

# SCOPE OF WORK BASIC CONTRACT

## Design-Build Procurement

CONTRACT TYPE [CHECK ONE]

☐ Specific Rate of Pay

☒ Cost Plus Fixed Fee

☐ Lump Sum

CONTRACT DATE: AUGUST 2013

PROJECT NUMBER: TBD

PROJECT LOCATION: C-470 (Segment 1)

PROJECT CODE: 18999

THE COMPLETE SCOPE OF WORK INCLUDES THIS DOCUMENT (ATTACHED TO THE CONTRACT FOR CONSULTANT SERVICES) AND, IF REFERENCED,

SECTION 1 PROJECT SPECIFIC INFORMATION  
SECTION 2 PROJECT MANAGEMENT AND COORDINATION  
SECTION 3 EXISTING FEATURES  
SECTION 4 REFERENCE ITEMS NEEDED BY THE CONSULTANT  
SECTION 5 GENERAL INFORMATION  
SECTION 6 D-B PROCUREMENT WORK TASK DESCRIPTIONS  
APPENDICES

SECTIONS 3 AND 4 AND SECTION 6 ARE AVAILABLE AS SEPARATE DOCUMENTS AND APPLY TO THE CONTRACT ONLY BY REFERENCE

Comments regarding this scope may be directed to:

**David Wells**

CDOT Agreements Office,

(303)757-9480

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# **SECTION 1**

## **PROJECT SPECIFIC INFORMATION**

### **1 PROJECT BACKGROUND**

C-470 is a 26 mile state highway which runs from I-25 on the south to I-70 on the north end primarily through Douglas and Jefferson counties. The corridor is a four lane facility from I-25 to Morrison Road and a six lane facility from Morrison Road to I-70. In 2006 an Environmental Assessment was completed by CDOT with a preferred alternative of adding 2 barrier separated toll lanes on C470 in each direction from I-25 to Kipling Boulevard. However, the FONSI was never signed.

A C-470 coalition was formed in February 2011. This coalition is comprised of many local entities all with a common vested interest in the viability of the C470 corridor. The coalition's primary goals were to: identify a technical solution and a funding option that will improve safety and mobility along the C-470 Corridor while supporting regional partnerships. To accelerate the delivery of the project the coalition has decided to first focus on the I-25 to Kipling Blvd portion of C-470, identified as Segment 1. The coalition has determined that the appropriate interim technical solution is to add: a new inside shoulder + 1 buffer separated express lane and an auxiliary lane in each direction along Segment 1. This project also includes the reconstruction and rehabilitation of pavement in various locations, construction of sound and retaining walls, bikeway, ITS, lighting and minor ramp work.

Key to financing the planned improvement of additional lanes, the C-470 Coalition has proposed a tolling component. This component will require Tolling and ITS infrastructure needed to efficiently operate the new express lanes. The preliminary design consultant, Wilson and Company, is considering what the connection to the existing E-470 toll facility will look like near I-25. Cambridge Systematics is currently under contract with Douglas County to conduct a Level II Traffic & Revenue Study scheduled for completion in August, 2013.

Only for Segment 1, Wilson and Company is now under contract with Douglas County to: Prepare preliminary design documents, complete a Revised Environmental Assessment (EA) for the ultimate 2 express lanes in each direction solution and conduct the ground survey. While the Revised EA will include the ultimate 2 express lanes in each direction configuration only 1 express lane in each direction will be constructed at this time due to budgetary considerations. The goal is to complete the preliminary design and the Revised EA by December 2013. This places the project in position to be incorporated into the 2014 DRCOG Long Range Plan and makes the project eligible for CDOT's RAMP funding.

For the C-470 Segment 1 planning schedule the following assumptions were made:

- This project will be procured using Design-Build
- A signed FONSI, May 2014
- Design-build notice to proceed, October 2014

This schedule is subject to discovery in the preliminary design and procurement phase, and CDOT desires every effort to shorten the time to procurement of the design build contractor.

### **2 SCOPE OF WORK SUMMARY**

The limits for the scope of work are generally C-470 Segment 1 from I-25 to Kipling Blvd. herein after referred to as the "Project" including all impacted structures within the Project limits. The preliminary design consultant will determine whether the existing structures can be widened / extended or whether they must be completely reconstructed.

While the extent to which Public Private Partnerships (P3s) will be involved in the Project is unknown, the selected consultant team will demonstrate substantial P3 experience. The selected consultant team will also demonstrate the capability to commit staff key to P3 document development for the duration of the contract. The selected procurement consultant team will be precluded from being members of design-build proposer teams.

The selected consultant team will assist CDOT by coordinating extensively with the preliminary design consultant in determining viable project elements and limits. The selected team will also be responsible for preparing Design-Build procurement documents potentially including select concession agreement schedules and procuring the Design-Build Contractor.

Given the Project's P3 potential, the selected consultant team will demonstrate the capability to develop the following types of Concession Agreement Schedules:

- HPTE Construction Work Requirements
- Applicable Standards, Data and Reports
- Contract Drawings
- HPTE ETCS Requirements
- List of Reference Documents
- HPTE Service Requirements
- Federal Requirements and DBE Provisions
- Required Insurances
- Handback Requirements
- Utilities and Access
- HPTE Snow and Ice Control Services Requirements

Since the preliminary design consultant is already under contract the scope of work for the project will likely be under a single procurement phase task order.

**Task Order 1** – Procurement phase

- Procurement Process Strategic Planning
- Coordination with Preliminary Design Consultant
- Design Build document development (potentially including select Concession Agreement Schedules)
- Prepare project for Design-Build process
- Project meetings

Descriptions of the consultant responsibilities and duties are further described in this document.

### **3 PROJECT GOALS**

This project is intended to produce the following improvements:

- A. Increase capacity
- B. Provide Congestion relief
- C. Update aging infrastructure
- D. Ensure goals are met for alternative funding (TIFFIA, TIGER, etc.)
- E. Improve Safety
- F. Higher level-of-service
- G. Improve riding surface (smoother or stronger pavement)
- H. Bridge Replacement
- I. Rehabilitation
- J. Reconstruction
- K. Improve ITS
- L. Bikeway

### **4 PLANNED IMPROVEMENTS**

The Project is located on C-470, from milepost 12.449 to milepost 26.195, in Douglas, Jefferson and Arapahoe Counties.

### **5 PROJECT COSTS**

The current construction cost of the Project is estimated to be between \$250 and \$300 M but could change based on options included in the Design-Build project designed by others.

## **6 WORK DURATION**

The time period for the work described in this scope is estimated to begin September 2013 and extend 18 months.

## **7 CONSULTANT RESPONSIBILITY AND DUTIES**

The Consultant is responsible for:

Professional services and deliverables required to assist the Colorado Department of Transportation with developing, refining, implementing and supporting the Project, utilizing a design-build procurement process.

Descriptions of the consultant responsibilities and duties are further described in this document.

## **8 WORK PRODUCT**

The work in the scope of services for this project will be contracted on an individual Task Order basis. The Department reserves the right to, at its sole discretion, decide to not issue task orders for any part of the work contained in this scope of services. The Consultant work products may include:

- A. Project Coordination
- B. Schedules
- C. Meeting Minutes and Exhibits
- D. Design-Build Procurement Documents (Potentially Including Select Concession Agreement Schedules)

Detailed work product requirements are described in the following sections. All work required to complete this Scope of Work requires the use of English Units.

## **9 WORK PRODUCT COMPLETION**

All submittals must be accepted by the CDOT Contract Administrator or designee.

## **10 ADDITIONAL PROJECT INFORMATION**

Additional information regarding this project is included in the following documents:

[List available pertinent documents]

- A. C-470 2006 Environmental Assessment (Revised EA In Progress)
- B. C-470 Preliminary Ramp Application

Copies of these documents may be obtained from CDOT Printing and Visual communications Center, Phone no. 303-757-9214, Room 117, 4201 East Arkansas Avenue, Denver, Colorado 80222. A moderate fee, determined by document size, will be charged. An additional charge will be added for requests by mail or for billing. Please provide a notice of two working days prior to obtaining the document(s) in person.

## **11 SCOPE OF WORK ORGANIZATION**

This draft scope of work has been reviewed by the Department and reflects a plan of approach based on the known goals. One factor determining the selection of a consultant is the ability of that consultant to analyze the project goals, evaluate the work elements, and formulate a work plan. This process may produce new approaches or modification to the project work elements. Because of that, all consultants should be aware that the Final Scope of Work for a project will be produced with input from the selected Consultant.

## **SECTION 2**

### **PROJECT MANAGEMENT AND COORDINATION**

#### **1 CDOT CONTACT**

The Contract Administrator for this project is: Carrie DeJiacomo, Region 1 – South Program Engineer.

Active day-to-day administration of the contract will be delegated to:

Name: Rick Erjavec, PE  
Title: Resident Engineer  
Address: 2000 S. Holly Street  
Telephone: 303.757.9350  
Fax: 303.757.9004

#### **2 PROJECT COORDINATION**

Coordination will be required with the following agencies as applicable but not limited to:


- A. C-470 Coalition Representatives Representing-
  - i Cities - Centennial, Greenwood Village, Littleton, Lone Tree, Highlands Ranch Metro District
  - ii Counties – Arapahoe, Douglas, Jefferson
  - iii Mayors and Commissioners of involved entities
- B. Railroads – BNSF & Union Pacific
- C. Regional Transportation District (RTD)
- D. Denver Regional Council of Governments (DRCOG)
- E. Urban Drainage & Flood Control District (UD & FCD)
- F. Environmental Protection Agency (EPA)
- G. Federal Highway Administration (FHWA)
- H. Colorado Department of Public Health and Environment (CDPHE)
- I. USACE
- J. Utilities
- K. Irrigation Ditches
- L. High Performance Transportation Enterprise
- M. E-470 Public Highway Authority

The consultant should anticipate that a design which affects an agency will have to be accepted by that agency prior to its acceptance by the Colorado Department of Transportation. Submittals to affected agencies will be coordinated through CDOT.

# SECTION 3

## EXISTING FEATURES

### 1 STRUCTURES

|  |        | Colorado Department of Transportation |        |       |   |                      |         |            |          |        |        | Date of Data: May 16, 2005 |         |         |      |           |       |     |       |
|---|--------|---------------------------------------|--------|-------|---|----------------------|---------|------------|----------|--------|--------|----------------------------|---------|---------|------|-----------|-------|-----|-------|
| Field Log of Structures   |        |                                       |        |       |   |                      |         |            |          |        |        |                            |         |         |      |           |       |     |       |
| Page 146 of 149   |        |                                       |        |       |   |                      |         |            |          |        |        |                            |         |         |      |           |       |     |       |
| Route   | Mile   | Point Structure                       | Span # | Type  | Feature Intersected                       | Feature carried      | Str Len | Road Width | Inv Rate | Posted | Max    | Vertical Clearances        |         |         | Year | District  |       |     |       |
|   |        |                                       |        |       |   |                      |         |            |          |        | N/E    | Min                        | Max     | S/W     | Min  | Built     | Rehab | Enp | Maint |
| 0470A   | 12.449 | F-16-MC                               | 2      | CPGC  | KIPLING PARKWAY                           | SH 470 ML EBND       | 200     | 38.0       | 35       |        |        |                            |         |         |      | 1986      |       | 6   | 8     |
| 0470A   | 12.450 | F-16-MD                               | 2      | CPGC  | KIPLING PARKWAY                           | SH 470 ML WBND       | 200     | 38.0       | 35       |        |        |                            |         |         |      | 1986      |       | 6   | 8     |
| 0470A   | 12.700 | F-16-PJ                               | 1      | SIGNC | EBND ML                                   |                      | 29      |            |          |        | UNKN   | OWN                        |         |         |      | 2002      |       | 6   | 8     |
| 0470A   | 12.750 | F-16-OZ                               | 1      | SIGNC | WBND RAMP R                               |                      | 28      |            |          |        |        |                            | NO MAX  | 17' 4"  |      | 1990      |       | 6   | 8     |
| 0470A   | 13.160 | F-16-OY                               | 2      | SIGNB | MEDIAN                                    |                      | 24      |            |          |        |        |                            |         |         |      | 1990      |       | 6   | 8     |
| 0470A   | 13.590 | F-16-0X                               | 1      | SIGNC | EBND RAMP R                               |                      | 27      |            |          |        | NO MAX | 18' 1"                     |         |         |      | 1990      |       | 6   | 8     |
| 0470A   | 13.700 | F-16-PG                               | 1      | SIGNC | WBND ML                                   |                      | 30      |            |          |        |        |                            | UNKN    | OWN     |      | 2002      |       | 6   | 8     |
| 0470A   | 13.902 | F-16-MG                               | 2      | CBGC  | SH 121-WADSWORTH BLVD                     | SH 470 ML EBND       | 303     | 38.0       | 36       |        |        |                            |         |         |      | 1987      |       | 6   | 8     |
| 0470A   | 13.903 | F-16-MH                               | 2      | CBGC  | SH 121-WADSWORTH BLVD                     | SH 470 ML WBND       | 283     | 38.0       | 39       |        |        |                            |         |         |      | 1987      |       | 6   | 8     |
| 0470A   | 13.910 |                                       |        |       | JCT SH 121-WADSWORTH BLVD                 |                      |         |            |          |        |        |                            |         |         |      |           |       | 6   | 8     |
| 0470A   | 14.000 | F-16-PK                               | 1      | SIGNC | EBND ML                                   |                      | 30      |            |          |        | UNKN   | OWN                        |         |         |      | 2002      |       | 6   | 8     |
| 0470A   | 14.160 | F-16-HY                               | 2      | CBG   | MASSEY DRAWIC470 TRAIL                    | SH 470 ML            | 29      |            | 36       |        |        |                            |         |         |      | 1991      |       | 6   | 8     |
| 0470A   | 14.280 | F-16-OI                               | 1      | SIGNC | WBND RAMP R                               |                      | 30      |            |          |        |        |                            | NO MAX  | 18' 8"  |      | 1990      |       | 6   | 8     |
| 0470A   | 14.800 | F-16-OJ                               | 2      | SIGNB | MEDIAN                                    |                      | 24      |            |          |        |        |                            |         |         |      | 1990      |       | 6   | 8     |
| 0470A   | 15.000 | F-16-UH                               | 1      | SIGNC | WBND ML                                   |                      | 29      |            |          |        |        |                            | UNKN    | OWN     |      | 2002      |       | 6   | 8     |
| 0470A   | 15.000 | F-16-UW                               | 1      | SIGNC | WBND ML                                   |                      | 30      |            |          |        |        |                            | UNKN    | OWN     |      | 2003      |       | 6   | 8     |
| 0470A   | 15.443 |                                       |        |       | JCT SH 75-PLATTE CANYON DR-W OF LITTLETON |                      |         |            |          |        |        |                            |         |         |      |           |       | 6   | 8     |
| 0470A   | 15.848 |                                       |        |       | JEFFERSON-ARAPAHOE CL                     |                      |         |            |          |        |        |                            |         |         |      |           |       | 6   | 8     |
| 0470A   | 16.000 | F-16-UQ                               | 1      | SIGNC | EBND ML                                   |                      | 29      |            |          |        | UNKN   | OWN                        |         |         |      | 2003      |       | 6   | 8     |
| 0470A   | 16.500 | F-16-PF                               | 2      | SSS   | SOUTH PLATTE RIVER BP                     |                      | 180     |            |          |        |        |                            |         |         |      | 1991      |       | 6   | 8     |
| 0470A   | 16.562 | F-16-HW                               | 3      | CSGC  | SOUTH PLATTE RIVER                        | SH 470 ML EBND       | 173     | 38.0       | 30       |        |        |                            |         |         |      | 1968      |       | 6   | 8     |
| 0470A   | 16.563 | F-16-HV                               | 3      | CSGC  | SOUTH PLATTE RIVER                        | SH 470 ML WBND       | 173     | 38.0       | 30       |        |        |                            |         |         |      | 1968      |       | 6   | 8     |
| 0470A   | 16.564 |                                       |        |       | ARAPAHOE-DOUGLAS CL                       |                      |         |            |          |        |        |                            |         |         |      |           |       | 6   | 8     |
| 0470A   | 16.950 | F-16-0A                               | 1      | SIGNC | EBND ML                                   |                      | 33      |            |          |        | UNKN   | OWN                        |         |         |      | 2002      |       | 6   | 8     |
| 0470A   | 17.000 | F-16-IC                               | 2      | CBGC  | US 85 ML                                  | SH 470 ML            | 233     | 84.0       | 36       |        | 16' 3" | 16' 3"                     | 16' 7"  | 16' 7"  |      | 1970 1996 |       | 6   | 8     |
| 0470A   | 17.001 |                                       |        |       | JCT US 85-SOUTH SANTA FE DRIVE            |                      |         |            |          |        |        |                            |         |         |      |           |       | 6   | 8     |
| 0470A   | 17.050 | F-16-0C                               | 1      | SIGNC | WBND ML                                   |                      | 29      |            |          |        |        |                            | UNKN    | OWN     |      | 2002      |       | 6   | 8     |
| 0470A   | 17.110 | F-16-KG                               | 6      | CBGP  | UP RR                                     | SH 470 ML            | 418     | 13.0       | 0        |        | 17' 2" | 17' 1"                     | 16' 10" | 16' 10" |      | 1986      |       | 6   | 8     |
| 0470A   | 17.111 | F-16-KF                               | 6      | CBGP  | BNSF RR                                   | SH 470 ML            | 433     | 13.0       | 0        |        | 21' 3" | 21' 1"                     | 20' 6"  | 20' 5"  |      | 1986      |       | 6   | 8     |
| 0470A   | 17.371 | F-16-KL                               | 1      | CPG   | BOWEN FARM ROAD                           | SH 470 ML EBND       | 101     | 47.3       | 36       |        |        |                            |         |         |      | 1984      |       | 6   | 8     |
| 0470A   | 17.372 | F-16-KM                               | 1      | CPG   | BOWEN FARM ROAD                           | SH 470 ML WBND       | 101     | 57.1       | 35       |        |        |                            |         |         |      | 1984      |       | 6   | 8     |
| 0470A   | 17.540 | F-16-BP MINOR                         | 1      | CBG   | MAINT RD-BIKE PATH                        | SH 470 ML            | 15      |            | 36       |        |        |                            |         |         |      | 1984      |       | 6   | 8     |
| 0470A   | 17.588 | F-16-KP                               | 1      | CBG   | HIGHLINE CANAL                            | SH 470 ML            | 29      |            | 36       |        |        |                            |         |         |      | 1984      |       | 6   | 8     |
| 0470A   | 17.670 | F-16-LH                               | 2      | SIGNB | MEDIAN                                    |                      | 20      |            |          |        |        |                            |         |         |      | 1986      |       | 6   | 8     |
| 0470A   | 18.000 | F-16-LR                               | 1      | SIGNC | EBND ML                                   |                      | 30      |            |          |        | UNKN   | OWN                        |         |         |      | 2003      |       | 6   | 8     |
| 0470A   | 18.000 | F-16-LU                               | 1      | SIGNC | WBND ML                                   |                      | 29      |            |          |        |        |                            | UNKN    | OWN     |      | 2003      |       | 6   | 8     |
| 0470A   | 18.000 | F-16-LV                               | 1      | SIGNC | WBND ML                                   |                      | 29      |            |          |        |        |                            | UNKN    | OWN     |      | 2003      |       | 6   | 8     |
| 0470A   | 18.490 | F-16-KR                               | 1      | TLS   | HIGHLINE CANAL BP                         |                      | 57      |            |          |        |        |                            |         |         |      | 1986      |       | 6   | 8     |
| 0470A   | 18.500 | F-17-KQ                               | 2      | SBGC  | LUCENT BLVD                               | C470 ML              | 237     | 96.4       | 36       |        | UNKN   | OWN                        | UNKN    | OWN     |      | 1997      |       | 6   | 8     |
| 0470A   | 19.000 | F-16-US                               | 1      | SIGNC | EBND ML                                   |                      | 29      |            |          |        | UNKN   | OWN                        |         |         |      | 2003      |       | 6   | 8     |
| 0470A   | 19.000 | F-16-UT                               | 1      | SIGNC | WBND ML                                   |                      | 29      |            |          |        |        |                            | UNKN    | OWN     |      | 2003      |       | 6   | 8     |
| 0470A   | 19.010 | F-17-KR                               | 2      | SIGNB | MEDIAN                                    |                      | 24      |            |          |        |        |                            |         |         |      | 1997      |       | 6   | 8     |
| 0470A   | 19.550 | F-17-LP                               | 1      | SIGNC | EBND ML                                   |                      | 31      |            |          |        | UNKN   | OWN                        |         |         |      | 2002      |       | 6   | 8     |
| 0470A   | 19.590 | F-17-HW                               | 2      | CPGC  | BROADWAY                                  | SH 470 ML EBND       | 191     | 38.0       | 34       |        |        |                            |         |         |      | 1984      |       | 6   | 8     |
| 0470A   | 19.600 | F-17-HX                               | 2      | CPGC  | BROADWAY                                  | SH 470 ML WBND       | 205     | 38.0       | 36       |        |        |                            |         |         |      | 1985      |       | 6   | 8     |
| 0470A   | 19.650 | F-17-PM                               | 1      | SIGNC | WBND ML                                   |                      | 31      |            |          |        |        |                            | UNKN    | OWN     |      | 2002      |       | 6   | 8     |
| 0470A   | 20.000 | F-17-QO                               | 1      | SIGNC | EBND ML                                   |                      | 33      |            |          |        | UNKN   | OWN                        |         |         |      | 2003      |       | 6   | 8     |
| 0470A   | 20.000 | F-17-QQ                               | 1      | SIGNC | WBND ML                                   |                      | 29      |            |          |        |        |                            | UNKN    | OWN     |      | 2003      |       | 6   | 8     |
| 0470A   | 20.000 | F-17-QR                               | 1      | SIGNC | WBND ML                                   |                      | 29      |            |          |        |        |                            | UNKN    | OWN     |      | 2003      |       | 6   | 8     |
| 0470A   | 20.334 | F-17-IM                               | 2      | SIGNB | MEDIAN                                    |                      | 22      |            |          |        |        |                            |         |         |      | 1986      |       | 6   | 8     |
| 0470A   | 21.000 | F-17-PN                               | 1      | SIGNC | EBND ML                                   |                      | 29      |            |          |        | UNKN   | OWN                        |         |         |      | 2002      |       | 6   | 8     |
| 0470A   | 21.069 | F-17-HP                               | 2      | CPGC  | SH 177-UNIVERSITY BLVD                    | SH 470 ML EBND       | 190     | 38.0       | 30       |        |        |                            |         |         |      | 1984      |       | 6   | 8     |
| 0470A   | 21.070 | F-17-HQ                               | 2      | CPGC  | SH 177-UNIVERSITY BLVD                    | SH 470 ML WBND       | 190     | 38.0       | 30       |        |        |                            |         |         |      | 1984      |       | 6   | 8     |
| 0470A   | 21.071 |                                       |        |       | JCT SH 177-UNIVERSITY BLVD                |                      |         |            |          |        |        |                            |         |         |      |           |       | 6   | 8     |
| 0470A   | 21.100 | F-17-PO                               | 1      | SIGNC | WBND ML                                   |                      | 32      |            |          |        | UNKN   | OWN                        | UNKN    | OWN     |      | 2002      |       | 6   | 8     |
| 0470A   | 22.091 | F-17-HR                               | 2      | CBGC  | COLORADO BLVD                             | SH 470 ML            | 233     | 60.0       | 53       |        | 17' 9" | 17' 5"                     | 19' 7"  | 19' 3"  |      | 1984      |       | 6   | 8     |
| 0470A   | 22.605 | F-17-IN                               | 2      | SIGNB | MEDIAN                                    |                      | 22      |            |          |        | UNKN   | OWN                        |         |         |      | 1986      |       | 6   | 8     |
| 0470A   | 23.000 | F-17-OP                               | 1      | SIGNC | EBND ML                                   |                      | 28      |            |          |        |        |                            |         |         |      | 2003      |       | 6   | 8     |
| 0470A   | 23.014 | F-17-HS                               | 1      | CPG   | BIG DRY CREEK                             | SH 470 ML EBND       | 131     | 38.0       | 34       |        |        |                            |         |         |      | 1984      |       | 6   | 8     |
| 0470A   | 23.015 | F-17-HT                               | 1      | CPG   | BIG DRY CREEK                             | SH 470 ML WBND       | 131     | 38.0       | 34       |        |        |                            |         |         |      | 1984      |       | 6   | 8     |
| 0470A   | 23.200 | F-17-IA                               | 2      | TLS   | BIG DRY CREEK BP                          |                      | 145     |            |          |        |        |                            |         |         |      | 1984      |       | 6   | 8     |
| 0470A   | 24.100 | F-17-PP                               | 1      | SIGNC | EBND ML                                   |                      | 30      |            |          |        | UNKN   | OWN                        |         |         |      | 2002      |       | 6   | 8     |
| 0470A   | 24.144 | F-17-HJ                               | 2      | CBGC  | QUEBEC STREET                             | SH 470 ML            | 212     | 92.0       | 35       |        | 17' 0" | 16' 8"                     | 18' 3"  | 18' 1"  |      | 1984 1985 |       | 6   | 8     |
| 0470A   | 24.300 | F-17-PG                               | 1      | SIGNC | EBND ML - VMS                             |                      |         |            |          |        | UNKN   | OWN                        |         |         |      | 2002      |       | 6   | 8     |
| 0470A   | 24.543 | F-17-HN                               | 2      | CPGC  | ACRES GREEN DRIVE                         | SH 470 ML EBND       | 140     | 49.1       | 37       |        |        |                            |         |         |      | 1984      |       | 6   | 8     |
| 0470A   | 24.544 | F-17-HO                               | 2      | CPGC  | ACRES GREEN DRIVE                         | SH 470 ML WBND       | 140     | 51.5       | 37       |        |        |                            |         |         |      | 1984      |       | 6   | 8     |
| 0470A   | 24.873 | F-17-KP                               | 1      | SIGNC | WBND ML                                   |                      | 30      |            |          |        |        |                            | UNKN    | OWN     |      | 1997      |       | 6   | 8     |
| 0470A   | 24.910 | F-17-KN                               | 1      | SIGNC | WBND ML                                   |                      | 29      |            |          |        |        |                            | UNKN    | OWN     |      | 1997      |       | 6   | 8     |
| 0470A   | 25.058 | F-17-IC                               | 3      | CBG   | WILLOW CREEK                              | SH 470 ML            | 50      |            | 36       |        |        |                            |         |         |      | 1984      |       | 6   | 8     |
| 0470A   | 25.083 | F-17-KO                               | 1      | SIGNC | WBND ML                                   |                      | 26      |            |          |        |        |                            | UNKN    | OWN     |      | 1997      |       | 6   | 8     |
| 0470A   | 25.135 | F-17-JE                               | 2      | SIGNB | MEDIAN                                    |                      | 18      |            |          |        |        |                            |         |         |      | 1985 1997 |       | 6   | 8     |
| 0470A   | 25.536 | F-17-HL                               | 2      | CPGC  | YOSEMITE STREET                           | SH 470 ML EBND       | 165     | 50.0       | 28       |        |        |                            |         |         |      | 1984 1991 |       | 6   | 8     |
| 0470A   | 25.537 | F-17-HM                               | 2      | CPGC  | YOSEMITE STREET                           | SH 470 ML WBND       | 165     | 59.3       | 28       |        |        |                            |         |         |      | 1984 1991 |       | 6   | 8     |
| 0470A   | 25.590 | F-17-KE                               | 2      | SIGNB | MEDIAN                                    |                      | 22      |            |          |        | 20' 1" | 17' 10"                    |         |         |      | 1991      |       | 6   | 8     |
| 0470A   | 25.780 | F-17-KF                               | 1      | SIGN  | EBND ML                                   |                      | 88      |            |          |        | 19' 0" | 18' 4"                     |         |         |      | 1991      |       | 6   | 8     |
| 0470A   | 25.813 | F-17-IR                               | 1      | SIGN  | EBND ML                                   |                      | 60      |            |          |        |        |                            |         |         |      | 1986      |       | 6   | 8     |
| 0470A   | 25.910 | F-17-IQ                               | 6      | SBGC  | I 25, SH 470 ML, RAMPS R                  | I25NB TO C470WB RAMP | 782     | 27.0       | 38       |        |        |                            |         |         |      | 1985      |       | 6   | 8     |
| 0470A   | 25.940 | F-17-JX                               | 7      | SBGC  | I 25, SH 470 ML, RAMPS R                  | I25SB TO E470EB RAMP | 1196    | 38.0       | 38       |        | 19' 4" | 19' 0"                     | 18' 9"  | 18' 7"  |      | 1991      |       | 6   | 8     |
| 0470A   | 25.950 | F-17-JU                               | 2      | CPGC  | I 25 ML SBND                              | SH 470 ML            | 160     | 67.8       | 42       |        | 18' 8" | 18' 2"                     | 17' 10" | 17' 8"  |      | 1990      |       | 6   | 8     |
| 0470A   | 25.960 | F-17-JV                               | 2      | CPGC  | I 25 ML NBND                              | SH 470 ML            | 160     | 67.2       | 42       |        |        |                            |         |         |      | 1990      |       | 6   | 8     |
| 0470A   | 25.965 |                                       |        |       | JCT I 25                                  |                      |         |            |          |        |        |                            |         |         |      |           |       | 6   | 8     |
| 0470A   | 25.970 | F-17-JE                               | 3      | CPGC  | RAMP TO I 25 SBND R                       | RAMP TO SH 470 ML    | 172     | 68.0       | 41       |        |        |                            |         |         |      | 1983 1991 |       | 6   | 8     |
| 0470A   | 25.970 | F-17-KB                               | 1      | SIGN  | WBND RAMP R                               |                      | 70      |            |          |        |        |                            | 18' 11" | 18' 11" |      | 1991      |       | 6   | 8     |
| 0470A   | 26.000 | F-17-KV                               | 1      | SIGN  | WBND RAMP R                               |                      | 81      |            |          |        |        |                            | UNKN    | OWN     |      | 1991      |       | 6   | 8     |
| 0470A   | 26.230 | F-17-KC                               | 1      | SIGN  | EBND RAMP R                               |                      | 57      |            |          |        | 18' 9" | 18' 9"                     |         |         |      | 1991      |       | 6   | 8     |
| 0470A   | 26.265 | F-17-KD                               | 1      | SIGN  | WBND RAMP R                               |                      | 73      |            |          |        |        |                            | 18' 6"  | 18' 1"  |      | 1991      |       | 6   | 8     |
| 0470A   | 26.480 | F-17-KH                               | 1      | SIGNC | EBND ML                                   |                      | 28      |            |          |        | NO MAX | 18' 0"                     |         |         |      | 1991      |       | 6   | 8     |
| 0470A   | 26.590 | F-17-KG                               | 1      | SIGN  | WBND ML                                   |                      | 83      |            |          |        |        |                            | 19' 2"  | 17' 10" |      | 199       |       |     |       |

## 2 **UTILITIES**

ATT TRANSMISSION  
CDOT REGION6  
CDOT FIBER OPTIC BACKBONE  
COMCAST  
LOCKHEED MARTIN  
CITY OF LITTLETON  
XCEL ENERGY  
PLATTE CANYON WATER & SANITATION  
QWEST  
ROXBOROUGH WATER & SANITATION DIST  
S/W METRO H2O & SAN  
CENTENNIAL WATER & SANITATION DIST  
DENVER WATER DEPARTMENT  
FOOTHILLS PARKS & REC DISTRICT  
KEN-CARYL RANCH WATER & SANITATION DIST  
MEADOWBROOK WATER DISTRICT  
MEADOWBROOK FAIRVIEW METRO DIST  
SOUTH SUBURBAN PARK & RECREATION DIST  
AMERICAN TRAFFIC SOLUTIONS  
DOUGLAS COUNTY GOVERNMENT  
E470 PUBLIC HIGHWAY AUTHORITY  
INVERNESS WATER & SANITATION  
CITY OF ENGLEWOOD  
CITY OF LITTLETON  
LEVEL 3 COMMUNICATIONS  
MCI  
NEW CENTURY ENERGY – FIBER  
XCEL ENERGY – SOUTH DENVER  
US SPRINT  
S/W METRO H2O & SAN  
T/W TELECOM  
XO COMMUNICATIONS INC  
ZAYO BANDWIDTH  
CITY OF AURORA – RAW WATER  
CENTENNIAL WATER & SANITATION DIST  
DENVER WATER DEPARTMENT  
HIGHLANDS RANCH METROPOLITAN DIST  
CITY OF LONE TREE  
MERIDIAN METROPOLITAN DISTRICT  
KEN-CARYL RANCH WATER & SANITATION DIST  
NORTHERN DOUGLAS COUNTY H2O & SANIT DIST  
PARK MEADOWS METRO DISTRICT  
SOUTHGATE WATER DISTRICT  
SOUTHGATE SANITATION DISTRICT  
SOUTH ARAPAHOE SANITATION DISTRICT  
SOUTH SUBURBAN PARK & RECREATION DIST

Contact Utility Notification Center of Colorado (U.N.C.C.) at 1-800-922-1987

### **3 IRRIGATION DITCHES**

Hodgson & Nevada Ditches  
City Ditch  
Highline Canal  
Warrior Ditch

### **4 RAILROADS**

Burlington Northern Santa Fe  
Union Pacific

**Note: The above is a list of the known features in the area. It should not be considered as complete. The Consultant should be alert to the existence of other possible conflicts.**

## **SECTION 4**

### **REFERENCE ITEMS NEEDED BY THE CONSULTANT**

#### **1 CURRENT CDOT MANUALS, SPECIFICATIONS, STANDARDS, ETC.**

The consultant shall obtain and utilize the most recent CDOT adopted references including standards and specifications, manuals and software, electronic files of applicable standards, and all CDOT forms specified in this document or as directed by the CDOT/PM. A list of general reference material is provided in Appendix A.

## **SECTION 5**

### **GENERAL INFORMATION**

#### **1 NOTICE TO PROCEED**

Work will not commence until the written Notice-to-Proceed is issued by the State with certification from the Consultant that the work will be completed within the allotted time. Work may be required, night or day, on weekends, on holidays, or on split shifts. CDOT must concur in time lost reports prior to the time lost delays being subtracted from time charges. Subject to CDOT prior approval the time charged may exclude the time lost for:

- A. Reviews and Approvals.
- B. Response and Direction

#### **2 PROJECT COORDINATION**

The routine working contact will be between the CDOT Project Manager (CDOT/PM) and the Consultant Project Manager (C/PM) as defined in Appendix C.

Each Project Manager will provide the others with the following:

- A. A written synopsis or copy of their respective contacts (both by telephone and in person) with others.
- B. Copies of pertinent written communications.

#### **3 ROUTINE REPORTING AND BILLING**

The Consultant will provide the following on a routine basis:

##### **Coordination**

Coordination of all contract activities by the C/PM

##### **Periodic Reports and Billings**

The periodic reports and billings required by CDOT Procedural Directive 400.2 (Monitoring Consultant Contracts).

##### **Minutes of all Meetings:**

The minutes will be completed and provided to the CDOT/PM within five working days after the meeting. When a definable task is discussed during a meeting, the minutes will identify the "Action Item", the party responsible for accomplishing it, and the proposed completion date.

##### **General Reports and Submittals**

In general, all reports and submittals must be approved by CDOT prior to their content being utilized in follow-up work effort.

#### **4 PERSONNEL QUALIFICATIONS**

The Consultant Project Manager (C/PM) must be approved by the CDOT Contract Administrator. Certain tasks are required to be done by a Licensed Professional Engineer (PE) or a Professional Land Surveyor (PLS) who is registered with the Colorado State Board of Registration for Professional Engineers and Land Surveyors, National Institute for Certification in Engineering Technology (NICET). Other certifications may be required for project inspectors and testers.

## **5 CDOT COMPUTER/SOFTWARE INFORMATION**

The consultant shall utilize the most recent CDOT adopted software. The primary software used by CDOT is as follows:

|                       |  |
|-----------------------|--|
| A. Earthwork          | InRoads  |
| B. Drafting/CADD      | InRoads and Microstation with CDOT's formatting configurations and standards |
| C. Survey             | CDOT Inroads TMOSS   |
| D. Geometry           | InroadsCOGO (Coordinate Geometry)  |
| E. Bridge             | CDOT Staff Bridge software shall be used in either design or design check    |
| F. Estimating         | Transport (an AASHTO sponsored software)                                     |
| G. Specifications     | Microsoft Word   |
| H. Traffic            | Highway Capacity Software (HCS)  |
| I. Traffic Operations | CORSIM or VISSIM   |
| J. Traffic Signals    | Passer II-90   |
| K. Traffic Model      | Quick Response System (QRS) II   |
| L. Hydraulics         | Hydrologic Engineering Center's River Analysis System (HEC-RAS)              |
| M. Pavement Design    | DARWin (AASHTO)  |
| N. Scheduling         | Microsoft Project  |
| O. GIS                | ESRI, ArcMap geodatabases (Projection: UTM NAD 83, Zone 13)                  |
| P. Noise Modeling     | TNM v2.5   |
| Q. Misc               | Microsoft Word, Excel, Power Point   |

## **6 COMPUTER DATA COMPATIBILITY**

The data format CDOT presently utilizes which Consultants shall be required to use for submitting roadway design data is: Inroads.

The data format used by the Consultant to submit surveying and photogrammetric data shall be as determined by the CDOT/PM in coordination with the respective Region PLS. The data format for submitting design computer files shall be compatible with the latest version of the adopted CDOT program. The Consultant shall immediately notify the CDOT/PM if the firm is unable to produce the desired format for any reason and cease work until the problem is resolved. Refer to Table 1, Submittals, for additional information regarding the InRoads and TMOSS formats and the acceptable transmittal media.

## **7 PROJECT DESIGN DATA AND STANDARDS**

General:

Appendix A is a list of technical references applicable to CDOT work. The consultant is responsible for ensuring compliance with the latest CDOT adopted version of the listed references. Conflicts in criteria shall be resolved by the CDOT/PM.

Specific Design Criteria:

Appendix B has been omitted because the Preliminary Design is being done by Others.

Construction Materials/Methods:

The materials and methods specified for construction will be selected to minimize the initial construction and long-term maintenance cost to the State of Colorado. Non-typical construction materials and methods must be approved in writing by CDOT.

## **SECTION 6**

### **D-B PROCUREMENT WORK TASK DESCRIPTIONS**

This section establishes the consultant's individual task responsibility. The consultant shall maintain the ability to perform all work tasks listed below, in accordance with the forms and conditions contained herein, and the applicable CDOT standards. Selected work tasks shall be assigned only after coordination and consultation with CDOT. The Consultant is also responsible for coordinating the required work schedule for those tasks accomplished by CDOT and other agencies. The Consultant should review this entire section to identify applicable material. Contact the Colorado Department of Transportation/Project Manager (CDOT/PM) if clarification is required (see Section 2.01).

The following activities of communication, consensus building, project team reviews, conceptual design, data gathering, documentation, and formal public notice should be planned by the Consultant and coordinated with the CDOT/PM. The time of their accomplishment will overlap and parallel paths of activity should be planned to finish the development phase in accordance with the shortest possible schedule. The type and number of meetings, documents, etc., will depend on the category and characteristics of the project work. A project plan shall be developed by the Consultant which satisfies the requirements of the project development. This plan must be approved by the Contract Administrator (see Section 2.01) before starting the work.

Work described in subsequent sections will be performed jointly with CDOT and in cooperation with HPTE and FHWA as appropriate.

#### **1 PROJECT MANAGEMENT AND ADMINISTRATION SUPPORT**

The Consultant will perform and assist in the necessary Project Management tasks to ensure timely completion of the Project in compliance with all applicable standards. Tasks include:

- A. General coordination with CDOT Management
- B. Coordination and Oversight of project team and subconsultants
- C. Internal document and file management
- D. Internal project management and controls
- E. Preparation of monthly invoices and progress reports

#### **2 GENERAL SUPPORT**

This task includes providing support by attending regularly scheduled meetings, reporting on activities, and preparing and providing meeting minutes and agendas; preparing presentation material as requested; identifying project policy elements and solutions; preparing project process schedules; preparing independent cost estimates; and completing quality control assurance reviews

- A. Meeting Attendance and Preparation
  - a Executive Oversight Committee (EOC) meetings -assume monthly for contract duration
  - b Project Management Team (PMT) meetings -assume weekly for contract duration
  - c Miscellaneous meetings -assume 4 per month for contract duration
  - d Public meetings -2

- B. Document Management and Control System Definition

The consultant will support CDOT in implementing a Non-Proprietary standard software & computer based Document Management and Document Control System (DMDC) to be used during final design and construction that is appropriate to the needs of the project and is fully compatible with CDOT's computer system.

- C. Public Involvement Services

The Consultant will provide updated information as appropriate and support CDOT in communicating the Project's purpose, impacts, scheduled activities and progress through CDOT public relations. The consultant will facilitate the development of project related materials to be published on the CDOT web site by CDOT staff.

D. ITS & Toll System Integration Support

- a Support preparation and review with CDOT and E-470 the requirements for E-470 delivery of toll system integration.
- b Support development and negotiation of agreement with E-470 for delivery of toll system integration. Assumes any legal support will be provided from CDOT
- c Support any sole source authorization issues with FHWA.

E. Traffic Analysis Support

Analyze traffic models prepared by others and make potential modifications.

F. Additional HPTE Support As Requested

Provide continued support to CDOT and HPTE regarding tolling, TIFIA loan, and delivery methods as requested and approved by the CDOT Project Manager. Additional support beyond this budgeted effort will be defined and included in a subsequent task order.

G. Unforeseen Services As Requested

As the Consultant's role is fairly broad, there will be additional services requested by CDOT that are not specifically defined within this scope of services. A specific line item will be included in the work-hour estimate to cover such services which will be performed upon written direction and approval from CDOT Project Manager.

**3 DESIGN-BUILD PROCUREMENT MANAGEMENT SERVICES**

A. Policy Decisions .

It will be necessary, as the design-build contract is being developed, for CDOT to make decisions on Project policy issues. The Consultant will recommend processes that allow for this to be completed timely and effectively. Issues that will be considered include:

- Identifying the Project Executive Oversight Committee (EOC), and its Roles and Responsibilities
- Identifying the Project Management Team (PMT), and its Roles and Responsibilities
- Identifying, Assigning and Managing Project Risks
- Establishing Evaluation and Selection Process Integrity and Confidentiality
- Developing Qualification Evaluation Criteria
- Developing Qualification Evaluation Methodology
- Identifying the Qualification Evaluation Team
- Identifying the Qualification Selection Board
- Developing Proposal Evaluation Criteria
- Developing Proposal Evaluation Methodology
- Identifying the Proposal Evaluation Team
- Identifying the Proposal Evaluation Board
- Identifying Conflicts of Interest
- Identify the need for Stipend and Establish Amount

B. Assist/Support Project Goals Development.

a Goals

Working with CDOT, the Consultant will facilitate the development of the Project Goals. The Consultant may support development of these “goals” by holding a project goals workshop. It is estimated one additional meeting will be required to obtain “approval” from the Region for the project goals.

b Best Value

The Consultant will assist in the identification and definition of Best Value elements based on project goals, priorities, budget and schedule. The identification of Best Value will assist in development of the project approach, and overall contract documents.

C. Risk Assessment and Design-Build Deliverables determination.

A risk assessment workshop involving CDOT Region 1 and Stakeholders identified by CDOT will be held by the Consultant (it is estimated 1 meeting will be required to review and approve the Risk Matrix, and 4 subsequent meetings). The risk assessment will identify areas of project risk that will manage, reduced or eliminate risks. The goals of the Risk Assessment are to ensure a higher probability of project success and reduced project costs. A detailed risk matrix identifying and assigning (allocating) risk will be prepared, and may include:

- Percent design required for each discipline
- Determining the need for design studies/investigations
- Determining the need for pre-selection ROW acquisition
- Determining the need for utility agreements
- Determining the need for hazardous materials identification
- Determining the need for additional geotechnical investigations, and the completion of additional geotechnical investigations
- Determining the need for third party agreements
- Determining risks associated with obtaining and repayment of loans
- Determine and Define "Quality"

**4 Informal Industry Review**

A. Informal Industry Review

Consultant will assist in developing an Informal Industry Review utilizing draft documents and information prepared for transmittal to the Letter of Interest submitters for review and comment;

- Coordinating meeting attendees and venues.
- Individual meetings with Letter of Interest submitters will be conducted to discuss the general project overview, and the procurement process. CDOT will solicit feedback in regards to the Project, the Book 1 (Contract) and the Request for Qualification process, and Request for Proposal process.

**5 REQUESTS FOR QUALIFICATIONS (RFQ) SERVICES**

This work will be performed consistent with CDOT's Design-Build Policy and Procedures Manual, and current Federal Highways Administration rules for Design-Build.

A. Short-list Selection Plan

Working jointly with CDOT, the Consultant will identify and develop the Qualification Evaluation Criteria and Qualification Evaluation Methodology to be used in the Short Listing process. To ensure integrity and minimize challenge to the process a Short-list Selection Plan (SSP) will be completed and presented to the Executive Oversight Committee (EOC) for authorization in advance of the RFQ release. The SSP will describe in detail the plan for the conduct of the entire short-list selection process for the Project. The short-list selection process includes evaluation of the Statement of Qualification (SOQ), short-list selection procedures by the evaluation team, and publication of the short-list selection. The consultant will facilitate a selection procedure training session.

Deliverables: RFQ Evaluation Procedure Manual

B. Responses to the RFQ

Working with CDOT the Consultant will:

- compile responses to the RFQ for the Project into qualifying, measurable components as presented in the RFQ;
- evaluate the measurable qualifications of each component utilizing the evaluation procedures and formulas authorized by the EOC;

- provide summaries of strengths and weaknesses of all respondents for each component;
  - Participate in evaluation meetings to discuss evaluations of SOQ applicable to each component.
- C. Presentations/briefings/discussions - EOC
- If CDOT determines Presentations are necessary the Consultant will;
- prepare and distribute agenda for oral presentations/briefings/discussions (the "orals") by and with the respondents if requested by the EOC;
  - assist with the preparation of questions to be asked by the EOC at the orals;
  - assist and advise the EOC in planning and managing the orals;
  - assist the EOC in answering questions at the orals;
  - Prepare written answers to respondent questions posed at the orals for consideration by the EOC.
- D. Participation with the EOC - discussions and reviews (only necessary if presentations are conducted)
- The Consultant will:
- participate with the EOC in discussions and reviews of the respondents' comments and answers to EOC questions post orals;
  - assist in the preparation of final written synopses of those responses in a style and format suitable for review and evaluation by the Qualification Evaluation Team (the Team may be composed of CDOT staff members and non-voting representatives of Stakeholders identified by CDOT);
  - prepare the documentation for the record that the review and short list selection procedure followed.
- E. Preparing for and presenting the recommendations
- The Consultant will:
- assist CDOT in preparing for and presenting the recommendations of the Qualification Evaluation Team to the Qualification Selection Board;
  - prepare and organize documents, exhibits, and visual aids to support the presentation to the Board.

## **6 INITIAL REQUEST FOR PROPOSALS (RFP) DOCUMENT DEVELOPMENT**

- A. Development of a management plan / schedule for the procurement
- This will entail the preparation of a procurement process/protocol and reasonable schedule to define progress achievement milestones between the issuance of the Initial RFP and Award to the selected design-build team for the Project. This schedule will allow time for all elements of the procurement process, including: development of the RFP; preparation of Detailed Proposals by the short listed proposers; evaluation of the Proposals; recommendation and selection; negotiations if necessary; and Award and Execution of the Contract.
- B. Instructions to Proposers (ITP)
- This document will contain relevant information to the short listed proposers regarding the project and their associated submittals, including: an introduction and summary of the project; a procurement schedule defining the major milestone dates to be adhered to during the procurement process; detailed description of the procurement process which CDOT will utilize during the review and evaluation of the responses to the RFP
- Main sections will include:
- Detailed information pertaining to the Proposal delivery, content and format
  - Proposal evaluation criteria and weighting
  - Contract award and approval process
  - Stipend information and amounts.
  - Draft Price Allocation Form
- C. Book 1 – Contract/D-B Agreement
- Consultant will assist CDOT in preparing an initial draft of this document.
- D. Book 2 – Technical Requirements

This document will contain detailed information, specifications, and associated guidance intended to apply to the development and implementation of the Project. Sections include Quality, Environmental, PI, Agreements, and technical requirements for all aspects of the work. Consultant will perform the following:

- a Prepare initial drafts of each of the 20 technical sections:
    - Section 1 - General
    - Section 2 - Project Management
    - Section 3 - Quality Management
    - Section 4 - Public Information
    - Section 5 - Environmental Requirements
    - Section 6 - Third Party Agreements
    - Section 7 - Utility Relocations
    - Section 8 - Right of Way
    - Section 9 - Survey
    - Section 10 - Geotechnical, Roadway Pavements, and Structure Foundations
    - Section 11 - Earthwork
    - Section 12 - Drainage
    - Section 13 - Roadways
    - Section 14 - Signing, Pavement Marking, Signalization, Lighting, Tolling, and ITS<sup>1</sup>
    - Section 15 - Structures
    - Section 16 - Maintenance of Traffic
    - Section 17 - Landscaping
    - Section 18 - Maintenance During Construction
    - Section 19 - ITS & Tolling
    - Section 20 - Modifications to SSP's
    - Section 20A - Exhibit A - Standard Special Provisions
  - b Provide section drafts to CDOT staff for review as applicable
  - c Update sections for inclusion in initial complete draft
- E. <sup>1</sup> ITS/Tolling elements for procurement effort to be prepared:
- a Request For Qualifications (RFQ) – Describe Tolling and ITS elements to be included in the Design/Build contract, specify qualifications required, and define response format and required submittals.
  - b Request For Proposals (RFP) – information to be prepared for, and include in, the RFP.
    - References – compile a list of reference materials to be used for the pursuit and project
    - Standards – assemble list of relevant standards and guidelines to be followed by the Design/Build team(s)
    - Instructions to proposers
    - Describe delineation of responsibilities – between contractor, integrator, and agencies.
    - Define work to be performed by others.
    - Descriptions of ITS and Tolling elements
    - State furnished materials
    - Software
    - Functional requirements
    - Performance criteria
    - Location and protection of Tolling elements
    - Cabling and conductors
    - Maintenance requirements
    - Design and construction criteria and requirements
    - Performance specifications
    - Interim ITS operability and maintenance
    - Toll tag transponder functionality and requirements

- Provide support for public involvement requirements
- System integration criteria
- Testing plan (for each subsystem and entire system)
- Documentation
- Power
- Communications redundancy
- List and schedule of deliverables
- Training
- Cabinets
- Maintenance - during construction and warranty period after
- Description of work to be performed outside of the corridor

c Procurement assistance

- Respond to technical questions by bidders during pursuit phase
- Issue addendums to RFP and modify preliminary design as necessary
- Review technical proposals for each of the Design/Build teams
- Participate in Alternative Technical Concept workshops/presentations.
- Evaluate proposals for technical content and determine if RFP requirements are met.

F. Book 3 – Applicable Standards, Data and Reports

Consultant will prepare an initial draft of the expected contents of this Book.

G. Book 4 – Contract Drawings/Right-of-Way (ROW) Plans

Consultant will prepare an initial draft of the expected contents of this Book.

H. Reference Documents

- a Organize Reference Documents, prepared by others, or provided by CDOT for inclusion into the Initial RFP as attachments. These documents may include:
- Reference Drawings
  - Utility Relocation Agreement
  - Cooperative Agreements
  - Environmental Permits
  - Right-of-way Acquisition Documentation
  - Traffic Model Information

I. Industry Review

Develop an Industry Review utilizing draft documents and information prepared for transmittal to the short listed proposers for review and comment;

- Written review comments and responses will be formally requested from the short listed proposers.
- Individual meetings with each short listed proposer will be conducted to discuss the Initial RFP and solicit feedback; documentation of these meetings. A memo summarizing the comments and responses will be prepared for submittal to CDOT. Comments identified during this Industry Review process will be discussed with CDOT staff, legal, and project advisers to obtain approval prior to modifying the Initial RFP.

J. Prepare Design-Build cost estimate that validates expected limits and elements that could be constructed for the contract price. Including a high price parametric estimate and a low price parametric estimate based off of recent historic cost data.

- a Cost estimate shall be validated from an independent source, qualified to perform cost estimates for complex projects and funding.

## **7 FINAL REQUEST FOR PROPOSALS (RFP) DOCUMENTS**

### **A. Finalize RFP Documents**

RFP documents will be finalized and comments from the internal draft RFP review incorporated as follows:

#### **a Instructions to Proposers (ITP)**

Conduct final workshop with CDOT to finalize content and approach to the ITP elements of:

- Proposal delivery, content and format
- Proposal evaluation criteria and weighting
- Contract award and approval process
- Final Price Allocation Form

#### **b Book 1 – Contract/D-B Agreement**

Consultant will assist CDOT in preparing final version of this document with forms and appendices.

#### **c Book 2 – Technical Requirements**

Prepare final versions of each of the 20 technical sections, including latest versions of standard special provisions

#### **d Book 3 – Applicable Standards, Data and Reports**

Finalize table of contents and assemble PDFs of documents that will be provided

#### **e Book 4 – Contract Drawings/Right-of-Way (ROW) Plans**

Finalize table of contents and assemble PDFs or electronic files of documents that will be provided

#### **f Reference Documents**

Finalize table of contents and assemble PDFs or electronic files of documents that will be provided Reference Drawings

### **B. Compile and Distribute RFP**

#### **a Compile the Final RFP**

#### **b Assist CDOT in obtaining Federal Highway Administration (FHWA) approval of the RFP**

#### **c Prepare correspondence for execution by CDOT distributing the Final RFP to short listed proposers**

#### **d Distribute RFP to short listed proposers, provide to CDOT for posting on web site.**

## **8 PROPOSAL AND EVALUATION PHASE**

### **A. Pre-Proposal Meeting - Conduct Pre-Proposal Meeting to convey information about the project and RFP documents to the proposer teams.**

### **B. One-on-One meetings with Proposers**

Planning, organizing, and administering separate one-on-one meetings to be attended by CDOT Region 1 staff, CDOT legal, project advisers, Consultant staff, and short listed respondents. These workshops will be held to allow short listed proposers the opportunity to ask questions / request clarifications on the Final RFP; it will also provide the short listed proposers the opportunity to solicit feedback regarding Industry Review of Book 1(Contract),

potential Alternate Configuration Concepts (ACCs) and Alternate Technical Concepts (ATCs) they are interested in including in their Technical Proposals. Up to eight meetings each with no more than four separate proposer teams are assumed.

- The Consultant will assist in organizing any information from the short listed proposers such that agendas and related documents or exhibits to be distributed prior to the workshops;
- Minutes of all workshops will be prepared by the Consultant.
- The Consultant will assist with evaluations questions (oral and written) posed at the workshops (and submitted later in writing) and draft answers for consideration by CDOT.
- Consultant will coordinate initial review, responses and feedback on ACC's and ATC's proposed.

C. Requests for Clarification

- a Upon receipt of CDOT approval, the Consultant will assemble and distribute CDOT answers to any Requests for Clarifications.

D. Addendums to the RFP

Assist with the preparation and issuance of all addenda to the Final RFP, if required, suggested by meetings, discussions, workshops, questions posed by potential respondents, and clarifications suggested and or approved by CDOT; addenda will also include status updates on Reference Documents originally included in the RFP, if required.

E. Proposal Evaluation Procedure

Working with CDOT Region 1, the consultant will develop a detailed procedure and methodology for evaluating the Proposals to be submitted, as follows:

- Alternate Configuration Concepts (ACCs) and Alternate Technical Concepts (ATCs), will be evaluated. The evaluation procedure and methodology will include a detailed review by an approved committee; this review will be completed such that recommendations of "Approved", "Conditionally Approved" or "Not Approved" will be made for each component of the submittal.
- Technical Proposals, which include detailed information pertaining to the development of the Project as defined in the Final RFP, opening schedule, and overall approach to the project will be evaluated. The evaluation procedure and methodology for the Technical Proposals will utilize the "Best Value Concept" process and will include detailed reviews by approved committees. The evaluation procedures and methodologies must be approved by the EOC.

F. Alternative Configuration Concept and Alternative Technical Concept Review (ACC/ATC)

- a Receive and perform reviews of ACC and ATC Proposals submitted by the short listed proposers, which include information pertaining to ACCs and ATCs.
  - Coordinate attendees and venues.
  - Upon completion of the reviews, written recommendations will be made to the PMT regarding which ACCs/ATCs should be Approved, conditionally approved, or Not Approved.
  - Upon acceptance of the recommendations by the PMT, the Consultant will assist in obtaining necessary agency approvals, including CDOT and FHWA, if required.
  - If requested the Consultant will attend meetings with CDOT to present and discuss the selected ACCs/ATCs.

G. Technical Proposals Review

Receive and commence detailed reviews of the Technical Proposals submitted by the short listed proposers, which includes detailed information pertaining to the development of the Project as defined in the Final RFP, opening schedule, and overall approach to the project; the associated price proposals submitted by the short listed proposers defining their price allocation will also be reviewed as part of a blind evaluation independent of the technical proposal. .

- The Consultant will coordinate with CDOT as CDOT establishes specialized committees approved by the PMT to evaluate the thoroughness and quality of the Technical Proposal responses to each project goal as established in the Final RFP utilizing the evaluation procedures and formulae approved by the EOC.
- There may be other unsolicited technical, contractual or financial proposals in addition to the base guidelines provided by CDOT in the Final RFP; the Consultant will assist CDOT with evaluation and document the results. The Consultant will prepare documentation of the findings resulting from the Technical Subcommittee evaluations.

#### H. Final deliberations pertaining to the Proposals.

Prepare and distribute agenda for meetings called at the option of CDOT for final deliberations pertaining to the Proposals. These meetings will allow CDOT the opportunity to discuss any remaining questions or issues related to the Proposals prior to the identification of the "Best Value" Proposal. The Consultant will assist and or prepare documentation of these meetings.

#### I. Identification and selection of the "Best Value" Proposal

Assist CDOT in the identification and selection of the "Best Value" Proposal.

- a An evaluation outline will be prepared which documents the procedure followed during the evaluation of the Proposals, indicating what measurable performance categories were identified and individually analyzed.
- b The Consultant will prepare final reports summarizing the deliberations, actions, and recommendations of the Team and the Board relative to the review and consideration of the Proposals, and their final selection and designation of the project's "Best Value" evaluations.

#### J. Evaluation Participation

The Consultant will serve as a technical resource to the evaluators and CDOT staff in delivering final reports and recommendations for best value selections and to the Proposal Selection Board (EOC).

### 9 **POST-PROPOSAL PHASE**

- A. Assist CDOT in conducting and preparing documents for debriefings (assume 2 no more than three), under the guidance of CDOT's Attorney General, for respondents to the Final RFP that were not selected to enter a design-build agreement with CDOT.

- B. Evaluation report

Assist and or prepare:

- A benchmarking evaluation report to capture lessons learned throughout the process and
- Identify alternative or refined strategies that CDOT should consider for future procurements.
- The report shall be based upon a series of interviews to be held with CDOT, CDOT's Attorney General, and other appropriate parties. Issues to be addressed include; risk allocation, quality, time savings, life cycle cost, design and construction management changes, total project cost, etc.

## **DELIVERABLES**

- Management plan and schedule for the procurement process of the Project.
- Independent Cost Estimate at strategic process points as requested by CDOT including a third party estimate validation
- Statements of Qualification Evaluation Procedures Request for Qualifications
- Initial Request for Proposals (RFP) documents
- Final Request for Proposals (FRFP) documents
- Transmittal correspondence
- Question & answer documentation, tracking, and publishing.
- Addenda documents
- Proposal Evaluation Procedures
- Final reports summarizing the deliberations, actions, and recommendations of the Committee and the Board.

## **SCOPE OF WORK ASSUMPTIONS**

The following lists assumptions, clarifications, and exclusions for the accompanying work hour estimate:

1. This scope assumes CDOT will lead the overall effort and provide all Agency Coordination efforts, Permits and Approvals. Extensive coordination with public agencies is required to obtain necessary permits and approvals to proceed with the design-build process. CDOT will also prepare and provide Book One – “Contract.” The Consultant will assist as directed by CDOT Project Manager.
2. This scope assumes CDOT will lead the development and execution of all Intergovernmental Agreements and Third party agreements. The Consultant will assist in these efforts as directed by CDOT Project Manager.

| <i>TABLE 1...SUBMITTALS</i> |                      |                            |              |   |                   |                   |
|-----------------------------|----------------------|----------------------------|--------------|---|-------------------|-------------------|
|                             | <b>Hard<br/>Copy</b> | <b>Electronic<br/>Copy</b> |              | <b>Project Initiation and Continuing<br/>Requirements</b> | <b>CDOT/OTHER</b> | <b>CONSULTANT</b> |
|                             |                      | <b>PDF</b>                 | <b>Orig.</b> |   |                   |                   |
|                             | X                    | X                          | X            | Periodic Reports  |                   | X                 |
|                             | X                    | X                          |              | Billings  |                   | X                 |
|                             |                      | X                          | X            | Meeting Minutes   |                   | X                 |
|                             | X                    | X                          | X            | Project Schedule  |                   | X                 |
|                             | X                    | X                          | X            | D-B Procurement Documents                                 |                   | X                 |

## APPENDICES

- A. REFERENCES
- B. OMITTED
- C. DEFINITIONS

Comments regarding this scope may be directed to:

**David Wells**  
 CDOT Agreements Office,  
 (303)757-9400

## **APPENDIX A**

### **REFERENCES**

1 **AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) PUBLICATIONS** (using latest approved versions):

- A. A Policy on Design Standards-Interstate System
- B. A Policy on Geometric Design of Highways and Streets
- C. Guide for Design of Pavement Structures
- D. Standard Specifications for Highway Bridges
- E. Guide for the Design of High Occupancy Vehicle and Public Transfer Facilities
- F. Guide for the Development of Bicycle Facilities
- G. Standard Specifications for Transportation Materials and Methods of Sampling and Testing – Part 1, Specifications and Part II, Tests
- H. Highway Design and Operational Practices Related to Highway Safety
- I. Roadside Design Guide

2 **COLORADO DEPARTMENT OF TRANSPORTATION PUBLICATIONS** (using latest approved versions):

- A. CDOT Design Guide (all volumes)
- B. CDOT Bridge Design Guide
- C. CDOT Bridge Detailing Manual
- D. Bridge Rating Manual
- E. Project Development Manual
- F. Erosion Control and Storm Water Quality Guide
- G. Field Log of Structures
- H. Cost Data Book
- I. Drainage Design Manual
- J. CDOT Quality Manual
- K. CDOT Survey Manual
- L. CDOT Field Materials Manual
- M. CDOT Design Guide, Computer Aided Drafting (CAD)
- N. Erosion Control and Storm water Quality Guide
- O. Standard Plans, M & S Standards
- P. Standard Specifications for Road and Bridge Construction and CDOT Supplemental Specifications
- Q. Item Description and Abbreviations (with code number) compiled by Engineering Estimates and Marked Analysis Unit, CDOT
- R. Right-of-Way Manual, Chapter 2, Plans and Descriptions Procedures and General Information
- S. The State Highway Access Code

## **APPENDIX A**

### REFERENCES (CONTINUED)

- T. Utility Manual
- U. TMOSS Generic Format
- V. Field TMOSS Topography Coding
- W. Topography Modeling Survey System User Manual
- X. Interactive Graphics System Symbol Table

3 **CDOT PROCEDURAL DIRECTIVES** (using latest approved versions):

- A. No. 400.2 Monitoring Consultant Contracts
- B. No. 501.2 Cooperative Storm Drainage System
- C. No. 514.1 Field Inspection Review (FIR)
- D. No. 516.1 Final Office Review (FOR)
- E. No. 1217a Survey Request
- F. No. 1304.1 Right-of-Way Plan Revisions
- G. No. 1305.1 Land Surveys
- H. No. 1601 Interchange Approval Process
- I. No. 1700.1 Certification Acceptance (CA) Procedures for Location and Design Approval
- J. No. 1700.3 Plans, Specifications and Estimates (PS&E) and Authorization to Advertise for Bids under Certifications Acceptance (CA)
- K. No. 1700.5 Local Entity/State Contracts and Local Entity/Consultant Contracts and Local Entity/R.R. Contracts under C.A
- L. No. 1700.6 Railroad/Highway Contracts (Under Certification Acceptance)
- M. No. 1905.1 Preparation of Plans and Specifications for Structures prepared by Staff Bridge Branch

4 **FEDERAL PUBLICATIONS** (using latest approved versions):

- A. Manual on Uniform Traffic Control Devices
- B. Highway Capacity Manual
- C. Urban Transportation Operations Training – Design of Urban Streets, Student Workbook
- D. Reference Guide Outline – Specifications for Aerial Surveys and Mapping by Photogrammetric Methods for Highways
- E. FHWA Federal-Aid Policy Guide
- F. Technical Advisory T6640.8A
- G. U.S. Department of Transportation Order 5610.1E
- H. Geometric Geodetic Accuracy Standards and Specifications for Using GPS Relative Positioning Techniques
- I. ADAAG Americans With Disabilities Act Accessibility Guidelines

5 **AREA:**

- A. Manual for Railway Engineering

## APPENDIX C

### DEFINITIONS

|    |                         |   |
|----|-------------------------|---|
| 1  | AASHTO-                 | American Association of State Highway & Transportation Officials  |
| 2  | ADT-                    | Average two-way 24-hour Traffic in Number of Vehicles   |
| 3  | AREA-                   | American Railway Engineering Association  |
| 4  | ATSSA-                  | American Traffic Safety Services Association  |
| 5  | AT&SF-                  | Atchison, Topeka & Santa Fe Railway Company   |
| 6  | ADAAG-                  | Americans with Disabilities Accessibility Act Guidelines  |
| 7  | BAMS-                   | Bid Analysis and Management Systems   |
| 8  | BLM-                    | Bureau of Land Management   |
| 9  | BNRR-                   | Burlington Northern Railroad  |
| 10 | CA-                     | Contract Administrator. The CDOT Manager responsible for the satisfactory completion of the contract by the consultant.   |
| 11 | CAP-                    | CDOT's Action Plan  |
| 12 | CBC-                    | Concrete Box Culvert  |
| 13 | CDOT-                   | Colorado Department of Transportation   |
| 14 | CDOT/PM-                | Colorado Department of Transportation Project Manager – The CDOT Engineer responsible for the day to day direction and CDOT Consultant coordination of the design effort.   |
| 15 | CDOT/STR-               | Colorado Department of Transportation Structure Reviewer – The CDOT Engineer responsible for reviewing and coordinating major structural design   |
| 16 | CDPHE-                  | Colorado Department of Public Health and Environment  |
| 17 | CEQ-                    | Council on Environmental Quality  |
| 18 | COG-                    | Council of Governments  |
| 19 | COGO-                   | Coordinate Geometry Output  |
| 20 | CONSULTANT-             | Consultant for this project   |
| 21 | CONTRACT ADMINISTRATOR- | Typically a Region Engineer or Branch Head. The CDOT employee directly responsible for the satisfactory completion of the contract by the Consultant. The contract administration is usually delegated to a CDOT Project Manager. |

## **APPENDIX C**

### **DEFINITIONS (CONTINUED)**

|    |                      |   |
|----|----------------------|---|
| 22 | C/PM-                | Consultant Project Manager – The Consultant Engineer responsible for combining the various inputs in the process of completing the project plans and managing the Consultant design effort.   |
| 23 | DEIS-                | Draft Environmental Impact Statement  |
| 24 | DHV-                 | Future Design Hourly Volume (two-way unless specified otherwise)  |
| 25 | DRCOG-               | Denver Regional Council of Governments  |
| 26 | D&RGW-               | Denver & Rio Grande Western Railroad  |
| 27 | EA-                  | Environmental Assessment  |
| 28 | EIS-                 | Environmental Impact Statement  |
| 29 | ESAL-                | Equivalent Single Axle Load   |
| 30 | ESE-                 | Economic, Social and Environmental  |
| 31 | FEIS-                | Final Environmental Impact Statement  |
| 32 | FEMA-                | Federal Emergency Management Agency   |
| 33 | FHPG-                | Federal Aid Highway Policy Guide  |
| 34 | FHWA-                | Federal Highway Administration  |
| 35 | FIPI-                | Finding In Public Interest  |
| 36 | FIR-                 | Field Inspection Review   |
| 37 | FONSI-               | Finding of No Significant Impact  |
| 38 | FOR-                 | Final Office Review   |
| 39 | GPS-                 | Global Positioning System   |
| 40 | MAJOR<br>STRUCTURES- | Bridges and culverts with a total clear span length greater than twenty feet. This length is measured along the centerline of roadway for bridges and culverts, from abutment face to abutment face, Retaining structures are measured along the horizontal distance along the top of the wall. Structures with exposed heights at any section over five feet and total lengths greater than a hundred feet as well as overhead structures including (bridge signs, cantilevers and butterflies extending over traffic) are also considered major structures. |

## **APPENDIX C**

### **DEFINITIONS (CONTINUED)**

|    |                 |   |
|----|-----------------|---|
| 41 | MPO-            | Metropolitan Planning Organization (i.e. Denver Regional Council of Governments, Pikes Peak Area Council of Governments, Grand Junction MPO, Pueblo MPO, and North Front Range Council of Governments). |
| 42 | MS4-            | Municipal Separate Storm Sewer System   |
| 43 | NEPA-           | National Environment Policy Act   |
| 44 | NGS-            | National Geodetic Survey  |
| 45 | NICET-          | National Institute for Certification in Technology  |
| 46 | NOAA-           | National Oceanic and Atmospheric Administration   |
| 47 | PAPER<br>SIZES- | See Computer-Aided Drafting Manual (CDOT);<br>Table 6-13 and Table 8-1  |
| 48 | PE-             | Professional Engineer registered in Colorado  |
| 49 | PM-             | Program Manager   |
| 50 | PLS-            | Professional Land Surveyor registered in Colorado   |
| 51 | PRT-            | Project Review Team   |
| 52 | PS&E-           | Plans, Specifications and Estimate  |
| 53 | PROJECT-        | The work defined by this scope  |
| 54 | ROR-            | Region Office Review  |
| 55 | ROW-            | Right-of-Way: A general term denoting land, property, or interest therein, usually in a strip acquired for or devoted to a highway  |
| 56 | ROWPR-          | Right-of-Way Plan Review  |
| 57 | RTD-            | Regional Transportation Director  |
| 58 | T/E-            | Threatened and/or Endangered Species  |
| 59 | SH-             | State Highway Numbers   |
| 60 | TMOSS-          | Terrain Modeling Survey System  |
| 61 | TOPOGRAPHY-     | In the context of CDOT plans, topography normally refers to existing cultural or man-made details.  |
| 62 | UD & FCD-       | Urban Drainage and Flood Control District   |
| 63 | USCOE-          | United States Army Corp of Engineers  |

**Note: For other definitions and terms, refer to Section 101 of the CDOT Division of Highways Standard Specifications for Road and Bridge Construction and the CDOT Design Guide.**