



For roadway sections

**EL PASO COUNTY
 DEPARTMENT OF PUBLIC WORKS
 ENGINEERING DIVISION**

CALHAN HIGHWAY BRIDGE REPLACEMENT

SPECIAL PROVISIONS



For drainage
 and stormwater
 sections

The 2022 Colorado Department of Transportation (CDOT) *Standard Specifications for Road and Bridge Construction* (Standard Specifications) controls construction of this project. The following Special Provisions supplement or modify the Standard Specifications and take precedence over the Standard Specifications.

PROJECT SPECIAL PROVISIONS

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CDOT STANDARD SPECIAL PROVISIONS

The Standard Specifications are hereby modified in accordance with the CDOT Standard Special Provisions listed below and included with this specification package. These Standard Special Provisions have not been modified or formatted from the original versions written by CDOT.

**SSP Index 11-01-2022
 [For 2022 Spec Book]**

Name	Date	No. of Pages
Revision of Section 101 and 106 – Buy America Requirements	(November 1, 2022)	3
Revision of Section 105 – Control of Work	(October 1, 2022)	1
Revision of Section 109 – Asphalt Cement Cost Adjustment (Asphalt Cement Included in the Work)	(October 1, 2022)	3
Revision of Section 109 – Prompt Payment (Local Agency)	(October 1, 2022)	2
Revision of Section 207 – Topsoil	(October 1, 2022)	6
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Revision of Section 601 – Class DF Concrete	(October 1, 2022)	1
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NOTICE TO BIDDERS

The below referenced individuals are the only representatives of the Department with authority to provide any information, clarification, or interpretation regarding the plans, specifications, and any other contract documents or requirements.

El Paso County Engineer: Joshua Palmer
(719) 520-6806

El Paso County Project Engineer: Brett Hartzell
(719) 520-6860

CDOT Program Engineer: John Hall
(719) 227-3205

**COMMENCEMENT AND COMPLETION OF WORK
(WORKING DAYS)**

The Contractor shall commence work under the Contract on or before the 15th day following Contract execution or the 30th day following the date of award, whichever comes later, unless such time for beginning the work is changed by the County in the *Notice to Proceed*. The Contractor shall complete all work within **two hundred and sixty (260) working days** in accordance with the *Notice to Proceed* issued by the County.

A Limited Notice to Proceed may be provided to the Contractor prior to the Notice to Proceed for the purpose of ordering certain materials for the project that may require substantial lead time prior to delivery to the site, permitting and other non-construction tasks. Construction Work shall commence upon Notice to Proceed.

If materials stockpiling begins before the beginning date, contract time will not be charged for the stockpiling effort. Stockpiling of materials before the beginning date is subject to the Engineer's approval. If such approval is given, stockpiled material will be paid for in accordance with Sections 109 and 626.

Asphalt paving shall not be performed between **October 15** and **April 15**. As temperatures allow, paving outside this window can be accomplished if approved by the Engineer.

Salient features for this project, for the purpose of scheduling under Section 108, are:

- (1) Mobilization
- (2) Utility Relocations
- (3) SWMP Implementation
- (4) Bridge Removal
- (5) Bridge Replacement
- (6) Retaining Wall Construction
- (7) Removal of Asphalt Mat
- (8) HMA Paving
- (9) Guardrail Installation
- (10) Temporary and Permanent Pavement Markings
- (11) Temporary and Permanent Signing
- (12) Maintenance of Traffic (detours) of Public Roads
- (13) Seeding, Site Restoration, and Demobilization

DISADVANTAGED BUSINESS ENTERPRISE (DBE) CONTRACT GOAL

This is a federally-assisted construction project. As described in the CDOT DBE Standard Special Provision, the Bidder shall make good faith efforts to meet the following contract goal:

3% Percent DBE participation

ON THE JOB TRAINING CONTRACT GOAL

The Department has determined that On the Job Training shall be provided to trainees with the goal of developing full journey workers in the types of trade or classification involved. The contract goal for On the Job Trainees working in an approved training plan in this Contract has been established as follows:

Minimum number of total On the Job Training required = 640 hours

**REVISION OF SECTION 101
DEFINITIONS AND TERMS**

Section 101 of the Standard Specifications is hereby revised as follows:

Section 101 shall include the following:

Add the following language for the purpose of identification of the Owner and responsible parties for control of the construction of this project:

CONTRACT MODIFICATION ORDER: In addition to the definition given in the Standard Specifications, the term “Contract Modification Order” shall also include and be synonymous with the term “Change Order”.

CDOT RESIDENT ENGINEER, RESIDENT ENGINEER, or PROJECT ENGINEER: These terms shall mean the County Engineer, El Paso County Department of Public Works, or designated representative.

OWNER: The term “Owner” shall refer to the El Paso County Department of Public Works acting through and on behalf of the El Paso County Board of County Commissioners.

Add the following language for the purpose of defining and interpreting additional terms that may be utilized in the Standard Specifications:

- (a) “Central Laboratory” shall mean El Paso County, Colorado or designated representative.
- (b) “Chief Engineer” shall mean the El Paso County Engineer or designated representative.
- (c) “County” shall mean El Paso County, Colorado.
- (d) “Department” shall mean El Paso County, Colorado, Department of Public Works, Engineering Division.
- (e) “Department of Transportation” shall mean El Paso County, Department of Public Works, Engineering Division.
- (f) “District Engineer” shall mean the El Paso County Engineer or designated representative.
- (g) “Division” shall mean the El Paso County Department of Public Works, Engineering Division.
- (h) “Division of Highways, State of Colorado” shall mean the El Paso County Department of Public Works, Engineering Division.
- (i) “Engineer” shall mean the El Paso County Engineer or designated representative.
- (j) “Regional Transportation Director” shall mean the El Paso County Engineer or designated representative.
- (k) “Staff Construction Engineer” shall mean the El Paso County Engineer or designated representative.
- (l) “State, State of Colorado, State Department of Transportation, or CDOT” shall mean El Paso County, Colorado (where applicable).
- (m) “CDOT Staff Bridge, or Staff Bridge” shall mean El Paso County Engineer or designated representative or CDOT Staff Bridge if determined by the El Paso County Engineer.

**REVISION OF SECTION 102
BIDDING REQUIREMENTS AND CONDITIONS**

Section 102 of the Standard Specifications is hereby revised as follows:

Delete subsection 102.01 Pre-Qualification of Bidders.

Subsection 102.05 shall include the following:

The following information will be available on CD-ROM through the El Paso County Contracts & Procurement Division office, 210 S. Tejon St., Suite 138, Colorado Springs, CO 80903, (719) 520-6730 until the date set for opening bids:

- Full set of 11" x 17" construction plans (PDF)
- Geotechnical Report (Pavement and Structures)
- Project Special Provisions (included with these specifications)
- CDOT Standard Special Provisions (included with these specifications)
- Drainage Report
- Structure Selection Report

**REVISION OF SECTION 102
PROJECT PLANS AND OTHER DATA**

Section 102 of the Standard Specifications is hereby revised as follows:

Subsection 102.05 shall include the following:

3D modeling data is available in Land XML and DGN formats. These documents may be obtained by contacting the County Project Engineer listed in the Notice to Bidders. Available 3D modeling data consists of:

(a) Project Alignments

- (1) LandXML file generated of all Proposed Geometry

(b) Surfaces – LandXML files of the following:

- (1) Existing Terrain Model
- (2) Finished Grade Terrain Model

(c) DGN files:

- (1) Right of Way
- (2) Topography
- (3) Additional files include – Discipline Design Files

The County does not warrant the 3D modeling data and this information is not considered to be a part of the Contract. If bidders use the 3D modeling data in preparing a proposal or planning and prosecuting the work, it is used at their own risk, and bidders are responsible for all conclusions, deductions, and inferences drawn from the 3D modeling data.

The Contractor may obtain electronic sets of plans and special provisions from the El Paso County Department of Public Works. Also, if they are available for the project, the Contractor may also obtain cross sections, major structure plan sheets, and computer output data.

Survey information is available at the County Engineer's office for review.

Asbestos and Lead Testing Report from the CDOT Hazardous Materials Coordinator is available in PDF format.

Colorado Department of Public Health and Environment – Colorado Discharge Permit System Stormwater Construction Permit (CDPS SCP) is available from the County Project Engineer.

**REVISION OF SECTION 103
AWARD AND EXECUTION OF CONTRACT**

Section 103 of the Standard Specifications is hereby revised as follows:

Add subsection 103.05 to include the following:

103.05 Duration of Contract. The contract will remain open until all work has been completed and accepted by the County, all permit requirements have been met, and all permits have been closed. If agreed upon by the Contractor and the Engineer, the project may be deemed substantially complete and retainage may be released before the Colorado Discharge Permit System - Stormwater Construction Permit (CDPS-SCP) is closed. The Contractor will remain responsible for meeting all permit requirements, including but not limited to: inspections, maintenance, and additional work as approved by the Engineer, until the permit has been closed.

**REVISION OF SECTION 105
CONTROL OF WORK**

Section 105 of the Standard Specifications is hereby revised as follows:

Delete Subsection 105.04 and replace with the following:

All asphalt binders used for hot mix asphalt shall meet the requirements outlined in the *Pikes Peak Region Asphalt Paving Specifications, Version 5*.

Delete Subsection 105.05 and replace with the following:

All hot mix asphalt will be placed, tested, and paid for in accordance with the most current version of the *Pikes Peak Region Asphalt Paving Specifications, Version 5*.

Delete Subsection 105.07 and replace with the following:

All hot mix asphalt, Item 403, except hot mix asphalt used for patching and temporary pavement, shall be tested for smoothness in accordance with the *Pikes Peak Region Asphalt Paving Specifications, Version 5*.

Delete Subsection 105.09 and replace with the following:

105.09 Coordination of Plans, Specifications, Supplemental Specifications, and Special Provisions. These specifications, the plans, Project Special Provisions, CDOT Standard Special Provisions, and all supplementary documents are essential parts of the Contract, and a requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work.

In case of discrepancy the order of precedence is as follows:

- (1) Project Special Provisions
- (2) Project Plans
- (3) Standard Specifications
 - A. *Pikes Peak Region Asphalt Paving Specifications, Version 5*
 - B. CDOT Standard Special Provisions
 - C. CDOT *Standard Specifications for Road and Bridge Construction*
 - D. El Paso County *Engineering Criteria Manual*
- (4) Standard Drawings
 - A. CDOT *M&S Standard Plans*

The Contractor shall not take advantage of any apparent error or omission in the Contract. If the Contractor discovers an error or omission, the Contractor shall immediately notify the Engineer. The Engineer will make corrections and interpretations as necessary to fulfill the intent of the Contract.

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Revision of Section 105
Control of Work OF WORK

Subsection 105.10 shall include the following:

Other contractors, public and private utility agencies, and private developers may be working in areas near or adjacent to the project.

Subsection 105.12 shall include the following:

The Contractor shall conduct the work so as not to interfere with or hinder the progress or completion of the work being performed by other agencies or Contractors. Traffic Control conflicts that arise between the needs of the various construction contractors and other agencies, shall be brought to the attention of the Engineer. The Engineer will decide the method of resolution. It is agreed that the Contractor shall coordinate his/her respective Traffic Control subcontractor resources, Traffic Control Plans, Methods of Handling Traffic (MHT), and phasing elements to assure the most efficient, direct, safe, and smooth flow of traffic throughout the entire project work zone.

Subsection 105.14 shall include the following:

Work performed by the Contractor, outside the scope of the project plans and specifications as determined by the County, and not directed by the County, will not be compensated by the County.

**REVISION OF SECTION 106
CONTROL OF MATERIAL**

Section 106 of the Standard Specifications is hereby revised as follows:

Delete Section 106.05 and replace with the following:

All hot mix asphalt, Item 403, except hot mix asphalt used for patching and temporary pavement, shall be tested in accordance with Version 5, Section 4 of the *Pikes Peak Region Asphalt Paving Specifications* unless otherwise specified in these Project Special Provisions or following approval by the Engineer.

**REVISION OF SECTION 107
PERMITS, LICENSES, AND INSURANCE**

Section 107 of the Standard Specifications is hereby revised as follows:

Delete subsection 107.02, Permits, Licenses, and Taxes, and replace with the following:

107.02 Permits, Licenses, and Taxes. Unless otherwise specified, the Contractor shall procure all permits and licenses; pay all charges, fees, and taxes, including permits procured for this project by others; and give all notices necessary and incidental to the due and lawful prosecution of the work. The costs of these permits shall be included in the cost of the work and will not be paid separately. Copies of the fully executed permits shall be furnished to the Engineer upon request.

Permits that the Contractor is responsible for obtaining include, but are not limited to:

- (1) Erosion Storm Water Quality Control Permit “ESQCP” – El Paso County
- (2) Work in the Right-of-Way Permit – El Paso County
- (3) Construction Dewatering Permit – CDPHE
- (4) Bridge Demolition Permit - CDPHE

The County has obtained a Construction Dewatering Discharge Permit (CDPS from the Colorado Department of Public Health and Environment (CDPHE). Water from pumping activities containing pollutants cannot be placed directly back into the adjacent surface water without first obtaining a permit. If the Contractor's operations require discharge of water containing pollutants including sediments, they will be required to obtain the appropriate permit and develop a plan for managing that water. This plan must have written approval from CDPHE, which requires a minimum of 30 days, and the Engineer before pumping operations can begin.

The Contractor shall comply with the conditions of a Nationwide Permit 3 (NWP 3) in accordance with Section 404 of the Clean Water Act. A copy of the permit conditions is available from El Paso County.

Delete unused subsection 107.18 and replace with the following:

107.18 Insurance. For this project, all insurance certificates shall name El Paso County as additionally insured parties, with a 30-day cancellation notification.

Subsection 107.19 shall include the following:

A El Paso County Work in the Right of Way Permit shall be obtained by the Contractor before performing work within El Paso County Right of Way.

**REVISION OF SECTION 107
PERFORMANCE OF SAFETY CRITICAL WORK**

Section 107 of the Standard Specifications is hereby revised for this project as follows:

Subsection 107.06 (d) Competent Persons shall include the following:

(20) Traffic Control

**REVISION OF SECTION 107
NOXIOUS WEEDS**

Section 107 of the Standard Specifications is hereby revised as follows:

Add the following subsection:

107.26 Noxious Weeds. Noxious weeds may persist on or adjacent to the project location. All weed species on the State Weed Law List A and B shall be addressed according to State Statute. Information regarding noxious weeds is available through the CDOT Region 2 Environmental Office. CDOT Standard Specifications and BMPs shall be followed to reduce the spread of noxious weeds, including the following:

- (1) Soil disturbance shall be minimized to the extent possible.
- (2) Weed management efforts shall be coordinated with local jurisdictional agencies and adjacent landowners to the extent possible.
- (3) Herbicide may be used immediately adjacent to wetlands and/or water bodies only if the label indicates that its use is appropriate for such areas.
- (4) Noxious weeds observed in and near the construction area will be treated with herbicides or mechanically removed prior to the start of construction to minimize spread.
- (5) All disturbed area will be re-seeded with a certified weed-free seed mix within seven days of completion of work during the growing season.
- (6) Fertilizer will not be used in seeded area because it can enhance the growth of noxious weeds at the expense of desired vegetation.
- (7) "A" Horizon soil material currently supporting noxious weed cover of more than 10% shall not be used as topsoil during re-vegetation.
- (8) Topsoil should not be imported due to the potential for spread of noxious weeds.
- (9) All areas treated for noxious weeds during construction will be monitored and re-treated, if necessary, to prevent establishment of noxious weeds.
- (10) Any compost or mulch used shall be weed-free.

The costs to implement measures to reduce the spread of noxious weeds will not be paid separately and shall be included in the cost of the work.

**REVISION OF SECTION 107
AQUATIC INVASIVE SPECIES**

Section 107 of the Standard Specifications is hereby revised as follows:

Add the following subsection:

107.27 Aquatic Invasive Species. If heavy equipment used on this project has previously been used in another stream, river, lake, reservoir, pond, or wetland, one of the following disinfection practices shall be used prior to construction to prevent the spread of aquatic invasive species. The Contractor shall clean hand tools, boots, and other equipment that will be used in the water with one of the following options as well.

- (1) Remove all mud, plants, and debris from equipment (tracks, turrets, buckets, drags, teeth, etc) and spray/soak equipment in a 1:15 solution of Sparquat Clearing and water or Super HDQ Neutral Institutional Cleaner and water (keep equipment moist for at least ten minutes, or:
- (2) Remove all mud, plants, and debris from equipment (tracks, turrets, buckets, drags, teeth, etc) with water greater than 140 degrees Fahrenheit for at least ten minutes.

Equipment shall be dry before use.

The Contractor shall not move water from one water body to another.

The costs to inspect and clean equipment will not be paid separately and shall be included in the cost of the work.

**REVISION OF SECTION 108
PROJECT SCHEDULE**

Section 108 of the Standard Specifications is hereby revised as follows:

Subsection 108.03, Schedule, shall include the following:

The Contractor shall use the Critical Path Method (CPM). A Bar Chart schedule is not acceptable.

The Contractor shall submit an electronic copy (Microsoft Project format) and PDF copy of the CPM project schedule and method statement to the Engineer each month, ten days prior to the pay estimate cut-off date. Payment of the estimate will be released after review and acceptance of the updated schedule and method statement. Minimum review time by the County will be fourteen calendar days.

The Contractor shall establish a regular schedule for working hours and working days per week for concurrence by the Engineer. Changes to this schedule shall be coordinated with the Engineer at least two weeks in advance of a change to provide the Engineer with sufficient time to organize staff.

All construction activities shall be completed during daytime hours between **7:00 AM and 7:00 PM**. Nighttime construction work, defined as any work outside of this time range, will be considered provided that the Contractor submits a request a minimum of two weeks prior to the nighttime activities. The submittal shall include a noise mitigation plan identifying the measures to be implemented by the Contractor to mitigate construction noise. Noise mitigation measures will not be measured and paid for separately but shall be included in the work. The submittal shall also include a night lighting plan.

**REVISION OF SECTION 202
REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

Section 202 of the Standard Specifications is hereby revised as follows:

Subsection 202.04, Signs and Traffic Signals, shall include the following:

Sign panels removed by the Contractor shall remain the property of the County and shall be neatly salvaged, transported, and delivered by the Contractor to 3275 Akers Drive, Colorado Springs, CO. The work required to salvage, transport, and deliver sign panels shall be included in the cost of the work and will not be paid separately.

Add the following subsections immediately following subsection 202.10, Clean Culvert:

202.101 Removal of Guardrail. The Contractor shall propose a method to remove guardrail posts. The method shall minimize disturbance to the roadway subgrade, shall not adversely disturb utilities, and shall provide for backfill of the resultant hole. The Engineer shall review and approve the method prior to use.

Steel components of removed guardrail and guardrail end anchorages shall remain the property of the County and shall be neatly salvaged by the Contractor to a location on the project, approved by the Engineer, for pick-up by County forces.

This project includes both removal and reset of existing concrete barrier. The quantity of removal represents the estimated quantity of concrete barrier in excess of what will be needed when the project is complete. The Contractor shall take possession of concrete barrier that is removed and shall be responsible for transportation off-site. Segments of precast barrier that are in poor condition, as identified by the County, shall be the first to be removed and shall not be reset elsewhere on the project.

202.102 Removal of Minor Utilities. Unless a pay item is included in the Contract, the work to remove and dispose of abandoned utility lines that are encountered in the work will not be paid separately and shall be included in the cost of the work, including but not limited to plastic conduit and direct-bury wires.

Subsection 202.11, Method of Measurement, shall include the following:

Removal of Guardrail Type 3 will be measured by the linear foot along the face of rail including end anchorages.

Section 202.12, Basis of Payment, shall include the following:

Pay Item	Pay Unit
Removal of Fence	Linear Foot
Removal of Guardrail Type 3	Linear Foot

**REVISION OF SECTION 202
REMOVAL OF STRUCTURES COATED WITH HEAVY-METAL BASED PAINT**

Section 202 of the Standard Specifications is hereby revised for this project as follows:

Subsection 202.01 shall include the following:

This work consists of the removal of a structure or components of a structure coated with paint which may contain lead, other heavy metals, or a combination thereof. Management of paint debris waste shall be accomplished in accordance with Section 250.

Contractor shall obtain a bridge demolition permit from the Colorado Department of Public Health and Environment (CDPHE) and comply with all requirements

Subsection 202.12 shall include the following:

Payment for removal of structures, or portions thereof, coated with heavy-metal based paint will be full compensation for all work necessary to complete the item. Paint debris waste management and disposal will be measured and paid for in accordance with Section 250.

**REVISION OF SECTION 202
REMOVAL OF PAVEMENT MARKING**

Section 202 of the Standard Specifications is hereby revised for this project as follows:

In subsection 202.05, delete the first paragraph and replace with the following:

202.05 Pavement Markings. Pavement marking on the existing pavement shall be removed prior to placing new material. Removal shall be achieved by high pressure water spray. Water blasting shall abrade the surface of the pavement to a depth of 5 to 10 mils below the top of the existing pavement. The depth shall be measured from the bottom of a 2-foot straight edge that is placed transverse to the removed stripe on the roadway surface. Operations that do not produce the desired result, damage the pavement, or may constitute a hazard to the traveling public will not be permitted. Materials deposited on the pavement as a result of removal of pavement markings shall be promptly removed so as not to interfere with traffic or roadway drainage

**REVISION OF SECTION 202
REMOVAL OF ASPHALT MAT**

Section 202 of the Standard Specifications is hereby revised for this project as follows:

Subsection 202.01 shall include the following:

This work includes removal and disposal of exiting asphalt mat within the project limits as shown on the plans or at locations directed by the Engineer.

In Subsection 202.02, delete the 7th paragraph and replace with the following:

The existing asphalt mat which varies in thickness and location shall be removed in a manner that minimizes contamination of the removed mat with underlying material. The removed mat shall become the property of the Contractor and shall be either disposed of outside the project site, or used in one or more of the following ways:

- Used in embankment construction in accordance with subsection 203.06.
- Placed in bottom of fills as approved by the Engineer.
- Placed in subgrade soft spots as directed by the Engineer.
- Or in a manner approved by the engineer – Pre-approval is required prior to placement, otherwise material will be removed at no additional cost to the project

Subsection 202.11 shall include the following:

The removal of asphalt mat will be measured in square yards of pavement removed, regardless of depth and location. The cutting of asphalt mat to a neat line where removal of asphalt mat will abut a new pavement will not be paid for separately but shall be included in the work. The Contractor shall perform necessary investigations required to determine the thickness and location of existing asphalt pavements designated for removal.

Subsection 202.12 shall include the following:

Payment will be made under:

Pay Item	Pay Unit
Removal of Asphalt Mat	Square Yard

The disposal of the asphalt mat or its use in other locations on the project will not be measured and paid for separately, but shall be included in the work.

**REVISION OF SECTION 203
EMBANKMENT MATERIAL**

Section 203 of the Standard Specifications is hereby revised for this project as follows:

Subsection 203.03, first paragraph, shall include the following:

Embankment material shall consist of approved material acquired from excavations, hauled and placed in embankments. All embankment material shall have a maximum dry density of not less than 90 lb./cu. ft. All embankment material shall be free of topsoil, organic matter, claystone, and other deleterious materials, shall have less than 36% passing the #200 sieve. The material must be stable when tested in accordance with Colorado Procedure L-3102 and have an R-value of at least 15 or greater as measured by AASHTO T 190 in order to match or exceed strength of the in-place soil.

Embankment material shall meet the following requirements for Atterberg limits and gradation:

- (1) Maximum liquid limit of 40
- (2) Minimum plasticity index of 11
- (3) A maximum of 36 percentage of material by dry weight passing the No. 200 sieve.

The upper 2 feet of embankment material below the subgrade elevation shall have a resistance value of at least 9 when tested by the Hveem Stabilometer or the equivalent resilient modulus.

Subsection 203.05(b), first paragraph, shall be revised to read as follows:

Unclassified. Excess or unsuitable excavated material, including rock and boulders, that cannot be used in embankments shall become the property of the Contractor and disposed of outside the project limits.

In Subsection 203.06, fourth paragraph, sentences 1-3 shall be deleted and replaced with the following:

Broken concrete, broken asphalt, or other solid materials more than 150 mm (6 inches) in greatest dimension, shall be removed from the project and shall become the property of the contractor.

In Subsection 203.06, delete the tenth paragraph and replace with the following:

Frozen materials shall not be used in construction of embankments. In addition, embankment material shall not be placed on top of frozen material. Frozen material will be identified by the visual observation of ice crystals within the foundation or embankment material, or by measuring the temperature of the ground surface.

In Subsection 203.08, delete the first, second, and third paragraphs and replace with the following:

203.08 Proof Rolling. After final subgrade elevation has been reached and the required compaction has been obtained, the top of the subgrade material shall be proof rolled within 24 hours prior to commencing the paving operation.

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**REVISION OF SECTION 203
EMBANKMENT MATERIAL**

Proof rolling shall be performed in the following manner:

- a. Proof rolling shall be performed with a three-axle loaded truck with at least 18,000 pounds per axle load on two of the axles and tire pressures of at least 80 psi. A weigh ticket from an approved scale shall be furnished by the Contractor to substantiate this weight.
- b. The loaded truck shall make a minimum of two complete passes.
- c. The proof roller shall be operated in a systematic manner so that a record may be readily kept of the area tested. Areas that are observed to have soft spots in the subgrade, where deflection is not uniform or is excessive, or otherwise fail the proof roll as determined by the Engineer shall be ripped, scarified, wetted or dried as necessary and recompacted to meet the requirements for density and moisture. These areas shall then be proof rolled again and retested for acceptance to meet all requirements. This work shall be performed if required at no additional cost.
- d. Prior to commencing proof rolling, the Contractor shall provide adequate notice to the Engineer in order to allow the Engineer to perform inspection and documentation of the proof rolling operations. This work shall be done after the contractor has performed his own quality control proof rolling and testing and has stabilized the subgrade.

Areas which, in the opinion of the Engineer, pump or deform an excessive amount during proof roll shall be reworked until such deformation does not occur during subsequent proof rolling. This rework may consist of additional compaction, excavation and replacement of embankment and/or additional excavation of unsuitable subgrade material as directed by the Engineer. This rework will not be paid for, except that unsuitable material below the limits of embankment material will be treated as described in subsection 203.05(c).

Subsection 203.12 shall include the following:

Unsuitable materials, as designated by the Engineer, will be measured in the field.

Excavated materials which, when specified, require more than one handling prior to final placement will be paid for at the contract unit price for unclassified excavation, embankment, rock excavation, stripping, muck excavation, or borrow as appropriate. Such payment shall be considered full compensation with no additional payment being made for stockpiling, cross hauling, or subsequent handling.

**REVISION OF SECTION 207
TOPSOIL**

Section 207 of the Standard Specifications is hereby revised for this project as follows:

Subsection 207.01 shall include the following:

The ~~2019-2022~~ CDOT Standard Specifications for Road and Bridge Construction shall apply to this project and the Standard Special Provision of Section 207 Topsoil shall not be used (4" thickness is used on this project).

Delete subsection 207.~~04-07~~ and replace with the following:

METHOD OF MEASUREMENT

~~207.04-07~~ Topsoil material secured from the roadway and placed in stockpiles will be measured in the stockpile by the method of average end areas. This topsoil material will be paid for as Topsoil when placed on the slopes. Stockpiling topsoil will not be paid for separately, but shall be included in the work.

Topsoil secured from a source outside the right of way will be measured at its source as described in Section 203 and paid for as Topsoil.

In subsection 207.05, delete the Pay Item "Stockpile Topsoil."

**REVISION OF SECTION 208
EROSION CONTROL**

Section 208 of the Standard Specifications is hereby revised as follows:

The Contractor is responsible for Erosion Control and Stormwater Management for this project. An initial Erosion Control Plan is provided in the plan set to give the Contractor guidance for bidding and conducting this work. The Contractor is responsible for reviewing this information and preparing a site-specific Stormwater Management Plan (SWMP) consistent with CDPHE requirements, plan notes, and plan specifications. The SWMP prepared by the Contractor shall be submitted to the Engineer for review at least five days before beginning the work.

Subsection 208.01 is hereby revised to include the following:

Water quality control during construction activity shall be in accordance with Section 107.25.

The contractor will be the Permittee of the Colorado Discharge Permit System – Stormwater Construction Permit (CDPS-SCP) during the entire period that it remains open and is also responsible for inactivation of the permit once final stabilization of the construction site has been achieved and accepted by El Paso County. No transfer of ownership or control will be permitted.

The Contractor shall provide a copy of the permit application submitted to CDPHE, as well as and a copy of the issued permits, once obtained, to El Paso County.

The contractor shall proceed with this permit activity as soon as he deems necessary following the Notice of Award. No contract delays or extensions will be granted to the contractor for failure to implement the required SWMP plan and obtain the required state permit in a timeframe necessary to begin the work as specified in the contract.

Once construction has been completed, the El Paso County Project Manager and the contractor will complete a walk-through of the project site. The purpose of which is to determine the areas where BMP's may be removed or maintained.

Subsection 208.03 (b) shall be revised to include the following:

Once work has started, and during the active construction period, the Contractor shall update the schedule for all erosion and sediment control work on a weekly basis and submit the updated schedule to the Engineer. A log will be kept of installation, removal, inspection, modification, and maintenance of Stormwater Best Management Practices (BMP's) and shall be updated following each action. A site map will be maintained showing the location of the BMP's and the dates that they were installed, removed, or modified. If during construction the Contractor proposes changes which would affect the Contractor's erosion and sediment control measures, the Contractor shall propose revised erosion and sediment control measures to the Engineer for approval in writing. Revisions shall not be implemented until the proposed measures have been approved in writing by the Engineer.

Subsection 208.03(c.1) shall be revised to include the following:

- (18) The ECS shall be responsible for implementing the water quality control construction requirements as contained in section 107.25(b), Water Quality Control of the "Colorado Department of Transportation Standard Specifications for Road and Bridge Construction" dated 2019.

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**REVISION OF SECTION 208
EROSION CONTROL**

- (19) Following construction, the ECS shall continue maintenance and inspection of the project site until the site is stabilized per the terms of all state and local permits regarding stormwater, erosion control, dewatering activity, pollutant discharge, and all other permits regarding Section 208 – Erosion Control. The ECS shall continue to update and record the SWMP site map as changes occur. Copies of all permit closure applications shall be submitted to the Engineer, and the Contractor shall not initiate application for closure of open permits without the approval of the Engineer.

Section 208.05(p) shall be revised to include the following:

Vehicle Tracking Pad shall be synonymous with Stabilized Construction Entrance. Vehicle Tracking Pads shall be completed before any stripping, excavation, or fill is begun. A Stabilized Construction Entrance shall be placed where construction traffic enters public roadways, or as directed by the Engineer.

Dimensions and requirements for Vehicle Tracking Pads shall conform to the typical detail, VT-2, as presented in the El Paso County Drainage Criteria Manual, Volume II.

Subsection 208.10.1 shall be added to include:

Final stabilization for compliance with the CDPS-SCP may require work to be performed after the project has been deemed substantially complete. The permit will remain the Contractor's responsibility and in the Contractor's name until all requirements are met and the permit may be closed. The Contractor shall provide all labor, materials, and equipment required to fulfill the permit requirements. The approved work will be paid for out of Force Account Post-Construction Erosion Control. The Force Account efforts will be inclusive of all stormwater inspections as required by the permit, repair and maintenance of all installed BMP's along with general site conditions, and possible revegetation efforts necessary for release of permit with the 70 percent re-growth requirement. All work, except inspections required by the permit, must be approved by the Engineer prior to construction, maintenance, etc.

Seeded areas shall be reviewed during the 14-day inspections by the ECS for bare soils caused by surface or wind erosion. Bare areas caused by surface or gully erosion, blown away mulch, etc., shall be repaired by regrading, seeding, mulching, blanketing, etc. as necessary at Contractor's expense, as directed by the Engineer.

Areas where seed has not germinated after one season shall be evaluated by the ECS and the Engineer. Areas that have not germinated shall have seed and mulch/tackifier (or seed and erosion control blanket) applied as directed by the Engineer.

The Contractor shall maintain seeding, mulching, and blanketing and shall mow and/or apply herbicide to control weeds in seeded areas until final stabilization and inactivation of the CDPS-SCP.

**REVISION OF SECTION 240
PROTECTION OF MIGRATORY BIRDS
PERFORMED BY THE CONTRACTOR'S BIOLOGIST**

Section 240 is hereby added to the Standard Specifications for this project as follows:

DESCRIPTION

240.01 This work consists of protecting migratory birds during construction.

MATERIALS AND CONSTRUCTION REQUIREMENTS

240.02 The Contractor shall schedule clearing and grubbing operations and work on structures to avoid taking (pursue, hunt, take, capture or kill; attempt to take, capture, kill or possess) migratory birds protected by the Migratory Bird Treaty Act (MBTA). The Contractor shall retain a qualified wildlife biologist for this project. The wildlife biologist shall have a minimum of three years experience conducting migratory bird surveys and implementing the requirements of the MBTA. The Contractor shall submit documentation of the biologist's education and experience to the Engineer for acceptance. A biologist with less experience may be used by the Contractor subject to the approval of the Engineer based on review of the biologist's qualifications. The wildlife biologist shall record the location of each protected nest, bird species, the protection method used, and the date installed. A copy of these records shall be submitted to the Engineer.

(a) *Vegetation Removal.* When possible, vegetation shall be cleared prior to the time when active nests are present. Vegetation removal activities shall be timed to avoid the migratory bird breeding season which begins on April 1 and runs to August 31. All areas scheduled for clearing and grubbing between April 1 and August 31 shall first be surveyed within the work limits for active migratory bird nests. The Contractor's wildlife biologist shall also survey for active migratory bird nests within 50 feet outside work limits. Contractor personnel shall enter areas outside El Paso County right of way only if a written, signed document granting permission to enter the property has been obtained from the property owner. The Contractor shall document all denials of permission to enter property. The Contractor shall avoid all active migratory bird nests. The Contractor shall avoid the area within 50 feet of the active nests or the area within the distance recommended by the biologist until all nests within that area have become inactive. Inactive nest removal and other necessary measures shall be incorporated into the work as follows:

1. *Tree and Shrub Removal or Trimming.* Tree and shrub removal or trimming shall occur before April 1 or after August 31 if possible. If tree and shrub removal or trimming will occur between April 1 and August 31, a survey for active nests shall be conducted by the wildlife biologist within the seven days immediately prior to the beginning of work in each area of tree and shrub removal or trimming. The survey shall be conducted for each phase of tree and shrub removal or trimming.

If an active nest containing eggs or young birds is found, the tree or shrub containing the active nest shall remain undisturbed and protected until the nest becomes inactive. The nest shall be protected by placing fence (plastic) a minimum distance of 50 feet from each nest to be undisturbed. This buffer dimension may be changed if determined appropriate by the wildlife biologist and approved by the Engineer. Work shall not proceed within the fenced buffer area until the young have fledged or the nests have become inactive.

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**REVISION OF SECTION 240
PROTECTION OF MIGRATORY BIRDS
PERFORMED BY THE CONTRACTOR'S BIOLOGIST**

If the fence is knocked down or destroyed by the Contractor, the Engineer will suspend the work, wholly or in part, until the fence is satisfactorily repaired at the Contractor's expense. Time lost due to such suspension will not be considered a basis for adjustment of time charges, but will be charged as contract time.

2. *Grasses and Other Vegetation Management.* Due to the potential for encountering ground nesting birds' habitat, if work occurs between April 1 and August 31, the area shall be surveyed by a wildlife biologist within the seven days immediately prior to ground disturbing activities.

The undisturbed ground cover to 50 feet beyond the planned disturbance, or to the right of way line, whichever is less, shall be maintained at a height of 6 inches or less beginning April 1 and continuing until August 31 or until the end of ground disturbance work, whichever comes first.

If birds establish a nest within the survey area, an appropriate buffer of 50 feet will be established around the nest by the wildlife biologist. This buffer dimension may be changed if determined appropriate by the wildlife biologist and approved by the Engineer. The Contractor shall install fence (plastic) at the perimeter of the buffer. Work shall not proceed within the buffer until the young have fledged or the nests have become inactive.

If the fence is knocked down or destroyed by the Contractor, the Engineer will suspend the work, wholly or in part, until the fence is satisfactorily repaired at the Contractor's expense. Time lost due to such suspension will not be considered a basis for adjustment of time charges, but will be charged as contract time.

- (b) *Work on structures.* The Contractor shall prosecute work on structures in a manner that does not result in a taking of migratory birds protected by the Migratory Bird Treaty Act (MBTA). The Contractor shall not prosecute the work on structures during the primary breeding season, April 1 through August 31, unless he takes the following actions:
 1. The Contractor shall remove existing nests prior to April 1. If the Contract is not awarded prior to April 1 and El Paso County has removed existing nests, then the monitoring of nest building shall become the Contractor's responsibility upon Notice to Proceed.
 2. During the time that the birds are trying to build or occupy their nests, between April 1 and August 31, the Contractor shall monitor the structures at least once every three days for any nesting activity.
 3. If the birds have started to build any nests, they shall be removed before the nest is completed. Water shall not be used to remove the nests if nests are located within 50 feet of any surface waters.
 4. Installation of netting may be used to prevent nest building. The netting shall be monitored and repaired or replaced as needed. Netting shall consist of a mesh with openings that are $\frac{3}{4}$ inch by $\frac{3}{4}$ inch or less.

If an active nest become established, i.e., there are eggs or young in the nest, all work that could result in abandonment or destruction of the nest shall be avoided until the young have fledged or the nest is unoccupied as determined by the wildlife biologist and approved by the Engineer. The Contractor shall prevent construction activity from displacing birds after they have laid their eggs and before the young have fledged.

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SECTION 240
PROTECTION OF MIGRATORY BIRDS
PERFORMED BY THE CONTRACTOR'S BIOLOGIST

If the project continues into the following spring, this cycle shall be repeated. When work on the structure is complete, the Contractor shall remove and properly dispose of netting used on the structure.

- (c) *Taking of a Migratory Bird.* The taking of a migratory bird shall be reported to the Engineer. The Contractor shall be responsible for all penalties levied by the U. S. Fish and Wildlife Service (USFWS) for the taking of a migratory bird.

METHOD OF MEASUREMENT

240.03 Wildlife Biologist will be measured by the actual authorized number of hours a wildlife biologist is on site performing the required tasks.

Removal of nests will be measured by the actual number of man-hours spent removing inactive nests just prior to and during the breeding season, April 1 through August 31. During this period, the Contractor shall submit to the Engineer each week for approval a list of the workers who removed nests and the number of hours each one spent removing nests.

Netting will be measured by the square yard of material placed to keep birds from nesting on the structure. Square yards will be calculated using the length of netting measured where it is attached to the ground and the average height of the netting where it is attached to the structure.

BASIS OF PAYMENT

240.04 The accepted quantities measured as provided above will be paid for at the contract unit price for each of the pay items listed below that appear in the bid schedule.

Payment will be made under:

Pay Item	Pay Unit
Wildlife Biologist	Hour
Removal of Nests	Hour
Netting	Square Yard

Payment for Wildlife Biologist will be full compensation for all work and materials required to complete the item, including wildlife biologist, wildlife survey, and documentation (record of nest location and protection method).

Payment for Removal of Nests will be full compensation for all work and material required to complete the work.

Payment for netting will be full compensation for all work and material required to complete the item. Overlaps of netting will not be measured and paid for separately, but shall be included in the work. Maintenance and replacement, removal, and disposal of netting will not be measured and paid for separately, but shall be included in the work.

Clearing and grubbing will be measured and paid for in accordance with Section 201. Mowing will not be measured and paid for separately, but shall be included in the work.

Removal and trimming of trees will be measured and paid for in accordance with Section 202. Fence (Plastic) will be measured and paid for in accordance with Section 607.

**REVISION OF SECTION 250
ENVIRONMENTAL, HEALTH, AND SAFETY MANAGEMENT**

Section 250 of the Standard Specifications is hereby revised as follows:

Sections 250.09, Measurement and Payment, shall include the following:

Environmental Health and Safety Management, including Health and Safety Officer, groundwater sampling, and preparation of a Health and Safety Plan and Materials Management Plan will not be paid separately and shall be included in the cost of the work.

It is anticipated that the Contractor will encounter groundwater on this project. The costs related to groundwater, including the requirements of the Construction Dewatering Permit acquired by the Contractor such as testing, permitting, dewatering, and control measures, will not be paid separately and shall be included in the cost of the work.

**REVISION OF SECTION 304
AGGREGATE BASE COURSE**

Section 304 of the Standard Specifications is hereby revised for this project as follows:

Subsection 304.02 shall include the following:

Materials for the base course shall be Aggregate Base Course (Class 6) as shown in subsection 703.03.

The base course (Class 6) must meet the gradation requirements and have a resistance value of at least 78 when tested by the Hveem Stabilometer method or a minimum California Bearing Ratio (CBR) of 80, and must be moisture stable.

**REVISION OF SECTIONS 304 AND 403
TICKET COLLECTION FOR AGGREGATE BASE COURSE
AND HOT MIX ASPHALT**

Section 304 and 403 of the Standard Specifications is hereby revised as follows:

Subsection 304.08 and 403.05 shall include the following:

The Contractor shall collect the scale ticket on each load when it is delivered to the project site, and ensure that the information required in subsection 109.01 is shown on each ticket. The Contractor's ticket collector shall add the placement location to each scale ticket using stationing or mileposts and sign it.

The scale tickets shall be available on site for inspection by EPC and/or CDOT personnel.

Each day the Contractor shall provide to the Engineer envelopes which contain the previous day's signed tickets and the following:

- (1) On each envelope: Project number, date of paving, type of material, daily total and cumulative total.
- (2) One of the following:
 - a. Two adding machine tape tabulations of the weight tickets with corresponding totals run and signed by different persons,
 - b. One signed adding machine tape tabulation of the weight tickets that has been checked and signed by a second person,
 - c. Signed check tape of computer scale tickets that have a cumulative total. These scale tickets must be consecutive and without voids adjustments.
- (3) A listing of any overweight loads on the envelope, including ticket numbers and amount over legal limit.
- (4) A comparison of the actual yield for each day's placement to the theoretical yield. Theoretical yield shall be based on the actual area paved, the planned thickness, and the actual density of the mixture being placed. Any variance greater than +2.5% shall be indicated on the envelope and a written explanation included.

The Contractor shall provide a vehicle identification sheet that contains the following information for each vehicle:

- (1) Vehicle number
- (2) Length
- (3) Tare weight
- (4) Number of axles
- (5) Distance between extreme axles
- (6) All other information required to determine legal weight.
- (7) Legal weight limit.

**REVISION OF SECTIONS 401, 403, AND 411
HOT MIX ASPHALT AND ASPHALT MATERIALS**

Sections 401, 403, and 411 of the Standard Specifications are hereby deleted and replaced with the following:

Description, Materials, Construction Requirements, Method of Measurement, and Basis of Payment for asphalt materials shall conform to the *Pikes Peak Region Asphalt Paving Specifications, Version 5*.

Placement of Aggregate Base Course (Class 6) and Hot Mix Asphalt (Grading SX) (100) (PG 58-28) as specified in the plans shall be placed in accordance with the recommendations in the “Geotechnical Evaluation Report – Proposed Calhan Highway Bridge Replacement” latest version (Vivid Engineering – Project No.: D20-2-333). If discrepancies are found with the Geotechnical Evaluation, the plans, and the *Pikes Peak Region Asphalt Paving Specifications, Version 5*, the latter two documents control.

**REVISION OF SECTION 403
 HOT MIX ASPHALT AND ASPHALT MATERIALS**

Section 403 of the Standard Specifications is hereby revised for this project as follows:

Subsection 403.02 shall include the following:

The design mix for hot mix asphalt shall conform to the following:

Table 403-1						
Property	Test Method	Value For Grading				
					SX(100)	
Air Voids, percent at: N (design)	CPL 5115				3.5 – 4.5	
Lab Compaction (Revolutions): N (design)	CPL 5115				100	
Stability, minimum	CPL 5106				30	
Aggregate Retained on the 4.75 mm (No. 4) Sieve for S, SX and SG, and on the 2.36mm (No. 8) Sieve for ST and SF with at least 2 Mechanically Induced fractured faces, % minimum*	CP 45				65	
Accelerated Moisture Susceptibility Tensile Strength Ratio (Lottman), minimum	CPL 5109 Method B				80	
Minimum Dry Split Tensile Strength, kPa (psi)	CPL 5109 Method B				205 (30)	
Grade of Asphalt Cement, Top Layer					PG 58-28	
Grade of Asphalt Cement, Layers below Top					PG 58-28	
Voids in the Mineral Aggregate (VMA) % minimum	CP 48				See Table 403-2	
Voids Filled with Asphalt (VFA), %	AI MS-2				65-80	
Dust to Asphalt Ratio Fine Gradation Coarse Gradation	CP 50				0.6 – 1.2 0.8 – 1.6	
<p>Note: AI MS-2 = Asphalt Institute Manual Series 2</p> <p>Note: Mixes with gradations having less than 40% passing the 4.75 mm (No. 4) sieve shall be approached with caution because of constructability problems.</p> <p>Note: Gradations for mixes with a nominal maximum aggregate size of one-inch or larger are considered a coarse gradation if they pass below the maximum density line at the #4 screen. Gradations for mixes with a nominal maximum aggregate size of 3/4" to 3/8" are considered a coarse gradation if they pass below the maximum density line at the #8 screen. Gradations for mixes with a nominal maximum aggregate size of #4 or smaller are considered a coarse gradation if they pass below the maximum density line at the #16 screen.</p> <p>*Fractured face requirements for SF may be waived by RME depending on project conditions.</p>						

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**REVISION OF SECTION 403
 HOT MIX ASPHALT AND ASPHALT MATERIALS**

Hot mix asphalt for patching shall conform to the gradation requirements for Hot Mix Asphalt (Grading S).

All mix designs shall be run with a gyratory compaction angle of 1.25 degrees and properties must satisfy Table 403-1. Form 43 will establish construction targets for Asphalt Cement and all mix properties at Air Voids up to 1.0 percent below the mix design optimum. CDOT will establish the production asphalt cement and volumetric targets based on the Contractor’s mix design and the relationships shown between the hot mix asphalt mixture volumetric properties and asphalt cement contents on the Form 429. CDOT may select a different AC content other than the one shown at optimum on the Contractor’s mix design in order to establish the production targets as contained on the Form 43. Historically, Air Voids adjustments typically result in asphalt cement increases from 0.1 to 0.5 percent. Contractors bidding the project should anticipate this change and factor it into their unit price bid.

Table 403-2

Nominal Maximum Size*, mm (inches)	Minimum Voids in the Mineral Aggregate (VMA)			
	***Design Air Voids **			
	3.5%	4.0%	4.5%	5.0%
37.5 (1½)	11.6	11.7	11.8	N/A
25.0 (1)	12.6	12.7	12.8	
19.0 (¾)	13.6	13.7	13.8	
12.5 (½)	14.6	14.7	14.8	
9.5 (¾)	15.6	15.7	15.8	
4.75 (No. 4)	16.6	16.7	16.8	16.9
* The Nominal Maximum Size is defined as one sieve larger than the first sieve to retain more than 10%. ** Interpolate specified VMA values for design air voids between those listed. *** Extrapolate specified VMA values for production air voids beyond those listed.				

The Contractor shall prepare a quality control plan outlining the steps taken to minimize segregation of HMA. This plan shall be submitted to the Engineer and approved prior to beginning the paving operations. When the Engineer determines that segregation is unacceptable, the paving shall stop and the cause of segregation shall be corrected before paving operations will be allowed to resume.

The materials for hot mix asphalt shall conform to the requirements described in Version 5, Sections 2, 3, and 4(D) of the Pikes Peak Region Asphalt Paving Specifications unless otherwise specified in these Project Special Provisions or following approval by the Engineer.

CDOT approved Warm Mix Asphalt (WMA) may be allowed on this project in accordance with CP 59. Unique requirements for WMA design, production and acceptance testing as documented during CDOT WMA approval shall be submitted and approved prior to creation of the Form 43 and before any WMA production on the project.

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**REVISION OF SECTION 403
HOT MIX ASPHALT AND ASPHALT MATERIALS**

Delays to the project due to WMA submittal and review will be considered within the Contractor's control and will be non-excusable.

A minimum of 1 percent hydrated lime by weight of the combined aggregate shall be added to the aggregate for all hot mix asphalt.

Acceptance samples shall be taken at the location specified in either Method B or C of CP 41.

Subsection 403.03 shall include the following:

The construction requirements shall be as prescribed in Version 5, Section 4 of the Pikes Peak Region Asphalt Paving Specifications unless otherwise specified in these Project Special Provisions or following approval by the Engineer.

The Contractor shall construct the work such that all roadway pavement placed prior to the time paving operations end for the year, shall be completed to the full thickness required by the plans. The Contractor's Progress Schedule shall show the methods to be used to comply with this requirement.

Delete subsection 403.04 and replace with the following:

Hot mix asphalt will be measured as described in Version 5, Section 4 (P) of the Pikes Peak Region Asphalt Paving Specifications unless otherwise specified in these Project Special Provisions or following approval by the Engineer.

Delete subsection 403.05 and replace with the following:

403.05 The accepted quantities of hot mix asphalt will be paid for in accordance with subsection 401.22, at the contract unit price per ton for the bituminous mixture.

Payment will be made under:

Pay Item	Pay Unit
Hot Mix Asphalt (Grading SX)(100)(PG 58-28)	Ton

Aggregate, asphalt recycling agent, asphalt cement, additives, hydrated lime, and all other work and materials necessary to complete each hot mix asphalt item will not be paid for separately, but shall be included in the unit price bid. When the pay item includes the PG binder grade, any change to the submitted mix design optimum asphalt cement content to establish production targets on the Form 43 will not be measured and paid for separately, but shall be included in the work. No additional compensation will be considered or paid for any additional asphalt cement, plant modifications and additional personnel required to produce the HMA as a result in a change to the mix design asphalt cement content.

The accepted quantities of HMA pavement shall be paid for at the contract unit price for each pavement type and/or thickness listed in the bid schedule. The price will be full compensation, furnishing all materials, preparation, mixing, placing and compaction of these materials and for all labor, equipment, tools, safety edges, and incidentals necessary to complete the work.

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**REVISION OF SECTION 403
HOT MIX ASPHALT AND ASPHALT MATERIALS**

Historically, typical asphalt cement increases reflected on the Form 43 are from 0.1 to 0.5 percent. However, the Contractor should anticipate the AC increases typical of his mixes. Contractors bidding the project should anticipate this change and factor it into their unit price bid.

When the pay item does not include the PG binder grade, asphalt cement will be measured and paid for in accordance with Section 411. Asphalt cement used in Hot Mix Asphalt (Patching) will not be measured and paid for separately, but shall be included in the work.

Excavation, preparation, and tack coat of areas to be patched will not be measured and paid for separately, but shall be included in the work.

**REVISION OF SECTION 407
PRIME COAT, TACK COAT, AND REJUVENATING AGENT**

Section 407 of the Standard Specifications is hereby revised for this project as follows:

Subsection 407.02 shall include the following:

407.022 Bituminous Material. The type and grade of bituminous material used for tack coating will meet the specifications described in Version 5 of the Pikes Peak Region Asphalt Paving Specifications unless otherwise approved by the Engineer. The bituminous material for prime coating shall meet the requirements of Section 702. The rejuvenating agent shall be accepted before loading into the distributor.

Subsection 407.09 shall include the following:

Tack coat will not be measured and paid for separately, but shall be included in the cost of 403 Hot Mix Asphalt.

**REVISION OF SECTIONS 408
JOINT SEALANT**

Section 408 of the Standard specifications is hereby revised for this project as follows:

Subsection 408.01 shall include the following:

This work consists of furnishing and installing hot poured joint sealant in single or multiple path saw cuts on hot mix asphalt overlay in accordance with these specifications and in conformity with the lines and details shown on the plans or as directed by the Engineer.

For replacement of existing joints at the top surface of concrete deck and approach slab, this work also includes removal of joint seal and cleaning of the joint.

Subsection 408.03 shall include the following:

For replacement of existing joints at the top surface of concrete deck and approach slab, all joint seal material and debris shall be removed, and the joint cleaned prior to the hot compressed air lance cleaning associated with the placement of new joint material.

The location, width, and depth of the saw cut for the joint sealant shall be in conformity with the plans or as directed by the Engineer.

Delete subsection 408.04 and replace with the following:

Joint sealant will be measured by the actual curb to curb quantity completed and accepted. Joint sealant will be paid for as the single length for multiple sawcuts and seals per joint.

Delete subsection 408.05 and replace with the following:

The accepted quantities of Joint Sealant will be paid for at the contract unit price.

Payment will be made under:

Pay Item	Pay Unit
Joint Sealant	Linear Foot

Payment for Joint Sealant will be full compensation for all labor, materials, tools, equipment and incidentals required to complete the item.

Saw cutting, removal, and cleaning will not be paid for separately but shall be included in the work.

REVISION OF SECTION 613 ELECTRICAL CONDUIT

Section 613 of the Standard Specifications is hereby revised for this project to include the following:

DESCRIPTION

This work includes furnishing and installing new High-Density Polyethylene (HDPE) and Polyvinyl Chloride (PVC) electrical conduit and fittings for use with fiber optic cable, electrical conductors, and communications cabling associated with installing the CCTV camera.

MATERIALS

All materials furnished, assembled, fabricated, or installed under this item shall be new, Underwriters Laboratories (UL) listed, corrosion resistant and National Electric Code (NEC) compliant. Materials shall be submitted to the Project Engineer for approval.

Electrical conduit shall be suitable for underground use and shall be Schedule 80 in the diameters, quantities and depths shown on the plans. Electrical conduit and fittings shall be UL listed.

HDPE conduit and fittings shall be certified by the manufacturer as meeting American National Standards Institute (ANSI) ANSI/UL 651A. PVC conduit and fittings shall be certified by the manufacturer as meeting ANSI/UL 651.

All HDPE conduit shall be low-friction, high-density conduit constructed of virgin high-density polyethylene resin. HDPE conduit shall be capable of being coiled on reels in continuous lengths, transported, stored outdoors, and subsequently used for installation, without affecting its properties or performance.

HDPE conduit used for fiber optic communications shall be orange and conduit for electrical conductors shall be red. If additional spare conduits are installed in a common trench, the additional conduits shall be blue and black with an orange stripe. PVC conduit shall be labeled to match HDPE colors.

Each conduit shall be equipped with a pull tape installed with or after all cabling for future use. The pull tape shall have a minimum tensile strength of 1800 pounds. The pull tape shall include a continuous 22 gauge tracer wire. Splices in the pull tape and tracer wire may occur inside manholes and pull boxes and shall not be permitted inside conduit. Pull tape shall be installed in conduits with electrical conductors carrying 50V or less.

A minimum 12 gauge tracer wire shall be included in at least one conduit within all conduit banks. The tracer wire shall be orange in color. In conduit banks with multiple conduits, the 12 gauge tracer wire and pull tape shall be installed in the same conduit with the fiber optic cable.

A 2-inch wide warning tape shall be provided in each conduit trench. The warning tape and lettering shall be chemically inert, resistant to acid and alkali, designed for installation underground, and be constructed of polyethylene plastic. The warning tape shall have a minimum nominal thickness of 4 mil. The warning tape shall be red with the repeated phrase "CAUTION ELECTRIC LINE BURIED BELOW" if any conduit in the trench is designated for use with electrical conductors. The warning tape shall be orange with the repeated phrase "CAUTION FIBER OPTIC CABLE BURIED BELOW" for all other trenches. The text shall be black printed in a single line.

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**REVISION OF SECTION 613
ELECTRICAL CONDUIT**

All conduit and fittings installation shall conform to the NEC.

Electrical Conduit (Bored) shall be HDPE and installed using a trenchless technology such as directional boring.

Electrical Conduit (Plastic) shall be PVC or HDPE and installed by direct burial methods such as plowing, open trenching, or other excavation methods.

For Electrical Conduit (Plastic) items, the contractor may select any of the trenching options provided in the typical detail in the Plans. The selected option may vary throughout the project, depending upon the conditions at each project location. The complete installation using any of the options will be paid for under the respective Electrical Conduit (Plastic) item.

Prior to construction, the Contractor shall submit a trenching and boring plan to the Engineer for approval. The plan shall show the limits of the planned work areas and the areas of anticipated disturbance. All disturbances outside the planned work areas created by Contractor's operations shall be restored to their original condition at the Contractor's expense.

During construction operations, the contractor shall maintain boring logs that include the depth at specific distances along the bore. Boring logs shall be submitted on a weekly basis.

All trenches shall be backfilled by the end of each shift. Material from trenching operations shall be placed in a location that will not cause damage or obstruction to vehicular or pedestrian traffic or interfere with surface drainage.

The Contractor shall be responsible for damage due to over-excavating a trench and heaving damage to the existing asphalt and concrete mat, caused by equipment directly and by dislodging rocks or boulders. All damage from over-excavation and heaving shall be repaired at the Contractor's expense. The Contractor shall bear the cost of backfilling all over-excavated areas with the appropriate backfill material approved by the Engineer.

The Contractor shall restore all surface materials to their original condition or better, including but not limited to pavement, sidewalks, sprinkler systems, landscaping, shrubs, sod, and native vegetation that is disturbed by the conduit installation operation. All restoration shall be included in the cost of the conduit.

The Contractor shall use corrosion resistant splice couplings that comply with the NEC. All associated work to splice the conduit shall be included in the cost of the item. The coupling technology used to connect conduit ends shall require no special tools and form a watertight, airtight seal. The breaking force between segments shall exceed 250 pounds. Conduit splices shall be kept to a minimum and all such locations shall be approved and inspected by the Engineer and the authority having jurisdiction. Additional pull boxes shall not be substituted for conduit splices.

When conduit is trenched or plowed, warning tape shall be installed a minimum of 12 inches directly above the conduit and a minimum 12 inches below final grade.

Conduits not containing cable shall be plugged with a plug that is watertight, removable, mechanical and equipped with a connection to secure a pull rope.

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**REVISION OF SECTION 613
ELECTRICAL CONDUIT**

Conduits containing cable shall be plugged with durable and reusable split type plugs, fabricated without corrosion resistant parts. The plugs shall allow easy removal and reinstallation around in-place cables. Split type plugs shall provide a watertight and airtight seal of at least 22 pounds per square inch. They shall be installable by hand without using tools and without damaging the cable. All plugs shall be correctly sized to fit the conduit being plugged.

Conduit shall be plugged at all termination points including but not limited to pull boxes, manholes, controller cabinets, structures, poles, and node buildings.

All open conduit ends shall be plugged at the end of each shift with an approved plug.

All conduits shall terminate between two inches and four inches from the bottom or sides of pull boxes and manholes.

All conduit runs containing fiber optic cable shall have a limited number of bends. The sum of the individual bends on a single conduit run between any two pull points shall not exceed 270 degrees. No individual bend shall exceed 90 degrees. All conduit bends shall have a minimum radius of 24 inches. HDPE conduit minimum bending radius shall conform to Table 354.24 in the NEC.

New conduits may be installed into existing pull boxes, manholes and cabinet bases, and the Contractor shall carefully excavate around the existing facility and install the new conduit as shown on the plans. The Contractor shall not damage the existing facility or its contents. If the existing conduit, pull box, lid and concrete collars are damaged during conduit installation, the Contractor shall restore the damaged item or section to current CDOT requirements at no additional cost to the project. For locations where conduit is installed into existing pull boxes, manholes, and cabinet bases that are located in asphalt, concrete, or slope pavement, patching with asphalt, concrete or slope pavement will be required and shall be included in the cost of the conduit. The Contractor shall reseal all new conduit entries into an existing manhole with grout.

Conduit shall always enter a pull box, manhole, cabinet base and all other structure types from the direction of the run only.

A conduit bell end shall be installed on each conduit in pull boxes, manholes, cabinets, and pole bases. All conduits ends shall be free from sharp edges and burrs.

Conduits stubbing up through pole foundations shall be installed within 4 inches of the center of the caisson.

The Contractor shall refer to ITS As-Built Documentation and GPS specifications for documentation requirements.

METHOD OF MEASUREMENT

Electrical Conduit will be measured by the actual linear foot of conduit installed and accepted.

Conduit shall also include all groundwork, lubricants, anchors, bands, skids, sweeps, pull rope, pull tape, copper tracer wire, adaptors, fittings, splice couplings, conduit plugs, foam sealant, installation equipment, mounting brackets and hardware, structure anchors, adhesives, labor and all other items necessary to complete the work.

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**REVISION OF SECTION 613
ELECTRICAL CONDUIT**

BASIS OF PAYMENT

Electrical Conduit unit prices shall be full compensation for the work shown on the Plans and described above.

Payment will be made under:

Pay Item	Pay Unit
2 Inch Electrical Conduit (Plastic)	Linear Foot

Payment will be full compensation for all labor, materials, and equipment required to complete the work associated with installing the CCTV camera. Refer to the Revision of Section 613 Lighting for electrical conduit requirements associated with lighting installations.

SECTION 621 DETOUR PAVEMENT

Section 621 is hereby added to the Standard Specifications for this project and shall include the following:

DESCRIPTION

621.01 This work consists of constructing detour pavement as shown on the plans.

MATERIALS

621.02 The Contractor shall be responsible for quality control required to assure adequate quality of hot bituminous pavement used in the pavement.

CONSTRUCTION REQUIREMENTS

621.03 The detour location and dimensions shall be as shown on the plans. The hot mix asphalt mix design and detour pavement thickness design shall be provided by the Contractor, with a minimum section of 6 inches of hot mix asphalt over 4 inches of Aggregate Base Course (Class 6). Traffic information needed to calculate pavement thickness can be obtained from the CDOT website at http://www.dot.state.co.us/App_DTD_DataAccess/. These designs shall be submitted to the Engineer at the pre-construction conference. Submitted pavement designs shall be stamped by a Colorado licensed professional engineer. Review does not constitute acceptance of the designs. Resubmittals shall be done 20 working days in advance of construction of the detour. Acceptance will be based solely on providing the detour in a satisfactory condition. If the material and thickness furnished result in an inadequate detour structure, the Contractor will provide additional thickness, materials, or other measures necessary to provide a satisfactory pavement for the life of the detour. These additional improvements shall be furnished at no additional cost. All necessary signs, pavement markings and other traffic control devices shall be provided in accordance with the traffic control plan. The Contractor shall remove and dispose of the detour pavement when it is no longer needed to maintain traffic.

All earthwork necessary to construct the detours is included on the tabulation of earthwork in the construction plans. Earthwork that is to remain in place as part of the permanent roadway prism, shall conform to Section 203.

MAINTENANCE OF DETOUR

621.04 The Contractor shall maintain the detour for the entire period that it is required. Any distress which affects the ride, safety, or serviceability of the detour roadway shall be corrected to the satisfaction of the Engineer at the expense of the Contractor. Contractor will be responsible for all traffic control required to maintain the detour.

METHOD OF MEASUREMENT

621.05 Detour pavement will be paid for on plan quantities. Exceptions will be made for revisions requested by the Engineer, or for an error of plus or minus two percent or more of the total area shown on the plans.

60% upon placement
40% upon removal

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SECTION 621
DETOUR PAVEMENT

BASIS OF PAYMENT

621.06 Detour shall be paid for at the bid price per square yard.

Pay Item	Pay Unit
Detour Pavement	Square Yard

Payment for the detour pavement will be full compensation for all work and materials required to complete the item, including hot bituminous pavement, temporary pipes, aggregate base course (class 6), maintenance, removal and disposal of all materials required to construct the detours.

**REVISION OF SECTION 626
MOBILIZATION**

Section 626 of the Standard Special Specifications is hereby revised to include the following:

DESCRIPTION

The following items will be paid for under Mobilization (without Autopay):

- (1) Project office expenses
- (2) Field office expenses
- (3) Administrative salaried labor
- (4) Employee mobilization, subsistence, housing
- (5) Yards and staging
- (6) Safety training, meetings and supplies
- (7) Temporary access and haul roads
- (8) Erosion control maintenance and protection
- (9) Job site cleanup and punch list

BASIS OF PAYMENT

Subsection 626.01 shall include the following:

Partial payments for Mobilization (Without Autopay), as determined by the Engineer, will be made as the work progresses. The Contractor shall submit a schedule of estimated mobilization costs for the above items to be approved by the Engineer before payments are made. The total sum of all payments shall not exceed the original contract amount bid for the item, regardless of the fact that the Contractor may have for any reason, including:

- (1) Shutting down the work on the project
- (2) Moving equipment away from the project and then back as multiple mobilization were specifically bid into the Construction Agreed Price (CAP) for certain work on the project.
- (3) Additional mobilizations unless otherwise approved by the Engineer.

These payments shall be independent of partial payments as defined in Subsection 109.06.

Payment will be full compensation for all work necessary to complete the item.

Payment will be made under:

Pay Item	Pay Unit
Mobilization	Lump Sum

Nothing herein shall be construed to limit or preclude partial payments for other items as provided for by the contract.

**REVISION OF SECTION 626
PUBLIC INFORMATION MANAGEMENT**

Section 626 of the Standard Specifications is hereby revised for this project as follows:

Subsection 626.01 shall include:

No specific meetings or coordination with the public are included in this project, however; the Contractor should expect to receive inquiries from adjacent property owners and the public. The Contractor shall respond to all public inquiries in a prompt, professional manner and shall send responses to the County for review prior to sending to the public and shall include the County in all correspondence. These responses may consist of a forward or redirect of the inquiry to the County.

Subsection 626.02 shall include:

The work and materials needed to interact with the public will not be paid separately, but shall be included in the cost of the work.

**REVISION OF SECTION 627
MODIFIED EPOXY PAVEMENT MARKING ACCEPTANCE**

Sections 627 of the Standard Specifications is hereby revised for this project as follows:

Subsection 627.05 shall include the following:

The Contractor shall take retroreflectivity readings on all modified epoxy pavement marking lines for each mile of roadway striping on the project. A test section is defined as each continuous line type (lane lines, centerlines, edge lines, channelizing lines, and others), which has been completed in a single day.

The Contractor shall use a Contractor-furnished retroreflectometer conforming to ASTM E 1710 or AASHTO TP111. The retroreflectometer shall be calibrated, tested and operated in accordance with manufacturer recommendations. The Contractor shall take one retroreflectivity reading within every lane mile striped in a single day. The calibration for the retroreflectometer shall be verified each day, prior to the readings being taken. The retroreflectivity readings shall be taken in the presence of the Engineer no earlier than 3 days and no later than 14 days after the marking is tack free. Traffic control required for retroreflectivity readings shall be included in the cost of the work.

The initial minimum retroreflectivity reading (mcd/m²/lux) in a one-mile line section of pavement marking paint shall be 350 for white and 200 for yellow. Any retroreflectivity readings below 350 for white and 200 for yellow shall be subject for removal and replace. In the case of a failing retroreflectivity reading three additional readings can be taken at random within the same line mile, if the average of the three additional readings is equal to or greater than 350 for white and 200 for yellow. That new average may be substituted for a passing retroreflectivity reading.

Any corrective work will not be paid for separately but shall be incidental to Pay Item 627-00009 [Modified Epoxy Pavement Marking (Inlaid)]. Prior to taking retro-reflectivity readings, the Contractor shall remove at the retro-reflectivity reading locations any excess beads placed during marking application.

**REVISION OF SECTION 630
REGION 2 CONSTRUCTION ZONE TRAFFIC CONTROL**

Section 630 of the Standard Specifications is hereby revised for this project as follows:

630.10 (a) Transportation Management Plan (TMP).

The key elements of the Contractor's Traffic Management Plan include:

- (1) Public Information (626 Specification)
- (2) Traffic Control Plan (TCP or MHT's): Detailed MHTs shall be produced in 11 x 17 electronic format and shall address traffic safety (SSP 630) and worker safety (SSP 107.06) through the work zone.
- (3) Traffic Operations (TO) Plan: Traffic Incident areas shall be considered or included in either the Project Safety Plan or individual MHT's.

The TCP components (minimum performance criteria) used to approve MHT's for this project are included in the following:

- (1) Subsection 104.04, 105.09, 107, 614.02 and Section 630 of the Standard Specifications
- (2) 2019 Standard Plans (M&S Standards)
- (3) Work Zone Safety Guidelines
- (4) 2009 Manual on Uniform Traffic Control Devices (MUTCD), Revision 1 and 2
- (5) CDOT Policy Directive 1502.1 "Traffic Control for Planned and Unplanned Work"
- (6) Region 2 Lane Closure Strategy, Latest Edition
- (7) Schedule of Construction Traffic Control Devices
- (8) Construction General Notes, Signing Plans, Detour Plans
- (9) Standard Highway Signs, 2012 Supplement as revised by the Colorado Supplement to Standard Highway Signs

Unless otherwise approved by the Engineer, the Contractor's equipment shall follow normal and legal traffic movements. The Contractor's ingress and egress of the work area shall be accomplished with as little disruption to traffic as possible. Traffic control devices shall be removed by picking up the devices in a reverse sequence to that used for installation. This may require moving backward through the work zone. When located behind a barrier or at other locations shown on approved traffic control plans, equipment may operate in a direction opposite to adjacent traffic.

EPC and/or CDOT may have entered into operating agreements with one or more law enforcement organizations for cooperative activities. Under such agreements, at the sole discretion of El Paso County, CDOT, law enforcement personnel may enter the work zone for enforcement purposes and may participate in the Contractor's traffic control activities. The responsibility under the Contract for all traffic control resides with the Contractor and any such participation by law enforcement personnel in Contractor traffic control activities is referenced in Section I(c). Nothing in this Contract is intended to create an entitlement, on the part of the Contractor, to the services or participation of the law enforcement organization.

The Contractor shall not have construction equipment or materials in the lanes open to traffic at any time, unless approved by the Engineer.

During the construction of this project, traffic shall use the present traveled roadway unless identified on the plans or approved by the Engineer.

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**REVISION OF SECTION 630
 REGION 2 CONSTRUCTION ZONE TRAFFIC CONTROL**

All costs incidental to the requirements listed in this specification shall be included in the applicable 630 pay item contract prices for the project and will not be paid for separately.

Special Traffic Control Plan (MHT) requirements for this project are as follows:

I. Project Specific Working Times and Traffic Control Plan Requirements

(a) *Project Specific Working Time.* The Contractor shall not perform any work requiring traffic control devices on the roadway (traveled way and shoulder) except within the hours and traffic control type as listed below as directed by the Engineer. Refer to Section I(c) of this specification for exceptions when temporary detours, temporary traffic signals, and/or full roadway closures are anticipated to be used by the Contractor

PROJECT SPECIFIC WORKING TIME						
Roadway	Beginning Limits (MP)	Ending Limits (MP)	Travel Direction	Days of Week	Allowed Working Hours	Traffic Control Type (i.e single, multi, one way, shldr)
Calhan Highway	131.65	135.26	NB/SB	F - Sun	9 PM – 5 AM	Single Lane Closures
Calhan Highway	131.65	135.26	NB/SB	M- Sun	9 AM – 5 PM	Shoulder Closure

Friday afternoon closures shall observe the most prohibitive of the weekday or weekend schedule as per the Region 2 Lane Closure Strategy, 2019 Edition, or as designated above.

Requests for allowable weekend work shall be submitted to the Engineer for approval. Weekend work will not be permitted unless it has been requested in advance and approved by the Engineer as per the Region 2 Lane Closure Strategy, Latest Edition, or as designated above. Refer to Section I (b) of this specification for requirements on submittals.

(b) *Variance Process for Project Specific Working Time.* Contractor will have 10 working days to submit a variance request through the Engineer in advance of planned work requiring a proposed variance for review. Submittal documents shall follow the process submittal as detailed in Section II.C and Figure 5 of the Region 2 Lane Closure Strategy (2019 Edition). At minimum, variance submittal request shall include: Current Project Schedule, Proposed Project Schedule (based on variance request), Proposed Working Times, MHT’s and supportive reasoning narrative for variance request.

(c) *Project Specific Traffic Control Requirements.* Any full roadway closures outside those shown and pre-approved in the project plans shall require a written justification from the Contractor submitted to the Engineer for review stating reasoning, dates scheduled, working times of operation, and applicable MHTs or TCPs that will be utilized.

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**REVISION OF SECTION 630
REGION 2 CONSTRUCTION ZONE TRAFFIC CONTROL**

The Contractor shall notify Region 2 Joint Operations Center and El Paso County a minimum of 48 hours prior to the date and time that construction is scheduled to begin or as directed by the Engineer.

Region 2 Joint Operations Center (JOC)
5615 Wills Blvd, Pueblo CO 81008
Phone: (719) 562-5555
Email: dot_r2joc@state.co.us

El Paso County
Brett Hartzell
Phone: 719-520-6860
Email: BrettHartzell@elpasoco.com

At least one week prior to starting the installation of advanced warning signs, the Contractor shall notify the Engineer of the date the Contractor intends to start. Temporary poles, signs and placement for advanced warning will require preapproval. All advanced warning signs and devices shall be located in accordance with the details shown in the plans, specifications or approved MHT's and meet minimum performance criteria for the project duration unless otherwise approved.

ATSSA Quality Guidelines for Temporary Traffic Control will be used to qualify and accept all devices. Marginal devices shall be replaced within 24 hours or as approved by the Engineer. Failure to replace out of specification devices may result in a Stop Work Order as determined by the Project Engineer.

Request for a lane closure within approved working times as noted above, shall be submitted at least 5 working days in advance after quality control has been performed by the Contractor(s). Lane closures will not be allowed to remain in place unless being utilized continuously for the intended purpose for which they were set up.

TCS diaries shall include all requirements per CDOT Standard Specifications for Road and Bridge Construction, Section 630. The Engineer may require additional information for specific tasks or construction activities if they are not included in the Project Safety Plan.

Quality Assurance (El Paso County/CDOT) MHT review times will be 5 days per submittal. Approval of an MHT does not constitute approval to deploy traffic control devices. The Contractor shall follow all requirements included in the TMP prior to implementing an MHT.

Traffic lanes through the construction area shall have a clear width of at least 11 feet per lane with 2 foot shoulders.

The Contractor and subcontractors shall equip their construction vehicles with flashing amber lights. Flashing amber light bars on vehicles and equipment shall be visible from all directions.

Any device damaged due to the Contractor's operations shall be replaced in kind or repaired by the Contractor at no additional cost to the project.

The Contractor shall maintain access to all properties at all times unless otherwise directed by the Engineer. The costs of maintaining access will not be paid for separately but shall be included in the work.

Vertical cuts or fills greater than 1 inch resulting from construction operations adjacent to traffic lanes unless approved by the Engineer shall be temporarily sloped at a 4:1 or a flatter slope and also be delineated immediately after removal operations to safeguard the traveling public. Material will not be measured and paid for separately.

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**REVISION OF SECTION 630
REGION 2 CONSTRUCTION ZONE TRAFFIC CONTROL**

When the Contractor removes, obliterates, or overlays any pavement markings, the Contractor shall replace them on a daily basis prior to opening the affected areas to traffic. All temporary pavement markings shall fully comply with the Standard Specifications and Special Provisions.

Any maintenance required to restore the roadways to this condition, including pavement patching and grading, shall be done prior to opening the areas to traffic or completing work for the day.

Buffer zones shall be considered and dimensioned on all MHT's. Both the posted speed limit and TMA vehicle weights shall be used in determining Roll Ahead Distances (RAD) per the manufacturer's recommendations.

The Contractor shall not place tack coat on any surface to be paved where traffic will be forced to travel upon prior to bituminous material application.

- (d) *Reduction in Speed Limits (CDOT Form 568) Submittal.* The Contractor may request a reduction in speed limits. A Form 568 must be completed, approved, and signed whenever the speed limit is reduced on a construction project, even if the speed limit reduction is shown on the plans.

Link: <https://www.codot.gov/library/forms/cdot0568.pdf>

The Contractor is required to submit the TMP for approval by the Engineer. The Engineer will complete and submit a speed limit reduction request based on the applicable MHT(s) to the Region 2 Traffic Engineer or his designee. The complete request must be submitted a minimum of 10 working days prior to the proposed implementation date indicated on the form.

For this project, submittals shall be sent to:

Brett Hartzell, EPC Project Engineer
Email: BrettHartzell@elpasoco.com

II. Modified Holiday Working Times and Schedule Modifications

Additional legal holidays, when designated by the Governor or the President of the United States, will also be recognized by the State.

The Contractor shall coordinate all construction activity with any conflicting special events as informed by the Engineer. The Contractor shall show in the construction schedule any identified events such as the Colorado State Fair as either limited or non-working days as approved by the Engineer. The Contractor may not be charged contract time during these events unless approved by the Engineer.

III. Vehicle and Pedestrian/Bicycle Access Management

The Contractor is restricted from storing materials, equipment, or construction traffic control devices (signs, cones, etc.) in any median or shoulder area (clear zone).

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**REVISION OF SECTION 630
REGION 2 CONSTRUCTION ZONE TRAFFIC CONTROL**

The Contractor shall maintain continuous access within the project for pedestrians, bicyclists, and disabled persons. When the existing access route is disturbed by construction, an alternate route shall be provided as designated on the approved MHTs.

The Contractor shall maintain access to all properties at all times unless otherwise directed by the Engineer. The costs of maintaining access will not be paid for separately but shall be included in the work.

IV. Project Communications

The Contractor shall notify the Engineer within 48 hours of anticipated schedule change.

The Contractor shall notify all identified stakeholders, as directed by the Engineer, on all lane closure submittals.

BASIS OF PAYMENT

All costs incidental to the requirements as listed in this specification shall be included in the 630 pay items contract prices for the project and will not be paid for separately.

Pay Items	Pay Unit
Traffic Control Management (TCM)	Day
Traffic Control Inspection (TCI)	Day

**REVISION OF SECTION 630
IMPACT ATTENUATOR (TEMPORARY)**

Section 630 of the Standard Specifications is hereby revised for this project to include the following:

DESCRIPTION

This work consists of furnishing, installing, certifying, moving, repairing, maintaining, and removing temporary impact attenuators in accordance with these specifications and in conformity with the lines and details shown on the plans or established.

MATERIALS

Each impact attenuator shall be selected from the Crash Cushion and End Treatment Application Chart as listed in the Safety Selection Guide on the CDOT Design and Construction Project Support web site. Impact attenuators shall conform to the requirements of the manufacturer and be capable of bi-directional shielding of the objects detailed and located on the plans. Filler materials shall be treated according to the manufacturer's recommendations to prevent freezing to a temperature of -50 °F.

If the posted speed limits of the construction zone are 45 miles per hour or less, the impact attenuator shall comply with the crash test requirements contained in NCHRP Report 350 (only applicable for impact attenuators developed prior to 2011) or MASH (acceptable for all impact attenuators), TL-2. For posted speed limits in the construction zone greater than 45 miles per hour, the attenuator shall meet the requirements of TL-3.

CONSTRUCTION REQUIREMENTS

The site shall be prepared to receive the impact attenuator by filling, excavating, smoothing, constructing the paved foundation pad, installing approved transition and anchoring, and all other work necessary for the proper installation of the attenuator.

The impact attenuator shall be fabricated and installed in accordance with the manufacturer's recommendations. The Contractor shall provide a copy of the manufacturer's installation instructions and parts list to the Engineer prior to installation of the device.

Each installation shall be supervised and certified as correct upon completion by a representative of the device manufacturer or by an employee of the Contractor who is a certified installer. The certified installer shall have completed device training and shall be registered with the manufacturer as a certified installer. The Contractor shall submit all appropriate documentation to validate that the certified installer has completed device training and has been registered with the manufacturer as a certified installer.

METHOD OF MEASUREMENT

Impact Attenuator (Temporary) will be measured by the number of attenuators shown on the plans, installed, certified, and accepted; or the actual number of authorized 24-hour periods that the attenuator is used.

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**REVISION OF SECTION 630
IMPACT ATTENUATOR (TEMPORARY)**

BASIS OF PAYMENT

If the pay unit is “day” there will be no incremental payment for the device. If the pay unit is “each” the item will be paid incrementally in accordance with subsection 630.16.

The accepted quantities will be paid for at the contract unit price for the pay item listed below:

Payment will be made under:

Pay Item	Pay Unit
Impact Attenuator (Temporary)	Each

Payment will be full compensation for all work and materials required to furnish, install, certify, move, repair, maintain, and remove the impact attenuator. Site preparation, foundation pad, epoxy painting, and all necessary hardware including anchors and transitions will not be paid for separately, but shall be included in the work.

**REVISION OF SECTION 702
BITUMINOUS MATERIALS**

Section 702 of the Standard Specifications is hereby revised for this project as follows:

Delete Subsection 702.01 and replace it with Version 5, Section 2 of the Pikes Peak Region Asphalt Paving Specifications.

**REVISION OF SECTION 703
AGGREGATES**

Section 703 of the Standard Specifications is hereby revised for this project as follows:

Delete Subsection 703.04 and replace it with Version 5, Section 2 of the Pikes Peak Region Asphalt Paving Specifications.

Delete Subsection 703.06 shall include the following:and replace it with Mineral filler shall conform to the requirements of Section 2 and 4 of Version 5 of the Pikes Peak Region Asphalt Paving Specifications unless otherwise specified in these Project Special Provisions or following approval by the Engineer.

FORCE ACCOUNT ITEMS

DESCRIPTION

This special provision contains the County’s estimate for force account items included in the Contract. The estimated amounts marked with an asterisk (*) will be added to the total bid to determine the amount of the performance and payment bonds. Force Account work shall be performed as directed by the Engineer.

BASIS OF PAYMENT

Payment will be made in accordance with subsection 109.04. Payment will constitute full compensation for all work necessary to complete the item.

Force account work valued at \$5,000 or less, that must be performed by a licensed journeyman in order to comply with federal, state, or local codes, may be paid for after receipt of an itemized statement endorsed by the Contractor.

<u>Force Account Item</u>	<u>Estimated Amount</u>
F/A Minor Contract Revisions	\$60,000*
F/A Fuel Cost Adjustment	\$10,000
F/A Asphalt Cement Cost Adjustment	\$10,000
F/A OJT Colorado Training Program	\$6,400
F/A Erosion Control	\$10,000*

Force Account Descriptions

Minor Contract Revisions – This work consists of minor work authorized and approved by the Engineer, which is not included in the contract drawings or specifications, and is necessary to accomplish the scope of work of this Contract. This work includes, but is not limited to, the following: reset of private utility services, erosion control during construction, temporary traffic control, and asbestos abatement, as directed by the Engineer.

F/A Fuel Cost Adjustment – Adjustment will be made in accordance with subsection 109.06(i).

F/A Asphalt Cement Cost Adjustment – Adjustment will be made in accordance with the subsection 109.06(j).

F/A OJT Colorado Training Program – Cost of maintaining on-the-job training program in accordance with the Standard Special Provision.

F/A Erosion Control – This work consists of stormwater BMPs authorized and approved by the Engineer. This force account is to pay for all necessary work and materials for erosion control items not identified in the plans and at the Engineer’s direction. Payment will be made based on time and materials used to perform the work. All items shall be pre-approved by the Engineer prior to installation or they will be at no cost to the project.

TRAFFIC CONTROL PLAN

General Traffic Control Plan Requirements

The key elements of the Contractor's Method of Handling Traffic (MHT) are outlined in subsection 630.10. The components of the Traffic Control Plan (TCP) for this project are included in the following:

- (1) Subsection 104.04 and Section 630 of the Specifications
- (2) Standard Plan S-630-1, Traffic Controls for Highway Construction, Case 4
- (3) Detour Layout/Tabulation of Traffic Control Items

The following documents shall control the preparation of the MHT Plans and are listed in the order of precedence:

- (1) Plans and Special Provisions for this project
- (2) *Manual on Uniform Traffic Control Devices (MUTCD)*
- (3) *El Paso County Engineering Criteria Manual*
- (4) Colorado Department of Transportation *Standard Specifications*
- (5) Colorado Department of Transportation *M&S Standards*

The Contractor shall notify the following two weeks prior to the beginning of construction and 48 hours prior to changing traffic patterns:

- (1) El Paso County Department of Public Works – Engineering Division
- (2) Emergency Responders (Fire, Law Enforcement, Ambulance Services, etc.)

The Contractor shall submit, in writing, the proposed MHT for the initial phase of construction. When a different MHT is required for a subsequent construction phase, it must be submitted one week prior to starting that phase. All proposed MHTs shall be approved, in writing, by the Engineer. Approval of the proposed MHT does not relieve the Contractor of liability specifically assigned to him/her under the Contract.

The Contractor shall not perform any work on the roadways on Saturdays, Sundays, holidays, and non-daylight hours on all other days, unless approved by the Engineer.

Work that interferes with traffic on holidays, any day of a three-day or four-day holiday weekend, or the day before any holiday or holiday weekend will not be permitted. Holidays on which this restriction applies shall be those holidays recognized by the State of Colorado listed in the 1st paragraph of subsection 101.36.

Access to the Engineer's Field Facilities shall be maintained at all times by the Contractor.

The Contractor shall install construction traffic control devices where they do not block or impede other existing traffic control devices.

The Contractor shall coordinate with property owners at least seven days prior to any construction activities adjacent to or within easements on their property. The Contractor shall maintain access to all private driveways at all times, unless otherwise directed by the Engineer. The Contractor may negotiate temporary closures of access with individual property owners to facilitate various operations, such as paving. All closures shall have written property owner consent and shall be approved in advance by the Engineer.

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Traffic Control Plan

The Contractor shall develop an Access Maintenance Plan in coordination with, and based on the requirements of the affected property owners and tenants, and submit it to the Engineer. This plan shall detail all barricades, ramps, signs, and temporary means of access required by the property owners or tenants. Five working days prior to commencing any work which affects access to a property, the Access Maintenance Plan for that property must be submitted and incorporated in the MHT.

The Access Maintenance Plan shall include documentation of this coordination, including the approval signature of each affected owner or tenant. Should the Contractor be unable to obtain approval and signatures, documentation of the efforts made to obtain said approval and signatures must be submitted. All access shall be maintained on traversable surfaces approved by the Engineer.

The Contractor's and/or subcontractors' personnel, suppliers, etc. shall not access the work areas by crossing roadways open to traffic unless proper traffic control is provided and approved by the Engineer. Suitable transportation to the work site for personnel whose vehicles are parked off-site shall be provided by the Contractor.

All construction vehicle ingress/egress to the limits of the project shall be along approved routes. Prior to construction, the Contractor shall submit site access plans for approval to the Engineer. Direct access to the work zone from the roadway shall only be permitted when no other approach is available and shall be properly controlled, with adequate auxiliary lanes and traffic control devices. Direct access from multiple, uncontrolled and informal access points shall be prohibited, unless otherwise approved by the Engineer.

All construction vehicles shall be equipped with flashing amber lights. Equipment to be used at night shall also be equipped with flashing amber lights. Flashing amber lights on vehicles and equipment shall be visible from all directions. The Contractor shall not have construction equipment or materials in the lanes open to traffic at any time, unless directed by the Engineer. All personal vehicle parking will be prohibited where it conflicts with safety, access, or the flow of traffic. The Contractor shall not store material or allow personal vehicle parking on private property or construction easements, unless approved in writing by the landowner. Landscaped areas and roadway shoulders shall be kept clear of all parking, unless approved by the Engineer.

The Contractor shall leave the construction site clean and remove all debris. If the Engineer determines that the Contractor did not exercise reasonable care to protect existing features from unnecessary damage while accomplishing the work, the Contractor shall restore the damaged items to their original condition at no additional cost to the project. The Contractor shall not operate trucks and equipment or store equipment and supplies on private property outside of approved easements unless he/she has obtained written permission from the landowner.

The Contractor shall have no vertical drop-off immediately adjacent to traffic, greater than one inch in height, left unprotected. The Contractor shall:

- (1) Place a wedge of material along the edge of any drop-off. The wedge shall consist of stable material placed at a 60-degree or flatter slope. Channelizing devices shall also be used in these circumstances.

Or

- (2) Install concrete barrier (temporary) with a minimum two-foot buffer between the barrier face and the traveled way. An acceptable crashworthy terminal or flared barriers shall be installed at the upstream end of the section. For nighttime use, standard delineation devices must supplement the barriers.

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TRAFFIC CONTROL PLAN

The Contractor is responsible for coordination with all adjacent construction projects to ensure that traffic control devices do not overlap and/or provide conflicting or confusing direction to the traveling public.

The Contractor shall provide traffic control as necessary for any utility relocation work performed by utility companies within the project limits.

The Contractor shall submit the final striping plan if applicable to the Engineer for approval, prior to beginning the work.

During non-construction periods (evenings, weekends, holidays, time-count suspensions, etc.) all work shall be adequately protected to ensure the safety of vehicular and pedestrian traffic. Excavations or holes shall be filled in and surfaced with traversable and maintained gravel or temporary asphalt or fenced when unattended. This will not be measured and paid for separately but shall be included in the work.

All costs incidental to maintenance of access will not be paid for separately, unless otherwise provided, but shall be included in the work. Utilization of materials to be incorporated into the work may be permitted. However, any degradation or other contamination or destruction shall be corrected at the Contractor's expense prior to acceptance.

The Contractor shall provide the Project Superintendent and Traffic Control Supervisor (TCS) with cellular phones for project communication in addition to other communication devices specified in other provisions, as required. All traffic control personnel shall also be equipped with cellular phones or two-way radios to maintain effective communications, as determined by the Engineer. The radios shall have sufficient range to communicate throughout the entire project. Cellular phones shall be provided prior to contract work beginning and will not be paid for separately but shall be included in the work.

All costs incidental to the foregoing requirements, including any additional traffic control items required for haul routes into the project, will not be measured or paid for separately but shall be included in the original pay items for traffic control.

UTILITIES

Known utilities within the limits of this project are:

<u>Utility</u>	<u>Contact / Email</u>	<u>Phone</u>
Mountain View Electric Association (MVEA)	Les Ulfers <i>Les.u@mvea.org</i>	719-494-2682
Lumen	Ken Davis <i>Ken.davis2@centurylink.com</i>	719-636-4748
Lumen/Terra Technologies	Danny McKeon <i>dmckeon@terratechllc.net</i>	630-267-6711
ZAYO Fiber	James Black <i>jamesr.black@zayo.com</i>	719-216-8508

The Contractor shall coordinate with the County and any appropriate utility company to facilitate the installation, placement, and relocation of all utilities impacted on this project.

The location of utility facilities as herein described, was obtained from the best available information.

The work described in these plans and specifications requires coordination between the Contractor and the utility companies in accordance with subsection 105.11 in conducting their respective operations as necessary to complete the utility work with minimum delay to the project. The Contractor shall coordinate the work with the owners of the utilities impacted by the work. Coordination with utility owners includes, but is not limited to, staking construction features, providing and periodically updating an accurate construction schedule which includes all utility work elements, providing written notification of upcoming required utility work elements as the construction schedule indicates, allowing the expected number of working days for utilities to complete necessary relocation work, conducting necessary utility coordination meetings, applying for and obtaining power or communication services in the name of the County, and all other necessary accommodations as directed by the Engineer. Surveying and/or staking of utility relocations to be performed by the owner shall be the responsibility of the utility owner.

Prior to excavating or performing any earthwork operations, the Contractor shall positively locate all potential conflicts with existing underground utilities and proposed construction, as determined by the Contractor according to proposed methods and schedule of construction. The Contractor shall modify construction plans to avoid existing underground facilities as needed, and as approved by the Engineer. Please note that UNCC marks only its member’s facilities. Other facilities may exist, and it is the Contractor’s responsibility to investigate, locate, and avoid such facilities. The Contractor shall pothole all the listed potential conflicts prior to starting any underground or earthwork well in advance of the work so that the utility companies can be given the required notification and avoid delays to the project. The Contractor shall comply with Article 1.5 of Title 9, CRS ("Excavation Requirements") when excavation or grading is planned in the area of underground utility facilities. The Contractor shall notify all affected utilities at least two (2) business days, not including the day of notification, prior to commencing such operations. The Contractor shall contact the Utility Notification Center of Colorado (UNCC) at (8-1-1) or 1-800-922-1987 to have locations of UNCC registered lines marked by member companies. All other underground facilities shall be located by contacting the respective company. Utility service laterals shall also be located prior to beginning excavating or grading.

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Utilities

The Contractor shall plan the work to protect and maintain the existing electric, and communications lines within the project limits until the new facilities have been constructed and connected. This may require potholing to confirm the depths of existing facilities before proceeding with excavation or grade changes associated with the revised vertical profile or proposed storm. The Contractor shall clear and grub, remove existing obstacles, rough grade to the approximate finished grades, and survey and stake ROW and easements for those areas intended for relocation of utilities as required to facilitate utility relocations. The Contractor shall keep each utility company advised of any work being done to their facilities, so that each utility company can coordinate their inspections for final acceptance with the Engineer. The Contractor will comply with any special construction or safety requirements of each utility company as it may affect their work. The Contractor shall protect existing utilities in the vicinity of culvert and ditch construction and coordinate any required adjustments with the impacted utility company.

Damage to utilities due to poor or missed locates shall be repaired by the contractor causing the damage; it is the sole responsibilities of the contractor to take whatever means are necessary to locate and protect utilities including but not limited to potholing.

The Contractor shall provide traffic control for any utility work expected to be coordinated with construction, as directed by the Engineer.

Work Performed by Utility Owner or their Agents

The work listed below will be performed by the Utility Owners or their Agents. Work that is anticipated to be complete prior to mobilization by the Contractor are marked with [*Expected Complete*]. The Contractor shall coordinate construction with utility providers or their agents throughout the project duration. Coordination will be considered incidental to the project and shall not be paid for separately.

(A) Lumen

1. The Lumen contractor will replace the 3 copper cables and 1 fiber/conduit. Lumen will place all proposed facilities in Lumen existing easement on the east side of the bridge. Lumen will bore fiber/conduit from west side of bridge to join copper conduit and cables.

Work Performed by the Contractor

The work listed below shall be performed by the Contractor in accordance with the plans and specifications, and as directed by the Engineer. The Contractor shall keep each utility company advised of any work being done to its facility, so that the utility company can coordinate its inspections for final acceptance of the work with the Engineer.

(A) ZAYO Fiber

1. The Contractor shall coordinate with ZAYO and shall protect the ZAYO fiber in place for the duration of construction.

(B) MVEA Electric

1. The Contractor shall coordinate with MVEA Electric and protect the overhead electric in place for the duration of construction.