

**RESOLUTION #BE-128**  
**Pilot Preservation Program Agreement**

**Approved by the Bridge Enterprise Board of Directors on: April 18, 2013**

WHEREAS, pursuant to SB09-108 and C.R.S. 43-4-805(2)(a)(I), the Colorado Bridge Enterprise was created as a government-owned business within the Colorado Department of Transportation ("CDOT"); and

WHEREAS, the Colorado Bridge Enterprise and CDOT previously executed a Master Agreement effective January 21, 2010 (the "Master Agreement") which sets forth terms and conditions for interaction between the Colorado Bridge Enterprise and CDOT in furtherance of the Colorado Bridge Enterprise's business purpose and to preserve the status of the Colorado Bridge Enterprise as an "enterprise" under Section 20 of Article X of the Colorado Constitution; and

WHEREAS, the business purpose of the Colorado Bridge Enterprise is to finance, repair, reconstruct, and replace any Designated Bridge (as defined by Section 43-4-803(10)), in the State, and as agreed to in the Master Agreement, maintain the Designated Bridges it finances, repairs, reconstructs, and replaces; and

WHEREAS, as part of its maintenance responsibilities for Designated Bridges, the Colorado Bridge Enterprise has proposed a Pilot Preservation Program, more fully described in the "Agreement for Administration and Management of Bridge Enterprise's Pilot Preservation Program" (Pilot Preservation Agreement), attached; and

WHEREAS, CDOT and the Bridge Enterprise have determined it necessary and convenient to enter into the Pilot Preservation Agreement to define the roles and responsibilities for the Pilot Preservation Program and to outline the Bridge Enterprise's reimbursement to CDOT of the costs of the Pilot Preservation Program; and

NOW THEREFORE BE IT RESOLVED, the Colorado Bridge Enterprise Board approves of the Colorado Bridge Enterprise's and CDOT's initiation of the Pilot Preservation Program and approves execution of the Pilot Preservation Agreement.

  
\_\_\_\_\_  
Herman Stockinger, Secretary  
Bridge Enterprise Board of Directors

5-3-13  
Date

**AGREEMENT FOR ADMINISTRATION AND MANAGEMENT OF BRIDGE  
ENTERPRISE'S PILOT PRESERVATION PROGRAM**

**By and between the**

**COLORADO DEPARTMENT OF TRANSPORTATION**

**AND**

**COLORADO BRIDGE ENTERPRISE**

THIS AGREEMENT, entered into as of the 29<sup>th</sup> day of April, 2013 by and between the Colorado Department of Transportation ("CDOT"), an agency of the State of Colorado (the "State"), and the Colorado Bridge Enterprise (the "Bridge Enterprise"), a government-owned business created within CDOT by the "Funding Advancements for Surface Transportation and Economic Recovery Act of 2009" ("FASTER"), cited as Chapter 5, Session Laws of Colorado 2009, First Regular Session, 67<sup>th</sup> General Assembly ("FASTER"). CDOT and the Bridge Enterprise are referred to in this Agreement individually as a "Party" and jointly as the "Parties".

**RECITALS**

WHEREAS, CDOT has the responsibility to plan, develop, construct, coordinate, and promote an integrated transportation system within the State and is also charged with maintaining the State highway system pursuant to Section 43-2-102, C.R.S.; and

WHEREAS, FASTER (Section 43-4-805(2), C.R.S.) created the Bridge Enterprise to be a government-owned business within CDOT for the business purpose of financing, repairing, reconstructing, and replacing any Designated Bridge as defined by Section 43-4-803(10) and Article One, Section 1.1(8) of the Master Agreement discussed below.

WHEREAS, the Bridge Enterprise and CDOT previously executed a Master Agreement effective January 21, 2010 (the "Master Agreement") which sets forth terms and conditions for interaction between the Bridge Enterprise and CDOT in furtherance of the Bridge Enterprise's business purposes and to preserve the status of the Bridge Enterprise as an "enterprise" under Section 20 of Article X of the Colorado Constitution; and

WHEREAS, Article Two of the Master Agreement provides for the transfer of ownership of Designated Bridges by CDOT to the Bridge Enterprise to enable the Bridge Enterprise to undertake financing, repair, reconstruction and replacement of Designated Bridges; and

WHEREAS, Article Three of the Master Agreement conveys full authority to the Bridge Enterprise to design, develop, finance, construct, reconstruct, repair, replace, operate, and maintain a Designated Bridge; and

WHEREAS, as part of its maintenance responsibilities for Designated Bridges, the Bridge Enterprise has proposed a Pilot Preservation Program more fully described in **Exhibit A** attached. CDOT and the Bridge Enterprise have determined it necessary and convenient to enter into this Agreement to define the roles and responsibilities of the Pilot Preservation Program and to outline the Bridge Enterprise's reimbursement to CDOT of the costs of the preservation program; and

NOW, THEREFORE, the Recitals set forth above are incorporated into this Agreement by reference and in consideration of the mutual covenants, obligations, and conditions expressed below, the Parties agree as follows:

## **Article One**

### **Obligations of CDOT and Bridge Enterprise**

#### **1.1 Preservation Activities**

The Preservation Activities included in this pilot program shall include, but not be limited to the following: power washing, deck joint sealing, sealing concrete, painting, removing debris, protection from scour, lubricating bearings (where applicable), and maintaining records and reporting for the program.

#### **1.2 CDOT's and the Bridge Enterprise's Obligations**

As described in **Exhibit A**, representatives of CDOT and the Bridge Enterprise shall meet to select approximately twelve (12) candidate structures that will be the subject of the Pilot Preservation Program, to determine the Preservation Activities that will be deployed and to develop a preliminary cost estimate. After this has been accomplished, CDOT shall procure a contractor to perform the determined Preservation Activities on the Bridge Enterprise's Designated Bridges. CDOT shall consult with the Bridge Enterprise before procuring the Preservation Activities contractor(s) to confirm the scope of work for the procurement and the time frames of the contract.

## **Article Two**

### **Reimbursement Rates and General Provisions**

#### **2.1 Rates for Bridge Preservation**

CDOT has estimated, using historical cost data, its bridge preservation costs, including overhead, benefits and all other burdens, for Colorado Bridge Enterprise owned structures. The Parties agree to periodically review CDOT's cost data and make any necessary adjustments, by written amendment, to the bridge preservation rate set forth herein so the rate accurately reflects the costs of Preservation Activities provided by CDOT to the Bridge Enterprise.

**2.2 Monthly Reimbursement for Preservation Activities.**

CDOT agrees to invoice the Bridge Enterprise on a monthly basis for Preservation Activities actually performed on Designated Bridges by a contractor at the rates set forth by the executed contract and hours worked by CDOT staff relating to management of the contractor or as hereafter amended. The Bridge Enterprise shall reimburse CDOT for the costs of Preservation Activities provided by CDOT from moneys available in the Bridge Special Fund as further described in section 2.7 and 2.8 of this Agreement.

**2.3 Effective Date and Term**

This Agreement shall be effective immediately upon its execution and shall continue in effect until terminated in accordance with its terms.

**2.4 Termination - By Parties**

This Agreement may be terminated at any time by mutual agreement of the Parties.

**2.5 Termination - By General Assembly**

The Parties acknowledge that the General Assembly has the power to terminate this Agreement and/or dissolve one or both Parties, except as any such action impair the obligation of contracts entered into by either Party under this Agreement.

**2.6 Amendment**

Amendments to this Agreement must be in writing and must be duly authorized and approved by CDOT and the Bridge Enterprise Board.

**2.7 Non-Funding Agreement**

The Parties agree and acknowledge that this Agreement sets forth the rates and basis for reimbursement by the Bridge Enterprise for Preservation Activity costs performed by the CDOT contractor(s) for the Bridge Enterprise, but that this Agreement does not presently encumber funds for those purposes. All expenditures by the Bridge Enterprise for bridge preservation services provided by CDOT shall be subject to the authority of the Bridge Enterprise Board to budget and approve expenditures from the Bridge Special Fund.

**2.8 Payments Subordinate to Trust Estate**

The Parties agree that the obligations of the Bridge Enterprise to reimburse CDOT for Preservation Activities are subordinate to the lien on the Trust Estate established in the Master Trust Indenture dated December 15, 2010 by and between the Bridge Enterprise and Wells Fargo Bank, N.A., as it may be amended from time-to-time in accordance with its terms.

**SIGNATURE PAGE**

**COLORADO BRIDGE ENTERPRISE**

A handwritten signature in black ink, appearing to read "Don Hunt", written over a horizontal line.

**DON HUNT, EXECUTIVE DIRECTOR**

**COLORADO DEPARTMENT OF TRANSPORTATION**

A handwritten signature in black ink, appearing to read "Tim Harris", written over a horizontal line.

**TIM HARRIS, CHIEF ENGINEER**

## EXHIBIT A

# Colorado Bridge Enterprise Pilot Preservation Program

## Introduction

Colorado Bridge Enterprise (CBE) has made significant investments in addressing Colorado's highway bridge replacement needs. Maximizing the long-term value of this investment requires CBE to become more proactive than reactive in the approach to managing and addressing the maintenance of CBE assets.

The Pilot Preservation Program will be a two-phased approach. The first phase will involve the deployment of a limited amount of preservation measures and requisite funding (approximately \$100K) on approximately 12 candidate bridges. In the second phase the program will collect and analyze data results and document effectiveness with the intent of deploying a larger scale, more robust preservation program.

## Purpose

It is generally recognized that applying the appropriate bridge preservation treatments and activities at the appropriate time may extend a bridge's useful life at a lower lifetime cost.

The need for proactive asset management requires CBE to become more strategic by adopting and implementing systematic processes for bridge preservation as an integral component of the overall management of the bridge assets.

CBE seeks a balanced approach to preservation. Focusing only on replacing deficient bridges while ignoring the newly replaced bridge preservation needs would be inefficient and cost-prohibitive in the long term.

Preservation activities often cost much less than major reconstruction or replacement activities even after many years of performing the preservation activities. Delaying or foregoing warranted preservation treatments may result in an acceleration of the condition deterioration. A viable alternative is timely and effective bridge preservation of new bridges to extend their useful life before they require replacement.

## Scope

The CBE preservation program plans to employ strategies and actions to maximize the useful life of approximately a dozen bridges in different geographic and climatic locations, also taking into consideration usage factors such as high ADT (Average Daily Traffic), percentage truck traffic, and structure type.

The preservation activities may include but are not limited to the items listed below:

- Bridge Deck Rinsing and Cleaning
- Waterproofing exposed Concrete surfaces
- Sealing or Replacing Deck Joints
- Facilitating Drainage
- Painting
- Removing Channel Debris
- Maintaining Embankment
- Lubricating Bearing (if applicable)
- Potential Use/Installation of Various Deck or Structure Sensors

The preservation activities are currently planned to be performed by an independent contractor under the direction of CDOT Staff Bridge.

### **Pilot Program Objectives**

The primary objectives of this pilot preservation program are as follows:

- CBE and CDOT Staff Bridge shall collaborate on the selection of approximately 12 candidate structures to be entered into the program. The selection of structures in distinctively different geographies will enable the program to evaluate the effectiveness of the treatments in different climate conditions. However, the selected structure must have a companion structure located in a similar climate and have similar usage that was not in the preservation program in order to have a relevant comparison.
- CBE and Staff Bridge will also collaborate on the treatment activities and frequency of the activities that will be deployed. Reference **Attachment A** for a listing of various proposed treatments and application frequencies per FHWA's Bridge Preservation Guide. The activities may be adjusted or changed during the program after analysis of preliminary data.
- CBE and CDOT Staff Bridge shall develop preliminary cost estimates associated with each preservation measure. This may require external conversations with manufacturers and/or contractors.
- Attempt to quantify effectiveness as it relates to extending a bridge's useful life.

### **Re-inspection and Data Collection**

To ascertain effectiveness of each preservation activity, CBE staff in concert with CDOT Staff Bridge will identify the timing of periodical follow-up inspections. This may include but is not limited to the following activities:

- Photo documentation depicting situation prior to application, immediately after, and then periodically thereafter.
- Data collection which may be a visual examination / observation with a complementary detailed narrative documenting before and after conditions.
- Document and confirm product effectiveness (e.g., concrete waterproofing) as outlined by manufacturer product data warranty.
- A continued and active identification of other quantitative testing and data collection procedures to further quantify effectiveness.
- Research and comparison of preservation measures being deployed by other state DOT's.

## **Documentation and Reporting**

The appropriate documentation shall be maintained on all candidate bridges involved within the program, including preservation measures deployed, application costs, and summary of re-inspection and data collection results. In addition, CBE staff in concert with CDOT Staff Bridge shall:

- Issue a report documenting the above noted information
- Periodically apprise the CBE Board of Directors on current program status and findings
- Use the data results as a starting point for the framework on implementation of a larger more robust program including identification of recommended preservation treatments and their respective life-cycle costs.

The preservation activities will be recorded and placed into the bridge file. After a specific period of time (probably not less than 10 years) the bi-annual bridge inspection reports (SIA's) of the preservation program selected bridges will be compared to similar structures that were not entered into the preservation program.

## **Estimated Cost**

Colorado Bridge Enterprise has estimated the cost of the Pilot Preservation Program to be approximately \$100,000 per year. The estimated cost includes CDOT Staff Bridge management of the contract and preservation activities performed at the intervals suggested in **Attachment A**. The actual cost to administer the program will be billed monthly by CDOT to CBE.

## ATTACHMENT A

### PRESERVATION ACTIVITY

### INTERVAL (Est.)

Bridge Rinsing and Cleaning	every 1-3 years
Sealing or Replacing Deck Joints	every 3-5 years
Facilitating Drainage	as needed
Sealing Deck Concrete	every 3-5 years
Painting	every 10-15 years
Removing Channel Debris	every 1-2 years
Maintaining Embankment	as needed
Lubricating Bearing (if applicable)	every 2-4 years
Potential Use/Installation of Various Deck or Structure Sensors	to be determined

### Resources

FHWA Bridge Preservation Guide, August 2011.