project Team members may be assigned as "Risk Owner")
- Perform the risk response steps assigned
- Assist the PM in activities associated with Risk Monitoring and Control

4) RISK OWNER RESPONSIBILITIES INCLUDE:

- Develop and/or update the assigned risk response strategy
- Monitor the risk assigned and inform PM of any threats or opportunities to the project. This includes monitoring the risk trigger and informing the PM, if the risk becomes a real event.

Risks will be discussed and evaluated during the monthly Progress Status Meetings required per the contract. Risk will also be evaluated throughout the life of the project by CDOT personnel.

If needed, the Matrix will be updated based on these meetings. The Project Director will review all changes to the Risk Matrix and direct project personnel as to the proper response.

5. FHWA COST ESTIMATE REVIEW

Prior to the Record of Decision, CDOT participated in an FHWA Cost Estimate Review. The subject of this review was primarily the first phase of the US 36 improvements described in the Final Environmental Impact Statement. The US 36 Managed Lanes Project is the first project which will be constructed under the umbrella of the Record of Decision published in December of 2009, and includes only a portion of the improvements cleared in the ROD.

During the CER, FHWA and CDOT identified threats and opportunities as they pertained to the improvements delineated in the ROD. Table 2 lists the threats and opportunities identified and mitigation measures for each.

TABLE 2: Threats and Opportunities identified during FHWA CER

THREATS AND OPPORTUNITIES IDENTIFIED DURING US 36 COST ESTIMATE REVIEW		
	THREATS	
1	Time	CDOT has significantly accelerated the schedule ahead of that anticipated in the CER
2	Funding	CDOT has pursued and obtained non-traditional funding for this project, including TIGER grants, TIFIA loans, and contributions from Local Agencies and RTD.
3	Scheduling and Phasing	See 1 above
4	Sizing of Contracts will Affect Competition	CDOT maximized the size of the project with available resources to take advantage of economies of scale during construction
5	Potential Environmental Regulation Change	By accelerating the schedule, CDOT has minimized the probability of extensive changes in Environmental regulations occurring during this project.
6	Utilities	Prior to the RFP, CDOT conducted and extensive survey to identify existing utilities and project impacts on the utilities.

7	Market Conditions (Other Major Construction Projects)	By accelerating the schedule, CDOT has avoided conflicts with other Major Highway projects expected during the life of the ROD(North I-25, I-70 East and West)
8	• Material Availability & Prices	Due to the short term nature of this project, CDOT does not expect this to be an appreciable risk
9	ROW Cost Changes due to Growth & Development in Corridor	This risk has been mitigated by refining the EIS design and eliminating many of the previously anticipated ROW impact. The accelerated schedule also allows CDOT to acquire the properties prior to development.
10	Viability of Project over 50+ years	This project enhances the viability of construction the EIS improvements by construction this Phase to accommodate Ultimate Condition and demonstrating the benefits of the Managed Lane concept in the corridor.
	OPPORTUNITIES	
11	Time	See 1 above
12	Scheduling & Packaging	NA
13	Project Delivery Methods	CDOT is employing the Design Build delivery method to maximize efficiency and accelerated project delivery
14	Advance Right of Way Purchase	CDOT will purchase ROW identified the RFP prior to construction on that ROW. CDOT is purchasing all ROW required for Ultimate storm water detention facilities at this time.

15	Practical Design	CDOT believe the Design Build process inherently include Practical Design elements.
16	Context Sensitive Solutions	Design will include consideration of CSS
17	Interchange Options could Reduce Phase 1	CDOT includes Wadsworth Interchange in the Basic Configuration and the Sheridan Interchange as an Additional Requested Element

6. RISK MATRIX

CDOT developed the Project's Risk Matrix and will use it to identify, compare, and evaluate risk allocation over the life of the Project. As the Project nears Notice to Proceed, CDOT and RTD will further develop the Risk Matrix based on Industry Reviews into a Risk Management Plan that will fully delineate anticipated Risks and Risk Controls.

The CDOT Project Manager and the Contractor identify the parties responsible for developing a risk mitigation plan to address the risk. The periodic reviews ensure that the responsible party is updating the plan until the potential risk has been fully mitigated.

Risks are removed from the matrix when:

The risk is so insignificant it no longer is worthy of monitoring

The identified risk has occurred and been successfully resolved.

CDOT adds a risk to the matrix when:

. A risk is identified that will adversely impact the success of the project

An opportunity has been identified that would positively impact the success of the project.

The Risk Matrix is included in Table 3. The Risk Matrix:.

- Categorizes and prioritizes each risk.
- Determines the likelihood of the risks occurring.
- Identify the impact on the Project if risk does occur.
- Identifies mitigation measures to lessen the risk.

Table 3: US 36 Management Lanes Project Risk Matrix

RISK A SSESSMENT
Low (Green)
Minimum impact. Minimum oversight needed
Moderate (Yellow)
Some disruption. Additional management attention may be needed.
High (Red)
Unacceptable. Major disruption likely. Priority management attention required

Assessment Guide

Probability \ Impact	1	2	3	4	5
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20
5	5	10	15	20	25

Level	Description of Impact
1	Minimal or no impact and/or Cost
2	Additional resources required; able to meet
3	Minor slip in key milestones; not able to meet need date
4	Major slip in key milestone or critical path impacted
5	Can't achieve key team or major program milestone

Level	Probability
1	Remote
2	Unlikely
3	Likely
4	Highly Likely
5	Near Certainty

US 36 MANAGED LANES PROJECT RISK MATRIX

Risks

	PROJECT MANAGEMENT RISKS	Potential consequences	Probability	Impact	Risk	Mitigation strategy
1	Scheduling	Schedule impact	3	3	9	The Contractor is required to submit for approval a series of schedules with each invoice. If the contractor is behind schedule, a recovery schedule is required to be prepared and submitted
2	Industry experience, extent of	Cost, schedule, quality impacts	1	2	2	CDOT extensively reviewed Proposals and the Design Build (DB) experience of each bidder.
3	Key Personnel Experience	General Project Impacts	2	3	6	CDOT extensively reviewed Proposals and the experience of each bidder's Key personnel. CDOT has the right to review the qualifications and character of each individual to be assigned to a key position

4	DBE Goal, plan for implementation of	Schedule impact, Liquidated damages	2	2	4	The Contractor must facilitate and incorporate participation by small businesses throughout the Project, ensuring that DBEs shall have an equal opportunity to participate in the performance of contracts financed in whole or in part with Federal funds. CDOT will continually monitor the Contractors DBE effort.
5	Safety Management	Safety	2	2	4	Contractor is required to submit both a Safety Management Plan and a Health and Safety Plan (HASP). The Contractor is also required to conduct regular Safety meetings. CDOT will monitor.
6	Deliverables	Schedule delay	2	2	4	All deliverables will reviewed and approved or excepted per the contract documents
7	Change Orders, extent of	Schedule delay, increased costs.	5	2	10	All change orders will be evaluated per section 13, book 1 of the contract documents
8	Local agency coordination, effectiveness of	Time schedules	2	3	6	Contractor is required to submit a Project Management Plan which will detail expected extent and means of coordination with Local Agencies.

9	Unplanned work that must be accommodated	Cost Schedule	3	4	12	Requirement for allowing change orders are delineated on the contract documents. CDOT will review all change order requests.
	QUALITY MANAGEMENT	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**
10	Contractor QA, performance of	Quality, cost and schedule impacts	2	4	8	The Contractor must develop a Quality Management Plan (QMP) that documents the Contractor's commitment to quality, and all quality requirements of the Contract. The QMP must be approved by CDOT
11	Timely/accurate documentation, performance of	Quality, cost and schedule impacts	2	4	8	CDOT will use a data base to track and record all results from materials tests
12	Non-conformances, timely/effective handling of	Quality, cost and schedule impacts	4	2	8	The QMP is required to include procedures to be taken for Nonconforming Work.
13	Top-down accountability for QA	Quality, cost and schedule impacts	2	2	4	The QMP shall state the Contractor's commitment to quality and provide a clear definition of the scope of Activities and detail the methods to ensure the Work meets the requirements of the Contract Documents
14	QMP development/implementation, reliability of	Quality, cost and schedule impacts	2	2	4	CDOT will monitor development and implementation of QMP

	PUBLIC INVOLVEMENT	Potential consequences	Probability	Impact	Risk	Mitigation strategy
15	PI coordination of Contractors/CDOT PIO's	Project delays due to lack of notification.	2	2	4	CDOT is responsible for all Public notification activities. The Contractor is required to support CDOT. The Contractor is required to submit an Public Information Plan. CDOT will monitor.
16	Multiple local agencies, addressing	Adverse impacts to public goodwill	2	2	4	CDOT is responsible for all Public notification activities. The Contractor is required to support CDOT. The Contractor is required to submit an Public Information Plan. CDOT will monitor.
17	Emergency Response, adequacy of	Adverse impacts to public goodwill, safety. CDOT liability	2	2	4	The Contractor is required to prepare an Incident Management Plan. CDOT will monitor.
18	Local business coordination, adequacy of	Adverse impacts to public goodwill	2	2	4	CDOT is responsible for all Public notification activities. The Contractor is required to support CDOT. The Contractor is required to submit an Public Information Plan. CDOT will monitor.

19	Community interaction, adequacy of	Adverse impacts to public goodwill	2	2	4	CDOT is responsible for all Public notification activities. The Contractor is required to support CDOT. The Contractor is required to submit an Public Information Plan. CDOT will monitor.
20	Contractor PIO % commitment	Adverse impacts to Public Information effort.	2	2	4	Contractor is required to have a full time Public Information Officer on staff for this project.
21	Public meeting management, adequacy of	Adverse impacts to public goodwill	2	2	4	The Contractor is required to assist CDOT in all Public meetings with display materials and personnel
22	Noise mitigation, impacts due to	Adverse impacts to public goodwill	2	2	4	The Contractor is required prepare and submit to CDOT a Noise Control Plan that outlines allowable daytime and nighttime uses, projected noise levels, and locations and types of noise abatement measures that may be required to meet specific noise limits. CDOT will monitor implementation.
	ENVIRONMENTAL	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**
23	Permit acquisition, timeliness of	Closing out the storm water permits are often the final outstanding tasks for a project.	4	2.5	10	Per contract documents, Contractor is responsible for obtaining all required permits. CDOT will supervise

24	Wetland Mitigation approach: use Boulder site versus off site banking	This will be handled as a separate project.	1	1	1	Agreement has been finalized
25	Risk of impacting more wetlands than allotted by 404 permit (delay from coordination with USACE and update of permit)	The project team will need to impact less than its pro rata share(approx. 8 acres) of the wetland impacts permitted by the USACE for the entire preferred alternative (21 acres).	2	2	4	Contractor is responsible. CDOT Environmental will supervise.
26	Prairie Dog mitigation, addressing	Risk associated will delay in schedule. Prairie dog management must occur before areas can be disturbed.	2	2	4	Contractor is responsible. CDOT Environmental will supervise.
27	Noise (Constr/permanent mitigation), implementation of	Risk associated with local agency approval/acceptance of wall alignment and material. Throw away mitigation potentially exists in one area.	3	2	6	Contractor is responsible. CDOT Environmental will supervise.
28	Coordination with Colorado Division of Wildlife on SB40 Certification (potential delay in schedule)	Risk of extended delays to schedule from SB40 coordination on	2	2	4	Contractor is responsible. CDOT will supervise.

		fisheries and aquatic habitat approach				
29	Migratory Birds/(nesting), mitigation of	Failure to remove nests before protected season could cause delays.	2	2	4	Contractor is responsible. CDOT Environmental will monitor.
	THIRD PARTY AGREEMENTS	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**
30	Timely completion/schedule considerations	Schedule delay	4	1	4	Coordination between CDOT, the contractor and third parties
31	Coordination of PI,MOT,detour routing, closures	Schedule delay	2	2	4	Prior to NTP2, Contractor must develop a Traffic Management Plan.
32	BNSF design review & acceptance - timely	Schedule delay due to unresponsive BNSF	4	3	12	Per Contract documents, Contractor must coordinate with BNSF on all design issues.
33	BNSF agreement process	Schedule delay due to unresponsive BNSF. Possible time extension.	4	4	16	Contractor required to support CDOT contract execution.
34	BNSF Bikeway crossing	Cost impacts	3	2	6	Coordinate with Contractor and BNSF.
35	BNSF bridge construction and coordination (If ARE#4 is constructed)	Schedule delay due to unresponsive BNSF	4	4	16	Contractor must coordinate with BNSF per contract documents. Contractor must comply with all railroad requirements.

36	Irrigation Ditch design review & acceptance - timely	potential delay from unresponsive Irrigation Ditch	4	2	8	Per Contract documents, Contractor must coordinate with irrigation companies on all design issues.
37	Irrigation Ditch agreement process	potential delay from unresponsive Irrigation Ditch	4	2	8	Contractor required to support CDOT in contract execution.
38	Irrigation Ditch construction coordination	potential delay from unresponsive Irrigation Ditch	2	2	4	Per Contract documents, Contractor must coordinate with irrigation companies on all construction coordination issues.
	UTILITIES	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**
39	Unidentified Utility	Discovery of utility during construction that was not identified in the Utility Data	4	3	12	Prior to RFP, CDOT conducted extensive survey of existing utilities in the corridor. Contractor is also required to conduct an independent survey of all utilities.
40	Utility relocation design - timely schedule	Potential delay for completion of utility relocation design by Private Utility	3	2	6	Contractor required to coordinate with Utility companies to establish design schedule
41	Utility relocation construction - timely schedule	Potential delay for completion of utility relocation construction by Private Utility	3	3	9	Contractor required to coordinate with Utility companies to establish construction schedule
42	Utility Betterments - Public Utility	Potential delay/added cost for	1	2	2	Requesting Utility will be responsible for cost of Betterments

		added work requested by Public Utility				
43	Requested Relocations - Private Utility	Potential delay/added cost for added work requested by Private Utility	1	2	2	Requesting Utility will be responsible for cost of relocations
	ROW	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**
44	Property access, requirements for (permanent acquisition parcels - fee, PE)	Assumption: This entry reflects meeting scheduled date of possession of permanent ROW parcels and contractor obtaining possession of parcels over baseline contractor needs to obtain. The cost factor is twofold, if possession is not timely obtained, schedule delays could mean increased construction costs, also if ROW impacts are greater than baseline, acquisition of additional ROW parcels will lead to	2	3.5	7	The best mitigation for this factor is early identification of any ROW parcels needed over baseline. If additional parcels are identified early, risks to schedule, cost and performance are lower.

		increased acquisition costs, possibly significant increases.				
45	Property access, requirements for (temporary construction easements)	No temporary construction easements will be defined in the ROW plans. It seems reasonable that some temporary construction easements will be needed. It is important to note that it can take 6 months or more to purchase temporary construction easements.	2	5	10	If temporary construction easements are defined early, risks to schedule, costs and performance is lower.

46	Acquisition management, effectiveness of (permanent acquisition parcels - fee, PE)	Schedule impacts, increased costs	4	3	12	The best mitigation for acquisition management is timely identification by engineering of need for additional parcels, completion of competent design before initiation of ROW plans development and proven past success in timely and effective ROW plans preparation, appraisal, and acquisition negotiation.
47	Acquisition management, effectiveness of (temporary construction easements)	Schedule impacts, increased costs	3	4	12	The best mitigation for acquisition management is timely identification by engineering of need for temporary construction easements, completion of competent design before initiation of ROW plans development and proven past success in timely and effective ROW plans preparation, valuation, and acquisition negotiation.

48	Construction staging, consideration of	Schedule impacts, increased costs	1	1	1	The design build contractor can use CDOT and RTD ROW for construction staging (there is an ample supply in the corridor) and it will be responsible for negotiating agreements with private landowners for construction staging, however the design build contractor will not be constrained by CDOT and FHWA appraisal acquisition requirements in negotiating staging agreements. As a result, this factor is not a relevant risk to be quantified.
49	Restoration/property protection measures, implementation of	This is a very difficult risk factor to analyze because it is a function of the number and extent of temporary construction easements that will be needed. The assumption is that no additional temporary construction easements will be needed for the level of design established for the RFP. If only a few TCEs are needed, for a short period of time,	3	4	12	The best mitigation is timely identification by engineering of need for additional parcels, completion of competent design before initiation of ROW plans development and proven past success in timely and effective ROW plans preparation, appraisal, and acquisition negotiation.

		protection and restoration should not be a significant impact on schedule, cost or performance. Greater numbers of TCEs to be used for longer periods of time will equate to more significant project impacts for this risk factor.				
	PAVEMENT	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**
50	Design Criteria assumptions, determination of	There is always some risk in every assumption, but it is very minimal if standard practices are followed.	2	2	4	Standard practices will be followed
51	Material availability, consideration of	This mostly affects the subgrade material and it's availability. The risk should be low for the CDOT specified subgrade material. If the contractor proposes using "better" material, a source of that material has most likely already been identified.	2	2	4	

52	Use of Alternative alignments	The impacts to ROW, drainage, and environmental would be greater than those for pavement.	2	2	4	Mitigated in preliminary design and reviews
	EARTHWORK	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**
53	Sub excavation (stabilization)	This risk originates from the "uncertainty" regarding the initial pavement / soil investigation. No matter how thoroughly the investigation is conducted, there will also be variations of the existing soil. The risk to the contractor occurs if there are pockets of undesirable soil underneath the pavement section that needs to be replaced. This could incur some cost and possibly delays. The risk to CDOT arrives in the form of increased future risk if the subex / stabilization is not conducted correctly.	4	3	12	The Contractor is required to submit a Quality Management Plan (QMP) to CDOT. The QMP will include a Material Testing & Inspection Plan that include will the appropriate criteria, tests, and inspection requirements. The contractor is required to sub-ex 2' of material for all roadway sections. CDOT will monitor implementation

	DRAINAGE	Potential consequences	Probability	Impact	Risk	Mitigation strategy
54	All existing storm sewer, cross culverts, and irrigation structures are planned to be removed and replaced.	Inferior material remains on the site	1	3	3	All drainage features will be removed and replaced per contract documents
55	Identifying all drainage easements or takes for outfalls and ditches	Unforeseen work, permitting. Could lead to additional features or schedule delay.	2	4	8	Surveyed all drainage features on project before RFP. Required contractor to
56	LOMR/CLOMR process and floodplain permits	Potential schedule delay due to approval process	2	4	8	Contractor responsible for LOMR/CLOMR process per contract documents
57	Designing Coal Creek crossing such that it is not throw away. Looking at split flow options. Floodplain concerns. Bike path crossing. Wildlife crossing.	Throw-away wasted recourses.	2	2	4	Build to ultimate width
58	Conveying the need to the contractor that drainage must be planned out and designed for the ULTIMATE condition. All systems that are constructed as part of this project must be able to utilized in the future	Throw-away, future removal costs. Duplication of design effort	2	3	6	Required contractor to build to ultimate width per contract documents
59	All detention and water quality ponds must be sized for the ultimate condition. There may be some latitude for portions of throw away PWQ as part of this project.	Throw-away, future removal costs. Duplication of design effort	2	3	6	Required contractor to build to ultimate conditions per contract documents

60	Coordination with R6 environmental on approval of contractor proposed PWQ items.	Schedule impact.	2	2	4	Coordination between R6 Hydraulics and Environmental units and the contractor. Review of contractors preliminary design and water quality reports for each segment prior to RFC.
61	Timing of drainage reports with phases	Schedule impact.	2	2	4	Contractor responsible for submittals. Cot responsible for timely review.
62	Timing of water quality reports with phases	Schedule impact.	2	2	4	Contractor responsible for submittals. CDOT responsible for timely review.
63	Need Master Drainage Report with 30% plans	Schedule impact.	2	2	4	Contractor responsible for submittals. CDOT responsible for timely review.
64	Need Master Water Quality Report with 30% plans	Schedule impact.	2	2	4	Contractor responsible for submittals. CDOT responsible for timely review.
65	Drainage design criteria ambiguity	Schedule and cost impacts.	2	4	8	Contractor reviewed design criteria prior to submittal of proposals. Any changes will go through Change Order process.
66	For Detention/PWQ - groundwater elevations unknown & contaminated soil unknown	Mitigation costs/ Schedule impacts	2	5	10	Per contract documents, contractor shall determine groundwater elevations and presence of contaminated soils at all pond locations and mitigate.
67	CDOT Pipe Material Selection Policy	FHWA withdraws funding for items in question.	2	2	4	Contract documents require contractor to comply with CDOT Pipe Material Selection Policy

68	Removing onsite flow from offsite flows and conveying to PWQ facilities.	Non-compliance with MS-4 Permit. CDOT required to pay fines.	2	4	8	Contractor required to submit drainage reports prior to RFC. CDOT will review.
69	Describe process of land purchase for Airport Creek Ponds. CDOT to purchase, then give back a portion to Broomfield that encompasses the new outlet channel from regional pond. By doing this, Broomfield would qualify for maintenance of the channel from UDFCD.	CDOT will be required to maintain channel.	2	2	4	Contractor will be required to involve UDFCD in review and acceptance.
	ROADWAY	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**
70	Level of design completion	Cost impacts, schedule delay.	4	3	12	Design Build project deliver method will mitigate design risk. The Contractor is responsible for both design and construction. Must submit plans to CDOT prior to RFC.
71	Design criteria, safety performance function (SPF)	Changes in criteria could cause delays, cost impact.	2	2	4	Contractor reviewed design criteria prior to submittal of proposals. Any changes will go through Change Order process.
72	Change to Basic Configuration, timely appr of changes	Cost impacts, schedule delay.	2	5	10	Changes will be made per contract documents.
	STRUCTURES	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**

73	Urban Design Classifications, use of	Cost impacts	2	2	4	The Contractor must develop a corridor Aesthetic Treatment Plan. CDOT will monitor compliance with the plan.
74	Phasing requirements, impacts due to	Phasing requirement increase cost of structures	2	3	6	DB Contractor is responsible for all Structure design and construction phasing issue. CDOT will monitor.
75	Demolition requirements, consideration of	Safety, Cost Impacts	2	5	10	The Contractor must submit a bridge removal plan to CDOT. The Plan must detail procedures, sequences, and all features required to perform the removal in a safe and controlled manner. The Bridge Removal Plan is required to provide complete details of the bridge removal process
76	Geotechnical, lack of CDOT info	Cost Impacts, schedule delay	2	3	6	Prior to RFP, CDOT conducted extensive survey of soil conditions in the corridor. Contractor is also required to conduct an independent soil survey. All geotechnical investigations by the Contractor shall be documented in a geotechnical investigation report and submitted to CDOT

77	Bridge/ Bridge Deck rehab, estimated versus actual	Increased Cost	4	2	8	CDOT and the Contractor will jointly inspect decks to determine extent of repairs required. If it appears that the damaged deck areas are going to exceed the assumed 40 percent deck area, the Contractor is required to produce a detailed Bridge Deck Condition Report, to be submitted to CDOT for Acceptance
	MOT	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**
78	Quality coord, field vs. design	Cost Impact, Schedule delay	4	2	8	The Contractor shall conduct all Work necessary to meet the requirements associated with Maintenance of Traffic (MOT), including provisions for the safe and efficient movement of people, goods, and services through and around the Project while minimizing impacts to local residents and business and commuters. the Contractor will also establish a MOT task force with representatives from the various stakeholders to coordinate MOT related issues.
79	Local agency coordination	Cost Impact, Schedule delay	3	2	6	MOT Task Force - See 78 above

80	Phasing, planning of	Cost Impact, Schedule delay	3	3	9	Contractor is responsible for all phasing planning and implementation. The Contractor must submit a Traffic Management Plan to CDOT prior to NTP2. CDOT will monitor implementation.
81	Speed reductions, consideration of	Cost Impact, Schedule delay	3	2	6	Contractor is responsible for all phasing planning and implementation. The Contractor must submit a Traffic Management Plan to CDOT prior to NTP2. CDOT will monitor implementation.
82	Lane/shoulder width, consideration of reductions	Cost Impact, Schedule delay	3	2	6	Contractor is responsible for all phasing planning and implementation. The Contractor must submit a Traffic Management Plan to CDOT prior to NTP2. CDOT will monitor implementation.
83	Min lane requirements, reduction of	Cost Impact, Schedule delay	1	2	2	Contractor is responsible for all phasing planning and implementation. The Contractor must submit a Traffic Management Plan to CDOT prior to NTP2. CDOT will monitor implementation.

84	Detours, off-site loading	Cost Impact, Schedule delay	4	3	12	Contractor is responsible for all phasing planning and implementation. The Contractor must submit a Traffic Management Plan to CDOT prior to NTP2. CDOT will monitor implementation.
85	RTD access, mgmt. of	Cost Impact, Schedule delay	3	2	6	Contractor is responsible for all phasing planning and implementation. The Contractor must submit a Traffic Management Plan to CDOT prior to NTP2. CDOT will monitor implementation.
86	Business/private access, mtce of	Cost Impact, Schedule delay	3	2	6	The Contractor is required to construct connecting roads, driveways, or curb cuts to provide access to property parcels where existing accesses have been disturbed or modified.
87	Incident management plan implementation	Cost Impact, Schedule delay	3	3	9	Contractor is responsible for preparing and implementing an Incident Management Plan. The Contractor must submit this in conjunction with the Traffic Management Plan to CDOT prior to NTP2. CDOT will monitor implementation.

88	Safety amenities, adequacy of	Cost Impact, Schedule delay	4	2	8	Contractor is responsible for all phasing planning and implementation. The Contractor must submit a Traffic Management Plan to CDOT prior to NTP2. CDOT will monitor implementation.
	MAINTENANCE DURING CONSTRUCTION	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**
89	Construction Maintenance	Cost impacts, safety concerns, schedule delay	5	3	15	The Contractor is required to Submit a Maintenance Level of Service Plan. The Plan will define the Contractor's complete strategy for the implementation, coordination, scheduling, and monitoring of maintenance Activities during the Project. CDOT will review and monitor.
90	Snow Revmoval	Traffic Concerns, Public Goodwill	5	2	10	CDOT will be responsible for snow removal in all active lanes, the contractor will be responsible for lanes closed to traffic and behind all temporary barrier.
91	Working Time Violations	Traffic Impacts	4	3	12	CDOT will charge contractor lane rental fees is contractor does not open lanes as agreed to in the contract documents

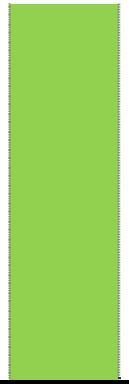
92	Contractor Responsiveness in repairs	Impact traffic and operations	2	2	4	CDOT will be responsible for highway maintenance until NTP2. After NTP2, the contractor will be responsible. If the contractor does not perform these duties per the contract documents, CDOT forces will, and CDOT will charge the contractor.
	ITS AND TOLLING	**Potential consequences**	**Probability**	**Impact**	**Risk**	**Mitigation strategy**
93	Survey	Survey has not been completed for all ITS elements, both within the corridor and the additional ITS infrastructure (fiber/conduit and devices) outside the corridor that is required. Additional survey would provide better information for the D/B contractor. Installation element could conflict with other utilities and infrastructure	2	2	4	Per contract documents, contractor must locate ITS infrastructure in the field. ITS Task force will coordinate ITS design issues.
94	Use of existing conduit	Damaged conduit will need to be replaced and brought up to CDOT standards.	3	2	6	Contractor required to repair all existing conduit

95	Toll tag procurement	The toll tags for this project need to be the "switchable" type utilizing the "6C" protocol. E-470's current tag provider, Sirit-Federal Signal, does not currently manufacture such tags.	2	3	6	Collect tolls with exist technology
96	Fiber allocations and IP addressing	CDOT ITS will be providing fiber allocation and IP addressing to the D/B contractor. Therefore, they will become a critical path element of the overall construction.	1	1	1	CDOT responsible
97	Toll system integrator	The toll equipment and integration is being contracted separately from the D/B contract. Therefore, the two schedules need to be closely integrated and coordination of civil infrastructure elements needs to be identified in sufficient detail.	2	2	4	Extensive review of RFP documents and contracts for both project. Both contractors will be required to coordinate with each other and CDOT ITS.

98	Full-color DMS	Currently, full-color Dynamic Message Signs (DMS) have been specified, however, there has been recent mention of Active Traffic Management (ATM) being desired. Full-color DMS would be critical for any future ATM applications.	3	1	3	Driver needs to be developed. CDOT ITS is process of developing. Expected completion Summer 2014
99	FIPI vs. open specifications	There are several ITS and tolling devices that could be FIPI items, if desired. However, there is a trade off between allowing for free market solutions versus using equipment known to be functional. In the case of roadside detection devices this proved to be a costly modification in TREX afterwards. Decisions need to be made as to what equipment will be prescribed.	1	2	2	Contractor will be encouraged to use COTS products

100	Full-color DMS	Several of the ITS and tolling equipment will require new software drivers or changes to existing software applications. These include the side-fire radar detectors, travel time indicators, potentially the variable toll message signs, and others. The Tolling Integrator will be on the critical path for delivery and testing and acceptance of certain system elements. For example, travel time cannot be checked for accuracy until the equipment is integrated with the CDOT ITS software (CTMS) and recording real data.	3	3	9	Driver needs to be developed. Tolling integrator is process of developing. Expected completion Summer 2014

101	Software integration and drivers	Several of the ITS and tolling equipment will require new software drivers or changes to existing software applications. These include the side-fire radar detectors, travel time indicators, potentially the variable toll message signs, and others. A decision needs to be made as to whether CDOT and/or the Tolling Integrator will be required to make software changes or if the D/B will be responsible for these items. If CDOT or the Tolling Integrator are responsible, then they will be on the critical path for delivery and testing and acceptance of certain system elements. For example, travel time cannot be checked for accuracy until the equipment is integrated with the	2	2	4	CDOT ITS and the Tolling Integrator will be jointly responsible. They will coordinate with Contractor

		CDOT ITS software (CTMS) and recording real data.			

APPENDIX G

Right-of-Way Schedule

APPENDIX G
RIGHT-OF-WAY SCHEDULE

Parcel No.	Segment	Owner	Access Date
92a	A	Adams County School District No. 50	5-21-12
160	A	KKR Culp LLC & Rex Motors, Inc.	4-23-12
162	A	BT 36 Lodging Group Inc	4-23-12
191	A	City of Westminster	5-21-12
193	A	Magnum Colorado One LLC	5-21-12
195	A	Magnum Colorado One LLC	5-21-12
197	A	Lucas Stan c/o Sessions Group Real Estate	4-23-12
196a	B	City of Westminster	6-22-12
200	B	Tuscany Trails Homes	6-6-12
200c	B	Centex Homes	3-23-12
213	B	SB Del Amo LLC	6-6-12
215	B	Westfield Village LLC	6-6-12
217	B	Wal Mart Real Estate Business Trust	6-6-12
217a	B	City of Westminster	6-22-12
271b	B	Farmer Highline Canal	6-6-12
218	B	City of Westminster	6-22-12
218a	B	AMLI Residential 2001 Pool LP	6-6-12
223	B	City of Westminster	6-22-12
225a	B	City of Westminster	6-22-12
225b	B	City of Westminster	6-22-12
227a	B	City of Westminster	6-22-12
233	B	City of Westminster	6-22-12
235	B	City of Westminster	6-22-12
237	B	R Dean Hawn Interests	7-3-12
237a	B	City of Westminster	6-22-12
239	B	TT of Westminster, Inc.	7-3-12
228	C	City of Westminster	8-14-12
	C	BNSF	6-29-12
232	C	City of Westminster	8-14-12
234	C	City of Westminster	8-14-12
246	C	Park 36 Investment LLC	7-17-12
246a	C	City and County of Broomfield	8-30-12
247	C	City of Westminster	8-14-12

APPENDIX G
RIGHT-OF-WAY SCHEDULE

Parcel No.	Segment	Owner	Access Date
251	C	City of Westminster	8-14-12
255a	C	Becker Oscar Albert Jr.	9-28-12
255b	C	Becker Oscar Albert Jr.	9-28-12
257	C	Nelson Mark R and Lynn M	9-28-12
259	C	Becker Oscar Albert Jr.	7-17-12
261	C	Becker Oscar Albert Jr.	7-17-12
261a	C	RTD	4-26-12
267a	C	RTD	4-26-12
266	D	City and County of Broomfield	8-30-12
268	D	JPI Colorado Land LLLP	8-17-12
270	D	JPI Interlocken LLLP 6/10 Int, et al	8-17-12
272	D	City and County of Broomfield	8-30-12
278	D	Amber Drive II LLC	8-17-12
280	D	Tana Oil & Gas LLC	8-24-12
284	D	Auto-Owners Insurance Co.	8-17-12
290	D	DDR Flatiron LLC	8-24-12
292a	D	City and County of Broomfield	8-30-12
292b	D	City and County of Broomfield	8-30-12
294	D	DDR Flatiron LLC	8-24-12
297	D	JPJA Limited Family Partnership	8-17-12
297.1	D	Teilhaber Manufacturing Corp.	8-24-12
299	D	Superior Investment Inc.	8-24-12
299.1	D	Turnpike Foresight, LLC	8-24-12
307	D	Mad Dog Enterprises LLC	8-24-12
309	D	Broomfield Properties Corp	8-24-12
311	D	Carey Technology Properties II LLC	8-24-12
311a	D	Carey Technology Properties II LLC	8-24-12
313	D	Carey Technology Properties II LLC	8-24-12
319a	D	Storage Technology Corporation	8-24-12
238	BE-112th	City and County of Broomfield	8-30-12
238A	BE-112th	City and County of Broomfield	8-30-12
238B	BE-112th	City and County of Broomfield	8-30-12
240	BE-112th	Broomfield Investors	8-13-12

APPENDIX G
RIGHT-OF-WAY SCHEDULE

Parcel No.	Segment	Owner	Access Date
240A	BE-112th	Colorado R&R LLC	8-13-12
240B	BE-112th	Park 36 Investment LLC	8-13-12
242	BE-112th	Park 36 Investment LLC	8-13-12
242A	BE-112th	Park 36 Investment LLC	8-13-12
253	BE-112th	Colorado R&R LLC	7-30-12
255	BE-112th	Raymer Robert D	9-28-12
269	BE-Wads	RTD	4-26-12
275A	BE-Wads	Twelve Thousand Wadsworth Investment Com	4-26-12
283	BE-Wads	JAT4 Family Limited Liability	8-17-12
293	BE-Wads	JAT4 Family Limited Liability	8-17-12
295	BE-Wads	JPJA Limited Family Partnership	8-17-12

APPENDIX E
SCHEDULE OF IMPROVEMENTS TO BE DEMOLISHED

Address of Improvement	Parcel Nos. on CDOT ROW Plans for Underlying Ownership	Owner from Whom Underlying Property will be Acquired
One residential house and attached garage and seven other buildings, all of which are located at 11425 Wadsworth Boulevard, Broomfield, CO 80020	257	Nelson Mark R and Lynn M
One residential house, a detached garage and three other buildings, all of which are located at 11415 Wadsworth Boulevard, Broomfield, CO 80020	255b	Becker Oscar Albert Jr.
One residential house and attached garage and four other buildings, all of which are located at 11395 Wadsworth Boulevard Broomfield, CO 80020	255a	Becker Oscar Albert Jr.
One residential house, a detached garage and three other buildings, all of which are located at 11375 Wadsworth Boulevard, Broomfield, CO 80020	255	Raymer Robert D.

APPENDIX G

STEPS OF THE CDOT RIGHT OF WAY ACQUISITION PROCESS, ENTITY RESPONSIBLE FOR COMPLETION OF EACH STEP, AND APPROXIMATE TIME FRAMES

Description of ROW Task	Entity Responsible for Completion of ROW Task	Approxi-mate Time Frame for Completion of ROW Task	Entity Responsible for Review and Approval of ROW Task	Approximate Time Frame for Completion of Review and Approval of ROW Task	Comments
Survey	Contractor	Variable depending on scope 2-4 weeks for smaller surveys, 2-4 months for larger surveys	CDOT Region 6 Survey Unit	2-3 weeks from submission	This is only survey of property boundary and topography needed for development of ROW Plans
Delivery of Engineering Design of Improvements Requiring ROW Completed to a Sufficient Level to Ensure that Location, Size and Shape of ROW Parcels Will Not Change as Design is Advanced	Contractor	Variable depending on scope of improve-ments to be designed	CDOT Design Review Team and CDOT Region 6 ROW Manager	Variable depending on scope of improve-ments designed	Completion of sufficient design to this level is a common cause of delay in the ROW plans development process
Preparation of ROW Plans and Review and Approval of ROW Plans	Preparation of ROW Plans: Contractor Review and Approval of ROW Plans. CDOT	For appraisal variable depending on scope. 4-6 weeks minimum.	Review: CDOT Region 6 ROW Plans Preparation Unit Approval: CDOT HQ ROW Plans Unit	Variable depending on scope of improve-ments designed. Note that a minimum of two review cycles is typically required	If parcels to be acquired for any certain request are temporary easements only, a sketch and legal description prepared in compliance with the CDOT ROW Manual can substitute for a complete set of ROW plans. An appropriate environmental clearance, as specified in Book 2, Section 5, Environmental Compliance, will be required for approval of ROW plans.

Description of ROW Task	Entity Responsible for Completion of ROW Task	Approxi-mate Time Frame for Completion of ROW Task	Entity Responsible for Review and Approval of ROW Task	Approximate Time Frame for Completion of Review and Approval of ROW Task	Comments
Appraisal and Appraisal Review	Appraisal: Contractor Appraisal Review: CDOT	6-8 weeks per appraisal per landowner 1-2 weeks to review an appraisal	CDOT	1-2 weeks to review an appraisal	If the estimated value of the acquisition is $5,000 or less, a value finding can be prepared by a real estate specialist and an appraisal/appraisal review is not needed. All requests for valuation by a value finding vs. an appraisal must be approved by CDOT.
Acquisition Negotiation	Contractor	4-6 weeks for the initial negotiation. 2 weeks for a final offer letter. 2 weeks for a last and final offer letter, if given. At least 3 months from submission of request for condemna-tion to completing immediate possession hearing.	CDOT must review and approve certain administrative settlements. Contractor will be delegated the same administrative settlement authority as the "Region" as set forth in Section 10.2.1 of the CDOT ROW Manual. CDOT Region 6 will be delegated the same administrative settlement authority as "Central Office" as set forth in Section 10.2.2 of the CDOT ROW Manual.	2-4 days to review and approve backup document-ation of completed acquisition negotiations	Contractor cannot use duress or coercion in acquisition negotiations

Description of ROW Task	Entity Responsible for Completion of ROW Task	Approxi-mate Time Frame for Completion of ROW Task	Entity Responsible for Review and Approval of ROW Task	Approximate Time Frame for Completion of Review and Approval of ROW Task	Comments
Condemnation	Colorado Attorney General's Office	At least three months to file a condemn-ation petition, serve it on the parties, set and hold and immediate possession hearing. Valuation trials can take a year or more from the date of filing the condemnatio n petition.			All offers to purchase must be made in CDOT's name, so the Attorney General's Office is properly authorized to represent the CDOT as the condemning authority in the condemnation proceeding,
Certification that Acquisition was completed in compliance with State and Federal Requirements	Contractor		CDOT Region 6 ROW Manager		
Relocation Planning Studies Required by 49 CFR §24.205	Contractor	Variable depending on scope 1-2 weeks for smaller studies	CDOT HQ ROW Unit	1-2 weeks from submission	
Relocation Advisory Services Required by 49 CFR §24.205	Contractor	Variable. Typically continuous throughout relocation process.	CDOT Region 6 Acquisition/Relo-cation Supervisor. Note: approval of a specific deliverable is not required. Rather this is general oversight.	Generally continuous throughout relocation process.	CDOT Region 6 Acquisition/Relocation personnel can assist with advisory services, as needed.

Description of ROW Task	Entity Responsible for Completion of ROW Task	Approxi-mate Time Frame for Completion of ROW Task	Entity Responsible for Review and Approval of ROW Task	Approximate Time Frame for Completion of Review and Approval of ROW Task	Comments
Provide Displaced Occupants Notice that They Have 90-days to Vacate the Premises, and Later That They Have 30-Days to Vacate the Premises 49 CFR §24.203	Contractor	The 90-day notice is provided at the time the written offer to purchase the property is provided to the landowner	CDOT Region 6 Acquisition/Relo-cation Supervisor. Note: approval of a specific deliverable is not required. Rather this is general oversight.		90-days for a displaced occupant to find a replacement property and move into it is the minimum required by law. As a practical matter, that is too short, especially for displaced businesses. It is desirable to lengthen this minimum time frame as much as possible. At least 6 months is a better expectation. The 30-day notice cannot be provided until possession of the underlining property is obtained.
<u>Business Relocation</u> Prepare and Submit Requests for Reimbursement of all Available Business Relocation Monetary Benefits, Including Expenses Incurred Searching for a Replacement Property, 49 CFR §24.301, Moving Expenses, 49 CFR §24.301, Reestablishment, 49 CFR §24.304, or single "In Lieu" payment, 49 CFR §24.305	Contractor	Variable Note: since these are reimburse-able expenses, the displaced occupant must actually incur the expenses before a request for reimburse-ment can be prepared.	CDOT HQ ROW Unit	2-5 days per submittal	

Description of ROW Task	Entity Responsible for Completion of ROW Task	Approxi-mate Time Frame for Completion of ROW Task	Entity Responsible for Review and Approval of ROW Task	Approximate Time Frame for Completion of Review and Approval of ROW Task	Comments
Residential Relocation Prepare and Submit Requests for Reimbursement of all Available Residential Relocation Monetary Benefits, Including Replacement Housing Payment, 49 CFR §24.401 and Moving Expenses, 49 CFR §24.301	Contractor	Variable Note: since these are reimburse-able expenses, the displaced occupant must actually incur the expenses before a request for reimburse-ment can be prepared.	CDOT HQ ROW Unit	5-10 days per submittal	
Certification that Acquisition was completed in compliance with State and Federal Requirements	Contractor		CDOT Region 6 ROW Manager		