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## 18.0 MAINTENANCE DURING CONSTRUCTION

This Section 18 includes the requirements for the maintenance during construction Work for the Region 2 Bridge Bundle Design Build Project (Project). This Work shall be completed in accordance with the Contract Documents.

### 18.1 Maintenance Administration

#### 18.1.1 Responsibilities for Maintenance

The responsibility for performing maintenance of the Highway within the project limits shall be the Contractor's responsibility and shall conform to Sections 104.04, 105.19, 105.20 and 107.17 of the 2019 Colorado Department of Transportation (CDOT) *Standard Specifications for Road and Bridge Construction*, and as described herein.

Americans with Disabilities Act (ADA) compliant pathways with an all-weather surface shall be provided and maintained at all times by the Contractor, if applicable. The requirements herein define those maintenance Work responsibilities that shall be performed by the Contractor and those that will remain the responsibility of CDOT. All Work shall conform to the CDOT Highway Maintenance Levels of Service Manual.

##### 18.1.1.1 Initiation of Contractor Maintenance Responsibilities

The Contractor will commence maintenance responsibilities beginning upon the first mobilization for any Work on a structure segment through Final Acceptance, including any and all project suspensions for weather and/or seasonal shut downs.

##### 18.1.1.2 Termination of Contractor Maintenance Responsibilities

All responsibilities assigned to the Contractor shall remain as defined until Final Acceptance.

#### 18.1.2 Maintenance Level of Service Plan

The Contractor shall develop and submit to CDOT a Maintenance Level of Service (MLOS) plan for Approval. The MLOS plan shall define the Contractor's complete strategy for the implementation, coordination, scheduling, and monitoring of maintenance Activities during the Project. The MLOS plan shall conform to the CDOT *Highway Maintenance Level of Service Manual* and be updated at a minimum every six months or sooner if needed, to reflect changes in the Contractor's construction Activities. The Maintenance Level of Service Plan shall also address the following components:

1. Maintenance Condition Survey  
Every six (6) months, the Contractor shall perform a detailed survey of maintenance conditions for the Highway(s) and any Road provided for construction phasing until all of the Contractor's maintenance responsibilities are complete (Final Acceptance). The results of the survey shall be documented by the Contractor and submitted to CDOT for Acceptance.
2. Monthly Maintenance Progress Report

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Monthly Maintenance Progress Reports shall be required for the full term of the Contractor's maintenance responsibilities. These reports shall detail all maintenance Activities performed, monitored maintenance condition of existing facilities, identification of any deficiencies from minimum standards, and an action plan for correcting the deficiencies. Monthly maintenance progress reports shall be submitted to CDOT for review each month with the monthly invoice submittal for Review, as required in Book 2, Section 2 - Project Management.

The Maintenance Level of Service Plan shall be submitted to CDOT for Approval at least 21 Days prior to the Second Notice to Proceed (NTP2).

### **18.1.3 Maintenance Responsibilities of the Contractor**

Except as specifically assigned to CDOT in Section 18.1.4, the Contractor shall perform all required maintenance Activities, within 48 hours or less of notice of maintenance item, for all roadways within the project limits per 18.1.1.1, including but not limited to:

1. Patching and repair of existing pavements
2. Patching and repair of all existing structures included as a part of the Project
3. Repair of shoulder drop-offs
4. Replacement and repair of existing Hot Mix Asphalt (HMA) shoulders
5. Snow and ice removal for lanes closed to traffic and behind all temporary barrier
6. Maintenance of delineators, signing and pavement markings
7. Compliance to ADA requirements for all-weather surfaces of all pathways and accesses at all times, if applicable.
8. Drainage maintenance
9. HMA overlays of existing pavements and structures utilized as detours or as a part of the Contractor's Maintenance of Traffic (MOT) plans
10. Replacement of damaged guardrail, bridge rail, barriers, and glare screens
11. Repair of impact attenuators
12. Vegetation control in conformance with local agency ordinances
13. Litter control
14. Graffiti removal (graffiti shall be removed within 24 hours of notification and surface shall be the same color as the original)
15. Activities described in Appendix 18-A, Maintenance Performance Specifications (During Construction).
16. Debris removal responsive to providing the minimum lane requirements in Book 2, Section 16 - Maintenance of Traffic.
17. Sweeping as required by CDOT *Standard Specifications for Road and Bridge Construction 208.04(f)*.

Snow removal operations in the lanes closed to traffic and behind all temporary barriers shall be done in a way to avoid placing snow back into open lanes to traffic. Snow must be removed far enough from the edge of travel lane that runoff from melting snow will not enter into the travel lanes.

The Contractor shall meet vehicle weight limits for all trucks hauling material over the Roadway. CDOT may request certified truck weights for any trucks hauling Material over the Roadway at any time. The Contractor shall pay a price reduction fee per CDOT *Standard Specifications for Road and Bridge Construction 105.18*.

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Any items (debris) of value discovered by the Contractor on the highway shall be held by the Contractor at least 30 Days in consideration of claim by the original owner. This includes temporary advertisement signs. If the original owner does not claim these items within 30 Days, the Contractor shall then relinquish the items (debris) of value to CDOT's Maintenance Staff for storage and the Contractor may dispose of all advertising material at its discretion.

If repair or removal of items illegally dumped on any ROW or easement is required, the Contractor shall perform such services within 3 Working Days from the date discovered or reported.

#### **18.1.4 Maintenance Responsibilities of CDOT**

CDOT will perform the following maintenance Activities:

1. Inspection of structures
2. Patching and repair of all existing structures excluded from the Project
3. Snow and ice control for all lanes open to traffic on US 350, US 24, CO 9, and CO 239 prior to and during a snow event.

#### **18.1.5 Limits of Maintenance Responsibilities**

The longitudinal limits of the Contractor's maintenance responsibilities on the Project shall conform to the limits of the Project, including all portions of the Work.

The lateral limits shall be the ROW mainline, and ramps within the Project Site. Any other areas disturbed by Contractor Activities, outside of these limits, shall be the sole maintenance responsibility of the Contractor.

#### **18.1.6 Excluded Areas**

There are no excluded areas within the Project limits.

#### **18.1.7 Payment for Maintenance During Construction**

Progress payments for maintenance during construction shall be according to Book 2, Section 2 - Project Management.

### **18.2 Performance Specifications**

In performance of maintenance on the Project, the Contractor shall comply with the CDOT *Highway Maintenance Level of Service Manual*. Specifically, the Contractor shall adhere to the requirements for data collection and measurement for equating level of service (LOS) on the Highway and incorporate these requirements into its performance of all maintenance Work according to the maintenance of MLOS plan.

A minimum of LOS D shall be maintained within the Project limits through the duration of the Project, per the CDOT *Highway Maintenance Levels of Service Manual*.

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### 18.3 Right-of-Way Construction Requirements

#### 18.3.1 Risk of Loss, Obligation to Maintain and Repair

The Contractor shall comply with requirements in Book 2, Section 8 - Right of Way, and shall maintain improvements and provide reasonable safety and security measures to preserve any acquired ROW or easements (temporary or permanent). The Contractor shall conduct regular Site inspections and prevent, minimize, or correct problems such as vandalism, trespassing, rodent infestation, weed control (in accordance with any local agency ordinances), illegal dumping or disposal of rubble, and other debris on all areas of the Project that are under the Contractor's maintenance responsibility.

#### 18.4 Deliverables

At a minimum, the Contractor shall submit the following to CDOT for Review, Approval and/or Acceptance:

Deliverable	Review, Acceptance or Approval	Schedule
Maintenance Level of Service Plan	Approval	At least 21 Days prior to NTP2, then update every 6 months or sooner if needed
Maintenance condition surveys	Acceptance	Concurrent with the Maintenance Level of Service Plan update
Maintenance progress reports	Review	Included in monthly invoice submittal

#### 18.5 Appendix

Appendix 16-A: Maintenance Performance Specifications (During Construction)

Appendix A

**MAINTENANCE PERFORMANCE SPECIFICATIONS (DURING CONSTRUCTION)**

The following is an item Activities listing from CDOT's Highway Levels of Service Manual, for which the Contractor shall be responsible during construction.

**Maintenance Program Area: Roadway Surface (150)**

Survey Item	CDOT Activities Number
Patching/Minor Surface Repair	152
Patching-Machine, Overlay and Leveling	154
Blading – Existing Unpaved Surface/Shoulder	162
Building / Restoring Unpaved Surface/Shoulder	163
Base Stabilization and Repair	164

**Maintenance Program Area: Roadside Facilities (200)**

Survey Item	CDOT Activities Number
Drainage Structures Clean, Repair or Replace	202
Maintenance of Ditches and Streambeds	206
Slope Repair	210
Fence, Gate Cleaning & Maintenance	216
Litter Barrel and Trash Cleanup	218
Sweeping – Machine	220
Sweeping – Hand	222

**Maintenance Program Area: Roadside Appearance (250)**

Survey Item	CDOT Activities Number
Vegetation Control – Dry Land	252
Vegetation Control – Bluegrass	253
Vegetation Control – Hand Mowing, Weeding	254
Vegetation Control – Herbicide & Pesticide App	256
Vegetation Control – Irrigation	258
Tree Planting, Removal, Trimming	260

**Maintenance Program Area: Traffic Services (300)**

Survey Item	CDOT Activities Number
Traffic Signs	302, 303
Delineators, Mile Markers	304
Metal Guardrail	306
Concrete Guardrail	307
Pavement Striping, Pavement Markings	308, 310
Roadway, Sign Lighting	312
Traffic Signals	314
Energy Attenuators	316

Electrical Wiring	320
Interconnect Systems	326

**Maintenance Program Area: Structure Maintenance (350)**

Survey Item	CDOT Activities Number
Bridge Decks	353
Bridge Superstructure	354
Bridge / Structure Painting	355
Bridge Curbs, Railings	356
Bridge Structure Bearings	357
Bridge Substructure	358
Bridge Approaches, Slopes	360
Bridge Deck Expansion Devices	364

**Maintenance Program Area: Snow and Ice Control (400)**

Survey Item	CDOT Activities Number
Snow Removal (Lanes Closed to Traffic)	402
Ice Control – Drainage Related	403