



**PROJECT DOCUMENTS**

**BRIDGE REHABILITATION PROJECT  
MARSHALL STREET OVER CLEAR CREEK  
PROJECT #B-01-15  
ITB-16-20  
JUNE 2016**

Prepared by:  
DEPARTMENT OF PUBLIC WORKS  
ENGINEERING DIVISION

CITY OF WHEAT RIDGE  
7500 W. 29TH AVENUE  
WHEAT RIDGE, CO 80033  
(303) 235-2861 Engineering  
(303) 235-2857 (FAX)

The engineering material and data contained in these Project Documents were prepared under the supervision and direction of Mark A Westberg, PE, Projects Supervisor.

**TABLE OF CONTENTS**

	<u>PAGE #</u>
SIGNATURE PAGE .....	4
ADVERTISEMENT FOR BIDS .....	5
INFORMATION FOR BIDDERS .....	6
CONTRACTORS QUALIFICATION FORM.....	10
PROPOSAL FORM .....	18
BID SCHEDULE .....	20
LIST OF SUBCONTRACTORS .....	22
NON-DISCRIMINATION ASSURANCE FORM .....	23
ILLEGAL ALIEN COMPLIANCE FORM .....	24
KEEP JOBS IN COLORADO CERTIFICATION STATEMENT .....	25
NON COLLUSION AFFIDAVIT .....	26
BID BOND FORM.....	27
SAMPLE AGREEMENT & FORMS .....	28
GENERAL PROVISIONS .....	37
CDOT STANDARD SPECIAL PROVISIONS .....	46
Section 101 & 630 – Construction Zone Traffic Control .....	46
Section 103 – Colorado Resident Bid Preference .....	47
Section 105 – Violation of Working Time Limitation .....	48
Sections 105 & 106 – Conformity to the Contract of Hot Mix Asphalt (Less than 5000 Tons) .....	48
Section 105 – Hot Mix Asphalt Pavement Smoothness .....	54
Section 105 – Disputes and Claims for Contract Adjustments .....	60
Section 106 – Material Sources .....	85
Sections 106, 627, & 713 – Glass Beads for Pavement Marking .....	86
Section 106 – Certificates of Compliance and Certified Test Reports.....	86
Section 107 – Warning Lights for Work Vehicles and Equipment .....	87
Section 107 – Responsibility for Damage Claims, Insurance Types and Coverage Limits .....	87
Sections 107 & 208 – Water Quality Control Under One Acre Of Disturbance .....	87
Section 108 – Subletting of Contract .....	91
Section 108 – Notice to Proceed .....	91
Section 108 – Project Schedule .....	82
Section 108 – Delay and Extension of Contract Time .....	96
Section 109 – Scales .....	98
Section 109 – Measurement of Quantities.....	98
Section 109 – Compensation for Compensable Delays .....	98
Sections 202, 627, & 708 – Pavement Marking Paint .....	99
Sections 203, 206, 304, & 613 0- Compaction .....	101
Sections 206 & 601 – Maturity Meter and Concrete Form and Falsework Removal.....	103
Section 208 – Erosion Control .....	105
Section 250 – Environmental, Health, and Safety Management .....	124
Section 401 – Temperature Segregation .....	136
Section 401 – Compaction of Hot Mix Asphalt .....	136
Section 412, 601, & 711 – Liquid membrane Forming Compounds for Curing Concrete .....	137
Section 518 – Bridge Expansion Device.....	137
Section 601 – Class B, BZ, D DT, and P Concrete .....	138
Section 601 – Concrete Slump Acceptance .....	139
Section 601 – Concrete Batching .....	140
Section 601 – Concrete Finishing .....	140
Section 601 – QZ Testing Requirements for Structural Concrete .....	141
Section 601 – Structural Concrete Strength Acceptance .....	141
Section 630 – Retroreflective Sign Sheeting .....	141
Section 702 – Bituminous Materials.....	142
Section 703 – Concrete Aggregates .....	143
Section 703 – Aggregate for Hot Mix Asphalt.....	143

Section 709 – Epoxy Coated Reinforcing Bars.....	145
Section 712 – Water for Mixing or Curing Concrete .....	145
CITY PROJECT SPECIAL PROVISIONS	
Section 101 – Definitions and Terms.....	145
Section 102 – Bidding Requirements and Conditions .....	147
Section 103 – Award and Execution of Contract .....	149
Section 104 – Scope of Work .....	150
Section 105 – Control of Work .....	150
Section 106 – Control of Material.....	153
Section 107 – Legal Relations and Responsibility to Public.....	154
Section 108 – Prosecution and Progress.....	155
Section 109 – Measurement and payment .....	156
Section 201 – Clearing & Grubbing .....	157
Section 202 – Removal of Structures .....	157
Section 206 – Excavation & Backfill for Structures.....	158
Section 208 – Erosion Control .....	159
Section 304 - Aggregate Base Course .....	161
Section 403 - Hot Bituminous Pavement .....	162
Section 601 - Structural Concrete.....	163
Section 602 - Reinforcing Steel .....	163
Section 614 - Traffic Control Devices .....	163
Section 627 - Pavement Marking.....	163
Section 630 - Traffic Control .....	164
DRAWINGS (see attached)	
ADDENDA (if applicable)	



**CITY OF WHEAT RIDGE  
SOLICITATION # ITB-16-20**

**BID DUE DATE: TUESDAY, AUGUST 2, 2016 BY 1:00 PM OUR CLOCK**

**BRIDGE REHABILITATION PROJECT  
MARSHALL STREET OVER CLEAR CREEK**

**PROJECT #B-01-15**

**SEALED BIDS MUST BE MAILED OR DELIVERED TO:**

City of Wheat Ridge Municipal Building  
Attention: Jennifer Nellis, CPPB  
7500 West 29<sup>th</sup> Avenue, Purchasing & Contracting Division  
Wheat Ridge, CO 80033  
303-235-2811

**IMPORTANT: PLEASE READ ENTIRE DOCUMENT**

Per the attached specifications, terms and conditions.

FEIN/SSN (Required) \_\_\_\_\_  
Federal I.D. Number

COMPANY NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY/STATE/ZIP \_\_\_\_\_

PHONE \_\_\_\_\_ EMAIL \_\_\_\_\_

TYPED/PRINTED NAME \_\_\_\_\_

AUTHORIZED SIGNATURE \_\_\_\_\_  
This is required. Must be in ink.

TITLE \_\_\_\_\_

ACKNOWLEDGE ADDENDAS, MUST INITIAL \_\_\_\_\_ NUMBER OF ADDENDA \_\_\_\_\_  
(Bidder is responsible for following up on all addendums)

DO YOU ACCEPT VISA FOR PAYMENT? IT IS THE PREFERRED METHOD \_\_\_\_\_

**DO NOT CONTACT THE REQUESTING DEPARTMENT OR MEMBER OF THE EVALUATION COMMITTEE.**

Signature acknowledges that Bidder: has read the bid documents thoroughly before submitting a bid, will fulfill the obligations in accordance to the scope of work or specifications, terms, and conditions, and is submitting without collusion with any other individual or firm. Do not submit more than one bid from your firm or both bids will be disqualified. Submit bid with authorized signature.

**Point of Contact:** Jennifer Nellis, Purchasing Agent, [jnellis@ci.wheatridge.co.us](mailto:jnellis@ci.wheatridge.co.us) or fax 303-234-5924

**MUST SUBMIT PAGE THREE / SIGNATURE PAGE WITH BID**

**INVITATION TO BID  
ITB-16-20  
BRIDGE REHABILITATION PROJECT  
MARSHALL STREET OVER CLEAR CREEK**

**Bid Due Date:** TUESDAY, AUGUST 2, 2016 by 1:00 pm our clock. Public Opening: City Hall, 7500 W. 29<sup>th</sup> Avenue, Wheat Ridge, CO.

**Project Number:** PROJECT #B-01-15

**Scope of Work:** Bridge rehabilitation project includes replacing the existing expansion devices. The expansion device in the middle of the bridge will be eliminated and the bridge expansion devices on each end of the bridge will be replaced. Two-way traffic will be maintained on the bridge at all times and the bridge cannot be closed. Approximate quantities include: 106 LF of bridge expansion device, 3100 LB of Epoxy coated reinforcing steel, 140 SY of asphalt removal, 25 Tons of asphalt. Cost Range is \$150,000 to \$180,000. Anticipated start date is Mid-September. Completion time is approximately 60 working days. A pre-bid conference will not be held for this project.

**Deadline for Questions:** July 15, 2016 by noon. Submit questions by email to [jnellis@ci.wheatridge.co.us](mailto:jnellis@ci.wheatridge.co.us).

**Contractor Qualification:** Bidder must complete and submit the Contractor Qualification Form provided with the bid document. Failure to complete this form and submit with bid may result in the disqualification of the contractor. The City's acceptance of this bid shall be based on information provided by the contractor in this form. Bid amount and qualifications are evaluated subsequent to bid opening to determine the successful bidder. The City does not pre-qualify contractors.

**Disadvantaged Businesses:** Disadvantaged business enterprises are afforded full opportunity to submit bids and will not be discriminated against on the grounds of race, color or national origin in consideration for an award.

**Labor Compliance:** Contractors shall comply with the amended provisions of CRS 8-17.5-101 regarding employment of illegal aliens to perform on public contracts. The proposer shall also confirm its compliance with the 80% Colorado labor requirement of the Keep Jobs in Colorado Act, H.B, 13-1292, including C.R.S. 8-17-101, et seq.

**Bid Bond:** A 5% bid bond is required to be submitted with the bid. Payment and performance bonds for 100% of the contract price and insurance will be required for the successful bidder.

**Submit Sealed Bids to:** City of Wheat Ridge Municipal Building  
Attn: Jennifer Nellis, CPPB  
7500 W 29<sup>th</sup> Avenue, Purchasing Division  
Wheat Ridge, CO 80033

**Mark Sealed Envelopes:** ITB-16-20, BRIDGE REHABILITATION PROJECT- MARSHALL STREET OVER CLEAR CREEK

**Comments:** All bids will be validated. No bids will be accepted after the bid due time. Bids received after the bid opening time will be filed unopened. The City of Wheat Ridge reserves the right to reject any and all bids or any part and to waive any formalities or informalities to make an award in the best interest of the City.

**Bid Documents:** Available on the Rocky Mountain E-Purchasing System at [www.rockymountainbidsystem.com](http://www.rockymountainbidsystem.com) (800-835-4603 option #2) and the City website at [www.ci.wheatridge.co.us](http://www.ci.wheatridge.co.us). Visit the City website for bid tab sheets and project updates.

**Point of Contact:** Jennifer Nellis, Purchasing Agent, [jnellis@ci.wheatridge.co.us](mailto:jnellis@ci.wheatridge.co.us) or fax 303-234-5924 or phone 303-235-2811. Do not contact the requesting department.

**Publish Dates:**

Daily Journal: July 5, 2016  
July 11, 2016  
City Web/RMEPS: July 5, 2016

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Jennifer Nellis, Purchasing Agent

## INFORMATION FOR BIDDERS

### 1.0 BID SUBMISSION REQUIREMENTS

- 1.1 Sealed Bids for **ITB-16-20, BRIDGE REHABILITATION PROJECT MARSHALL STREET OVER CLEAR CREEK, PROJECT #B-01-15** will be received by the City of Wheat Ridge, Office of the Purchasing Agent, 7500 W. 29th Avenue, Wheat Ridge, CO 80033, as stated in the Advertisement. BID OPENING DATE IS SET FOR TUESDAY, AUGUST 2, 2016 BY 1:00 PM OUR CLOCK at which time bids will be publicly opened and read aloud.

Questions about this bid shall be referred to Jennifer Nellis, Purchasing Agent, 303- 235-2811, or by fax 303-234-5924 or by email [jnellis@ci.wheatridge.co.us](mailto:jnellis@ci.wheatridge.co.us)

- 1.2 Bid Documents: available on the Rocky Mountain Purchasing Group at [www.rockymountainbidsystem.com](http://www.rockymountainbidsystem.com) (800-835-4603 option #2) and the City website at [www.ci.wheatridge.co.us](http://www.ci.wheatridge.co.us) Limited hard copies are available in the Purchasing Office for a non-refundable and no returnable cost of \$25.00. Cash or check only.

The City does not assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of bidding documents.

The City in making copies of the bidding documents available on the terms in this Project Manual does so only for the purpose of obtaining bids on the Work and does not confer a license of grant for use.

- 1.3 Two **(2) copies** of the Project Document/Proposal must be submitted and signed. Single copies of the original bid bond will be accepted. All blank spaces for prices must be filled in, in ink or typewritten, and the Proposal Form must be fully completed and executed when submitted. In the case of discrepancies, the unit price shall govern the extension and subsequent total. No alteration in bid prices by erasures, deletions or strike-outs, will be acceptable unless each alteration is signed or initialed by the Bidder. A conditional or qualified Bid will not be accepted.

The Project Documents contain an affidavit certifying that the Bidder has not participated in any collusion or taken any action in restraint of free competitive bidding. This form must be signed and submitted with the Bid.

Names of all subcontractors and the amounts of their subcontract work shall be provided on the List of Subcontractors, as provided in this bid. If none, state "none".

- 1.4 Bids may be mailed or delivered in person, but must be in a sealed envelope. The envelope should bear on the outside the name of the project for which the Bid is submitted. No bids will be accepted after the date and time established above, except by written addendum.
- 1.5 Each Bid must be accompanied by a Bid Bond payable to the City for five percent (5%) of the total amount of the Bid. A certified check or cashier's check payable to the City of Wheat Ridge may be used in lieu of a Bid Bond. Securities may not be substituted for Bid Bonds.

Attorneys-in-Fact who sign Bid Bonds must file with each Bond a certified and effective dated copy of their Power of Attorney.

Surety companies executing bid and performance bonds must appear on the Treasury Departments most current list (Circular 570 as amended) and be authorized to transact business in the State of Colorado.

- 1.6 A bidder may withdraw or revise a proposal after it has been deposited with the City. Withdrawal of bids may be made either in writing or in person; however, any bid withdrawn for purpose of revision must be re-deposited with the City before the time set for opening of bids. Bids may not be withdrawn after the time set for opening of bids.
- 1.7 The City assumes no responsibility for late deliveries of mail on behalf of the United States Post Office. Only sealed bids received by the Purchasing Department will be accepted. Bids submitted by telephone, facsimile machine, or by other electronic means are not acceptable.

In the event of a situation severe enough to cause the City Council to close its offices for any reason, the Purchasing Agent has the prerogative of rescheduling the bid opening time and date. No bidder will be

considered above all other bidders by having met the bid opening time and date requirements to the exclusion of those who were unable to present their bid due to the closing of City offices.

- 1.8 Issuance of this Request for Bid does not commit The City of Wheat Ridge to award any contract or to procure or contract for any equipment, materials, or services. The City further reserves the right to waive informalities or irregularities, and the right to accept or reject any and all bids, including but not limited to, any bid which does not meet bonding requirements, or bids which do not furnish the quality, or offer the availability of materials, equipment or services as required by the specifications, description or scope of services, or bids from bidders who lack experience or financial responsibility, or bids which are not to form, or to award bids to the lowest and most responsive and responsible bidder, or to require new bids.

No award will be made to any person, firm, or corporation that is in arrears upon any obligation to the City.

- 1.9 The City of Wheat Ridge is exempt from City, County, State and Federal Sales/Excise Taxes. Certificates will be issued upon request.

## 2.0 BID DOCUMENTS

- 2.1 The Contract Documents consist of the Contract Bid Documents including construction specifications, if any. The Contract Bid Documents contain the provisions required for the bidding and construction of the Project. The Owner shall provide to Bidders, prior to Bidding, all information that is pertinent to, and delineates and describes, the Work. This may occur on the plans or on a separate document.

- 2.2 Each Bidder is responsible for inspecting the site and for reading and being thoroughly familiar with the Contract Documents, including Addenda. The failure or omission of any Bidder to do any of the foregoing shall in no way relieve any Bidder from any obligation in respect to his Bid. After Bids have been submitted, the Bidder shall not assert that there was a misunderstanding concerning the quantities of Work or of nature of the Work to be done or any materials specified for the Work.

- 2.3 If it should appear to a Bidder that the work to be done or matters relative thereto are not sufficiently described or explained in the Contract Documents or that the Contract Documents are not definite and clear, the Bidder may make written inquiry regarding same to the Purchasing Agent at least five (5) working days or a designated date set by the Purchasing Agent, before the scheduled closing time for filing Bids. Then, if in the judgment of the Purchasing Agent, additional, information or interpretation is necessary, such information will be supplied in the form of an Addendum, and will be delivered to all individuals, firms and corporations who have received the Contract Documents. Such Addendum shall have the same binding effect as though contained in the main body of the Contract Documents. **Oral instructions or information concerning the contract documents or the project given out by officers, employees or agents of the owner to prospective bidders shall not bind the owner.** If no request is made in the five working days or the designated time, Bidder waives right to any conflict in the Contract Documents.

- 2.4 All applicable laws, ordinances and the rules and regulations of all authorities having jurisdiction over construction of the Project shall apply to the Contract throughout. Further, the Bidder agrees to abide by the following federal requirements: Executive Order No. 11246 as amended, including specifically the provisions of the Equal Opportunity Clause, the Immigration Reform and Contract Act of 1986 and the Americans with Disabilities Act of 1991.

As a recipient of Federal funds, subject to United States Department of Transportation Title VI Regulations at 49 CFR Part 21 the Civil Rights Act of 1964, the City of Wheat Ridge, and its responsible agents, contractors and consultants assure that no person shall on the grounds of race, color, or national origin be excluded from participation in the opportunity to bid, or be discriminated against in consideration of award of this project. Disadvantaged business enterprises will be afforded full opportunity to submit bids in response to all invitations subject to the Regulations. The United States has a right to seek judicial enforcement with regard to any matter arising under Title VI, 49 CFR Part 21 and assurances.

- 2.5 **Contractor Qualification:** Bidder must complete and submit the Contractor Qualification Form provided with the bid document. Failure to complete this form and submit with bid may result in the disqualification of the contractor. The City's acceptance of this bid shall be based on information provided by the contractor in this form. Bid amount and qualification shall be evaluated subsequent to bid opening to determine the successful bidder. The City does not pre-qualify contractors.

### 3.0 CONTRACT AWARD

- 3.1 The Owner may make such investigations as deemed necessary to determine the ability of the Bidder and Subcontractors to perform the Work, and the Bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any Bid if the evidence submitted, or investigation fails to satisfy the Owner that such Bidder or any Subcontractor is properly qualified to carry out the obligations of the Agreement. If the owner rejects any Subcontractor as unqualified, the Bidder may substitute another Subcontractor for approval by the Owner but no change to the Bid Price will be allowed.
- 3.2 The Award of Contract, is anticipated, within 60 calendar days after the opening of bids to the lowest most responsive, responsible qualified bidder whose bid complies with all the requirements of this request for bids. Evaluation and award will only include the alternate if the base bid and the alternate price combined are within the advertised cost range. If more than one alternate, the order or the selection of the alternates for award is at the discretion of the City. Award is in the best interest of the City.
- 3.3 The successful bidder shall be notified of the recommendation for award and to provide two (2) signed agreements, insurance and bonds. A Performance Bond and Payment Bond, each in the amount of 100 percent (100%) of the Contract Price, with a corporate surety approved by the Owner, will be required for the faithful performance of the Contract. Securities may not be substituted for Payment or Performance Bonds. Attorneys-in-Fact who sign Payment and Performance Bonds must file with each Bond a certified and effective dated copy of their Power of Attorney.
- 3.4 The successful bidder shall return the two copies of the executed Agreement and one acceptable Performance and Payment Bonds by a designated date. In case the Bidder fails to comply by the designated date or if the Bidder fails to provide acceptable bonds, the Owner may, at its option, consider the Bidder in default, in which case the Bid Bond accompanying the Proposal (Bid) shall become the property of the Owner.
- 3.5 The Owner, within 14 calendar days of receipt of the requirement stated in 3.3 above, shall execute the Agreement and issue the Notice to Proceed at a pre-construction meeting with the Contractor. If the Owner cannot issue the Notice to Proceed within such time period, the time period will be extended by mutual agreement between the Owner and Contractor. If the Notice to Proceed has not been issued within the 14 calendar day period or within the period mutually agreed upon, the Contractor may terminate the Agreement, by Written Notice, without further liability on the part of either party.
- 3.6 Upon receiving notice of award, the Contractor may obtain from the City three sets of documents at no cost. Additional sets of drawings and specifications may be purchased on a cash sale basis from the City. The Contractor and the Owner will agree on the date that Work will commence which shall be within 14 calendar days of the date of the Notice to Proceed, unless a time extension is approved by the Owner.
- 3.7 Section 2-3 Of the City's Code of Laws is presented in part below:
- (a) FISCAL YEAR. Fiscal year for the City shall commence on January 1 and end on December 31st.
- (b) BUDGET CONTAINS APPROPRIATIONS. The City Council shall annually adopt a budget in a manner consistent with the provisions of Chapter X of the Home Rule Charter of the City of Wheat Ridge. Upon the annual adoption by the City Council of each year's budget, levels of authorized expenditures from the funds indicated within the annual budget itself and/or the adopting resolution shall constitute the appropriate of the amounts specified therein for the purposes specified therein. During the course of each fiscal year, approval by the City Council of contracts for goods or services, and/or approval of bids for the provision of specified goods or services, shall likewise constitute appropriations of the amounts specified therein for the purposes specified therein.
- (c) NO CONTRACT TO EXCEED APPROPRIATION. During each and any fiscal year, no contract entered into by or on behalf of the City shall expend or contract to expend any money, or incur any liability, nor shall any contract be entered into nor any bid be awarded by on behalf of the City which, by its terms, involves the expenditure of money for any of the purposes for which provision is made either in the adopted budget or adopting resolution is made either in the adopted budget or adopting resolution, including any legally authorized amendments thereto, in excess of the amount appropriated in the budget or the approved contract or bid amount. Any contract or bid award, either verbal or written, made in violation of the provisions of this Section shall be void as to the City and no monies from any source whatsoever shall be paid thereon.
- (d) AMENDMENTS AND AUTHORIZED EXPENDITURES. Nothing contained herein shall preclude the City Council from adopting supplemental appropriation in a manner consistent with the provisions of Section 10.12

of the Home Rule Charter of the City of Wheat Ridge. Further, nothing contained in this Section shall prevent the making of contracts for governmental services or for capital outlay for a period exceeding one year if such contracts are otherwise allowed by the Home Rule Charter of the City; provided, however, any contract so made shall be executory only for the amounts agreed to be paid for such services to be rendered in succeeding fiscal years.

(e) NOTICE TO PARTIES CONTRACTING WITH THE CITY. All persons contracting with or selling goods or services to, the City are hereby placed on notice of the provisions of this Section. The provisions of this Section shall become a part of the Merit System Personnel Rules and Regulations of the City of Wheat Ridge; shall be referred to specifically in all public works bid documents and contracts; and shall be incorporated into, or specifically noted within, all other contracts entered into by or on behalf of the City wherein City funds are used to pay for said contract.

3.8 Section 2-4 of the City Code of Laws is presented in part below:

(a) The City may, by contract, require the contractor awarded a public works contract to waive, release, or extinguish its rights to recover costs or damages, or to obtain an equitable adjustment, for delays in performing such contract, if such delay is caused, in whole or in part, by acts or omissions of the City or its agents, if the contract provides that an extension of time for completion of the work is the Contractors remedy for such delay. Such a clause is valid and enforceable, any provision of State Law to the contrary notwithstanding.

(b) The City Council, by this ordinance, declares its local contracting powers to be a matter of purely local concern, and further specifically intends to supersede, pursuant to its powers under Article XX of the Colorado Constitution, the provisions of Sections 24-91-101 and 103.5 C.R.S., insofar as they conflict with the provisions of this Section of the Code of Laws of the City of Wheat Ridge, Colorado.

4.0 ANTICIPATED PROJECT SCHEDULE

ITB Issued/Advertised	July 5 & July 11, 2016
Deadline for Questions	July 15, 2016
Final Addendum Issued	July 21, 2016
Bid Due Date	August 2, 2016 @ 1:00 pm
Submit CAF for City Council	August 12, 2016
City Council Award	August 22, 2016
Anticipated Start Date	Mid-September 2016
Completion Time	60 Working Days

IMPORTANT: THIS FORM MUST BE COMPLETED AND SUBMITTED WITH YOUR BID

## CONTRACTOR'S QUALIFICATION FORM

Your Bid Will Not Be Processed If Incomplete

### SECTION I - IDENTIFICATION

#### 1. Identification of Applicant Firm

A. \_\_\_\_\_  
Exact Legal Name of Applicant Firm DUNS #

B. \_\_\_\_\_  
Address City State Zip Code

C. \_\_\_\_\_  
(Mailing Address, if different from above)

D. Primary Company Telephone No. ( ) \_\_\_\_\_ Fax No. ( ) \_\_\_\_\_

E. Applicant Firm's Contact Person for Public Works Office follow-up:

\_\_\_\_\_  
Print or Type Name Position Telephone Number

F. Has the Applicant Firm changed its address or has the Firm or its Owner(s) operated under any other name(s) including other DBAs in the past five years? If yes, explain fully on a separate sheet of paper.  
 No  Yes

G. Type of business organization: \_\_\_\_\_

YEAR organization established: \_\_\_\_\_ NUMBER of current full time employees: \_\_\_\_\_

Sole Proprietor  Corporation  
[Date and State of Incorporation \_\_\_\_\_]

Limited Partnership  General Partnership  
[Date and State of Partnership filing \_\_\_\_\_]

Limited Liability Company  Limited Liability Partnership  
[Date and State of filing \_\_\_\_\_]

Other (describe) \_\_\_\_\_

Type of service(s) to be provided to the City of Wheat Ridge.

- |   |  |
|---|--|
| <input type="checkbox"/> General Contractor | <input type="checkbox"/> Concrete Flatwork     |
| <input type="checkbox"/> Storm Sewer        | <input type="checkbox"/> Concrete Structures   |
| <input type="checkbox"/> Traffic Signals    | <input type="checkbox"/> Slurry Seal           |
| <input type="checkbox"/> Grading            | <input type="checkbox"/> Fog Seal              |
| <input type="checkbox"/> Asphalt Paving     | <input type="checkbox"/> Crack Sealing         |
| <input type="checkbox"/> Concrete Paving    | <input type="checkbox"/> Landscaping           |
| <input type="checkbox"/> Signing            | <input type="checkbox"/> Striping              |
| <input type="checkbox"/> Traffic Control    | <input type="checkbox"/> Other (describe)_____ |

**SECTION II - OWNERSHIP/MANAGEMENT, PROJECT MANAGEMENT, SUPERVISORS, AND RELATED ENTITIES**

**1. Owners**

List Owners of Applicant Firm.

Full Legal Name	Title	Years of Related Experience	% Of Ownership

[Use additional sheets if necessary]

**2. Project Management Team, Supervisors and Employees Who Will Be Working Directly On The Project(s).**

List the full names of the primary employees of the proposed Project Team.

Full Legal Name	Present Position	Years of Related Experience	% of Time Devoted to Project	Professional Licenses

[Use additional sheets if necessary]

**3. Resume**

Attach resumes of the Project Management Team showing the last five years of employment in this field. Resumes must be comprehensive and include of Firms worked for and dates of employment. (RESUMES are not required from Materials Suppliers (Vendors)).

**4. Contractor's License(s)**

The awarded Contractor must obtain or have a current City of Wheat Ridge Municipal Contractor's License within 7 days of Council approval of bid award.

**SECTION III - CONTRACTING HISTORY**

**1. Contracting History**

A. List the applicant Firm's six largest contracts in the last three years.

1. Company Name \_\_\_\_\_ Contact Name \_\_\_\_\_  
Street Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_  
Phone No: \_\_\_\_\_ Fax No: \_\_\_\_\_  
Contract Name & Number \_\_\_\_\_  
Contract Amount \_\_\_\_\_ Start/Completion Dates \_\_\_\_\_  
Description of Work \_\_\_\_\_  
\_\_\_\_\_  
Prime or Subcontractor \_\_\_\_\_

2. Company Name \_\_\_\_\_ Contact Name \_\_\_\_\_  
Street Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_  
Phone No: \_\_\_\_\_ Fax No: \_\_\_\_\_  
Contract Name & Number \_\_\_\_\_  
Contract Amount \_\_\_\_\_ Start/Completion Dates \_\_\_\_\_  
Description of Work \_\_\_\_\_  
\_\_\_\_\_  
Prime or Subcontractor \_\_\_\_\_

**SECTION III - CONTRACTING HISTORY – (Continued)**

3. Company Name \_\_\_\_\_ Contact Name \_\_\_\_\_  
Street Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_  
Phone No: \_\_\_\_\_ Fax No: \_\_\_\_\_  
Contract Name & Number \_\_\_\_\_  
Contract Amount \_\_\_\_\_ Start/Completion Dates \_\_\_\_\_  
Description of Work \_\_\_\_\_  
\_\_\_\_\_  
Prime or Subcontractor \_\_\_\_\_

4. Company Name \_\_\_\_\_ Contact Name \_\_\_\_\_  
Street Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_  
Phone No: \_\_\_\_\_ Fax No: \_\_\_\_\_  
Contract Name & Number \_\_\_\_\_  
Contract Amount \_\_\_\_\_ Start/Completion Dates \_\_\_\_\_  
Description of Work \_\_\_\_\_  
\_\_\_\_\_  
Prime or Subcontractor \_\_\_\_\_

5. Company Name \_\_\_\_\_ Contact Name \_\_\_\_\_  
Street Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_  
Phone No: \_\_\_\_\_ Fax No: \_\_\_\_\_  
Contract Name & Number \_\_\_\_\_  
Contract Amount \_\_\_\_\_ Start/Completion Dates \_\_\_\_\_  
Description of Work \_\_\_\_\_  
\_\_\_\_\_  
Prime or Subcontractor \_\_\_\_\_

**SECTION III - CONTRACTING HISTORY – (Continued)**

6. Company Name \_\_\_\_\_ Contact Name \_\_\_\_\_  
Street Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_  
Phone No: \_\_\_\_\_ Fax No: \_\_\_\_\_  
Contract Name & Number \_\_\_\_\_  
Contract Amount \_\_\_\_\_ Start/Completion Dates \_\_\_\_\_  
Description of Work \_\_\_\_\_  
\_\_\_\_\_  
Prime or Subcontractor \_\_\_\_\_

In the past five years has the Applicant Firm or any Affiliate been the subject of any of the following actions?

- A. Been suspended, debarred, disqualified, or otherwise declared ineligible to bid?  
 No  Yes
- B. Failed to complete a contract for a commercial, private owner or Government agency?  
 No  Yes
- C. Been denied a low-bid contract in spite of being the low bidder?  
 No  Yes
- D. Had a contract terminated for any reason, including default?  
 No  Yes
- E. Had liquidated damages assessed against it during or after completion of a contract?  
 No  Yes

If "Yes" to Sections IV, V or VI, provide details including a brief summary of cause(s) of action, indicate if Applicant Firm, Owner or Affiliate Firms were plaintiffs (P) or defendants (D); define charges explicitly, by what authority, court or jurisdiction, etc. Complete details are required!

NOTE: For Sections IV and V below, the definition of an "investigation" includes: an appearance before a grand jury by representatives of the Firm; any oral or written inquiry or review of the Firm's documents by a governmental or law enforcement agency or investigative agency; or questioning of employees concerning the general operation or a specific project or activities of the Firm

**SECTION IV - CIVIL ACTIONS**

**1. Violations Of Civil Law**

In the past five years has Applicant Firm, any of its Owners, or any Affiliate been the subject of an investigation of any alleged violation of a civil antitrust law, or other federal, state or local civil law?

No  Yes

**2. Lawsuits With Public Agencies**

At the present time is, or during the past five years has the Applicant Firm, any of its Owners, or any Affiliate been a plaintiff or defendant in any lawsuit regarding services or goods provided to the City of Wheat Ridge or to a public agency?

No  Yes

**3. Bankruptcy**

During the past five years, has the Applicant Firm or any Affiliate filed for bankruptcy or reorganization under the bankruptcy laws?

No  Yes

**4. Judgments, Liens And Claims**

During the past five years, has the Applicant Firm been the subject of a judgment, lien or claim of \$10,000 or more by a subcontractor or supplier?

No  Yes

**5. Tax Liens**

During the past five years, has the Applicant Firm been the subject of a tax lien by federal, state or any other tax authority?

No  Yes

**SECTION V - COMPLIANCE WITH LAWS AND OTHER REGULATIONS**

**1. Criminal**

In the past five years has the Applicant Firm, any of its Owners, or Affiliates:

A. Been the subject of an investigation involving any alleged violation of criminal law?

No  Yes

B. Been arrested, indicted or named as an unindicted co-conspirator in any indictment or other accusatory instrument?

No  Yes

C. Been convicted, after trial or by plea, of any felony under state or federal law?

No  Yes

D. Been convicted of any misdemeanor involving business-related crimes?

No  Yes

E. Entered a plea of nolo contendere to a charge of embezzlement, theft, forgery, bribery, falsification or destruction of records, receiving stolen property, or a violation of any antitrust laws?

No  Yes

F. Entered into a consent decree?

No  Yes

G. Been granted immunity from prosecution for any business-related conduct constituting a crime under state or federal law?

No  Yes

H. Taken the Fifth Amendment in testimony on any business-related crime?

No  Yes

I. Paid a fine or settlement to resolve any criminal or civil violations or allegations involving a business activity?

No  Yes

J. Do any Owners in Applicant Firm have any felony charges pending against them that were filed either before, during, or after their employment with the Applicant Firm?

No

Yes

### 1. Regulatory Compliance

In the past five years, has Applicant Firm, any of its Owners, or Affiliates been cited for:

A. A violation of any labor law or regulation, including prevailing wage rates and fair labor practices?

No

Yes

B. An OSHA violation?

No

Yes

C. A violation of federal, state or local environmental laws or regulations?

No

Yes

D. Any other administrative, statutory or regulatory violations?

No

Yes

## SECTION VI - ETHICS

### 1. False Statements, Bribes, Collusion

In the past five years has the Applicant Firm, any of its Owners, or Affiliates:

A. Filed with a government body (including City of Wheat Ridge) or submitted to a government employee (including City of Wheat Ridge employee) any form of document known by the Applicant Firm, any of its Owners, or by the person submitting the document, to contain false information?

No

Yes

B. Created or maintained false business records?

No

Yes

C. Given, or offered to give, money or any other benefit to a public official or employee with intent to influence that person regarding any of their official acts, duties or decisions?

No

Yes

D. Given, or offered to give, money or other benefit to an official or employee of a private business with intent to induce that official or employee to engage in unethical or illegal business activities (including but not limited to improper gratuities, and/or violations of lobbying regulations)?

No

Yes

E. Agreed with another to bid below prevailing market rate?

No

Yes

F. Agreed with another to submit identical or complimentary bids or otherwise not to bid competitively?

No

Yes

G. Agreed with another not to submit competitive bids in another's territory established either by geography or customers?

No

Yes

H. Agreed with another to take turns in obtaining contracts by pre-determining which Firm shall submit the lowest bid?

No

Yes

**1. Conflict Of Interest**

- A. Does the Applicant Firm, any of its Owners or Project Team Members have any existing relationships that could be construed as either personal or organizational conflicts of interest, or which would give rise to a conflict if Applicant Firm should be a recipient of a contract with the City of Wheat Ridge?  
 No  Yes
- B. Has any Owner or Project Team member of Applicant Firm ever (if yes explain fully):
1. Been an employee of the City of Wheat Ridge, or served as a Member of Wheat Ridge City Council?  
 No  Yes
  2. Been related by blood or marriage to a City of Wheat Ridge employee or Council Member?  
 No  Yes

**SECTION VII - ADDITIONAL DOCUMENTATION REQUIRED**

**Additional document copies to be submitted with this application:**

Letter of Reference from your Firm's Surety, which states current available aggregate and single project bonding capacity (This Application will not be processed without this letter)

List of Major Equipment by number and type available for the Project(s).

Certification of all IMSA certified personnel, if applying for traffic signal project(s). A minimum of two full time employees must be certified at Level II or higher.

**PROPOSAL FORM**  
**ITB-16-20**  
**BRIDGE REHABILITATION PROJECT**  
**MARSHALL STREET OVER CLEAR CREEK**  
**PROJECT #B-01-15**

This is the Proposal (Bid) of \_\_\_\_\_ (hereinafter called "BIDDER") or organized and existing under the laws of the State of \_\_\_\_\_ doing business as a \_\_\_\_\_ (Insert "a corporation", "a partnership", or "an individual" as applicable.)

To the CITY OF WHEAT RIDGE (hereinafter called "Owner").

The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Contract Bid Documents, to complete all Work as specified or indicated in the Contract Bid Documents for the Contract Sum and within the Contract time indicated in accordance with the Contract Bid Documents.

Bidder accepts all of the terms and conditions of the Instructions to Bidders. The Bid will remain open for sixty days after the day of Bid opening. Bidder will sign the Agreement and submit any documents required by the Contract documents within seven (7) calendar days after notification or the designated date.

By submission of this Bid, each Bidder certifies, and in the case of a joint Bid, each party thereto certifies as to his own organization, that this Bid has been arrived at independently without consultation, or communication with any competitor. Every bid submitted to the City shall contain a statement certifying that the Bidder has not participated in any collusion or taken any action in restraint of free competitive bidding. This statement shall be in the form of an affidavit provided by the City and included in the Bid Proposal. The Bidders proposal will be rejected if it does not contain the completed Non-collusion Affidavit.

Bidder agrees to abide by the following federal requirements:

Executive Order No. 11246 as amended, including specifically, the provisions of the Equal Opportunity Clause, the Immigration Reform and Contract Act of 1986, and the Americans with Disabilities Act of 1991.

United States Department of Transportation Title VI Regulations at 49 CFR Part 21 the Civil Rights Act of 1964, assuring that no person shall on the grounds of race, color, or national origin be excluded from participation in the opportunity to bid, or be discriminated against in consideration of award of this project.

Bidder hereby agrees to commence Work under this contract on or before a date to be specified in the Notice to Proceed and to fully complete the Project within **60 working days**.

The Notice to Proceed shall be issued within fourteen (14) days of the execution of the Agreement by the Owner. Should there be reason why the Notice to Proceed cannot be issued within such period, the time may be extended by mutual agreement between the Owner and Contractor. If the Notice to Proceed has not been issued within the period mutually agreed upon, the Contractor may terminate the Agreement without further liability on the part of either party.

The Owner may make such investigations as he deems necessary to determine the ability of the Bidder to perform the Work, and the Bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any Bid if the evidence submitted by, or investigation of, such Bidder fails to satisfy the Owner that such Bidder is properly qualified to carry out the obligations of the Agreement.

Bidder has examined the site and locality where the Work is to be performed, the legal requirements (federal, state and local laws, ordinances, rules and regulations) and the conditions affecting cost, progress, or performance of the Work and has made such independent investigation as Bidder deems necessary.

Bidder will complete the Work for all accepted bid items.

**PROPOSAL FORM, CONTINUED**  
**ITB-16-20**  
**PRICING SCHEDULE**

Provide all materials, labor, and equipment to complete the work as per the specifications. It is the Owner's intent to award a single contract to the lowest qualified bidder.

Project: BRIDGE REHABILITATION PROJECT MARSHALL STREET OVER CLEAR CREEK,  
PROJECT #B-01-15

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Company Name Date

---

Authorized Signature Title

---

Printed Name

---

Title

---

License No. Type Expiration Date

ATTEST:

---

Printed Name

---

Signature Title

SEAL  
(If bid is by corporation)

ADDENDA

Bidder acknowledges receipt of the following Addenda:

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**BID SCHEDULE**      COMPANY SUBMITTING BID \_\_\_\_\_  
**ITB-16-20**  
**PROJECT #B-01-15**

Bidder agrees to perform all the work described in the Contract Documents for the following unit prices or lump sums.

<b>ITEM NO.</b>	<b>PAY ITEM</b>	<b>ESTIMATED QUANTITY</b>	<b>UNIT</b>	<b>UNIT PRICE</b>	<b>EXTENSION</b>
201	Clearing and Grubbing	1	LS	\$ _____	\$ _____
202A	Removal of Asphalt Mat	141	SY	\$ _____	\$ _____
202B	Removal of Portions of Present Structure (Class 2)	19	SY	\$ _____	\$ _____
202C	Removal of Portions of Present Structure (Class 3)	20	SY	\$ _____	\$ _____
202D	Removal of Portions of Present Structure	1	LS	\$ _____	\$ _____
206	Structure Excavation	24	CY	\$ _____	\$ _____
208A	Aggregate Bag	36	LF	\$ _____	\$ _____
208B	Concrete Washout Structure	1	EA	\$ _____	\$ _____
304	Aggregate Base Course (Class 6)	10	CY	\$ _____	\$ _____
403	Hot Mix Asphalt (Grading SX) (PG 64-22)	25	TON	\$ _____	\$ _____
411	Emulsified Asphalt (Slow-setting)	15	GAL	\$ _____	\$ _____
515	Waterproofing (Membrane)	75	SY	\$ _____	\$ _____
518	Bridge Expansion Device (0-4 Inch)	106	LF	\$ _____	\$ _____
601A	Concrete Class D (Bridge)	27	CY	\$ _____	\$ _____
601B	Concrete Class DT (Deck Topping)	5	CY	\$ _____	\$ _____
602	Reinforcing Steel (Epoxy Coated)	3,100	LB	\$ _____	\$ _____
614	Variable Message Sign	2	EA	\$ _____	\$ _____
620	Sanitary Facility	1	EA	\$ _____	\$ _____
626	Mobilization	1	LS	\$ _____	\$ _____
627	Pavement Marking Paint	3	GAL	\$ _____	\$ _____
SUBTOTAL THIS PAGE				\$ _____	\$ _____

COMPANY SUBMITTING BID \_\_\_\_\_

<b>ITEM NO.</b>	<b>PAY ITEM</b>	<b>ESTIMATED QUANTITY</b>	<b>UNIT</b>	<b>UNIT PRICE</b>	<b>EXTENSION</b>
630A	Flagging	160	HOUR	\$ _____	\$ _____
630B	Barricade (Type 3 M-C) (Temporary)	2	EA	\$ _____	\$ _____
630C	Construction Traffic Sign (Panel Size A)	14	EA	\$ _____	\$ _____
630D	Drum Channelizing Device	35	EA	\$ _____	\$ _____
630E	Traffic Cone	20	EA	\$ _____	\$ _____
SUBTOTAL THIS PAGE					\$ _____

TOTAL AMOUNT OF BID \$ \_\_\_\_\_

WRITTEN OUT AMOUNT OF BID \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



**CITY OF WHEAT RIDGE, CO**  
**NON-DISCRIMINATION ASSURANCE FORM**  
**TITLE VI REGULATIONS AT 49 CFR PART 21**

Title VI of the Civil Rights Act of 1964 prohibits discrimination on the basis of race, color or national origin by any entity receiving federal financial assistance.

The City of Wheat Ridge is a recipient of Federal financial assistance and as such, it—as well as all of its responsible agents, contractors and consultants—is required by the United States Department of Transportation Title VI Regulations at 49 CFR Part 21 (the Regulations) to assure nondiscrimination. The City of Wheat Ridge assures that no person shall be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination on the grounds of race, color, or national origin under any program or activity conducted by the City.

All bidders are hereby notified that the City of Wheat Ridge will affirmatively ensure that disadvantaged business enterprises will be afforded full opportunity to submit bids in response to all invitations and will not be discriminated against on the grounds of race, color or national origin in consideration for an award. This applies to all solicitations for bids for work or material subject to the Regulations, and for all proposals for negotiated agreements.

The bidder, whose name and signature appear below, certifies and agrees as follows:

1. The bidder shall comply with the provisions of Title VI of the Civil Rights Act of 1964.
2. The bidder assures the City of Wheat Ridge that disadvantaged business enterprises are afforded full opportunity to submit bids as sub-contractors or sub-consultants and will not be discriminated against on the grounds of race, color or national origin in consideration for award.
3. The bidder shall comply with all reasonable requests made in the course of an investigation of Title VI, the Regulations and this assurance by the Colorado Department of Transportation, the US Department of Transportation or the City of Wheat Ridge, as a sub-recipient of Federal financial assistance.
4. The bidder agrees that the United States has a right to seek judicial enforcement with regard to any matter arising under Title VI, the Regulations and this assurance.

FIRM: \_\_\_\_\_  
(Print full legal name of company)

AUTHORIZED SIGNATURE: \_\_\_\_\_

Printed Name and Title: \_\_\_\_\_

Date Certified and Agreed: \_\_\_\_\_

Attestation: (A corporate attestation is required)

Place corporate seal below:

BY: \_\_\_\_\_  
Corporate Secretary or Equivalent

***Bidder must complete and SUBMIT this form with your bid/proposal or will be considered Non-Responsive and/or Non-Responsible and therefore disqualified from bidding.***

**CITY OF WHEAT RIDGE, CO**  
**CERTIFICATION STATEMENT FOR**  
**ILLEGAL ALIENS, COMPLIANCE TO HB 1343**

The Vendor, whose name and signature appear below, certifies and agrees as follows:

1. The Vendor shall comply with the provisions of CRS 8-17.5-101 et seq.
2. The Vendor shall not knowingly employ or contract with an illegal alien to perform work under this purchase order or enter into a contract with a subcontractor that knowingly employs or contracts with an illegal alien.
3. The Vendor represents, warrants, and agrees that it (i) has verified that it does not employ any illegal aliens, through participation in the Basic Pilot Employment Verification Program administered by the Social Security Administration and Department of Homeland Security, or (ii) otherwise shall comply with the requirements of CRS 8-17.5-102(2)(b)(I).
4. The Vendor shall comply with all reasonable requests made in the course of an investigation by the Colorado Department of Labor and Employment. If the Vendor fails to comply with any requirement of this provision or CRS 8-17.5-101 et seq., the City may terminate the above referenced purchase order for breach and the Vendor shall be liable for actual and consequential damages to the City of Wheat Ridge.

CERTIFIED and AGREED to this \_\_\_\_\_ day of \_\_\_\_\_, 2016

BID NUMBER: \_\_\_\_\_

FIRM: \_\_\_\_\_  
(Print Full Legal Name)

Authorized Signature: \_\_\_\_\_

Print Name: \_\_\_\_\_

Print Title: \_\_\_\_\_ Date: \_\_\_\_\_

Attestation: (A corporate attestation is required.)

BY: \_\_\_\_\_ Place corporate seal here, if applicable  
Corporate Secretary or Equivalent

***Bidder must complete and SUBMIT this form with your bid/proposal or will be considered Non-Responsive and/or Non-Responsible and therefore disqualified from bidding.***

**CITY OF WHEAT RIDGE, CO**  
**CERTIFICATION STATEMENT FOR**  
**KEEP JOBS IN COLORADO ACT (80% Colorado Labor),**  
**COMPLIANCE TO H.B. 13-1292**

Effective January 1, 2014, the Keep Jobs in Colorado Act requires that Colorado labor be employed to perform at least 80% of the work on a public works project, as defined in C.R.S. 8-19-102(2).

**References**

Keep Jobs in Colorado Act - 8-17-101, et.seq., C.R.S.

Definition of Public Projects - 8-19-102, C.R.S.

Construction Bidding for Public Projects – 24-92-102, C.R.S.

House Bill 13-1292, Keep Jobs in Colorado Act

The Vendor, whose name and signature appear below, certifies and agrees as follows:

1. The Vendor shall comply with the provisions of House Bill 13-1291 and CRS 8-17-101 et seq.
  
2. The Vendor represents, warrants, and agrees that it (i) Colorado labor will be employed to perform at least 80% of the work on a public works project, or (ii) otherwise, shall comply with the notification requirements and/or waiver request of CRS 8-17-101 et seq.
  
3. The Vendor shall comply with all reasonable requests made in the course of an investigation by the Colorado Department of Labor and Employment. If the Vendor fails to comply with any requirement of this Act or CRS 8-17-101 et seq., the City may terminate the above referenced purchase order for breach and the Vendor shall be liable for actual and consequential damages to the City of Wheat Ridge.

CERTIFIED and AGREED to this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_

BID NUMBER: \_\_\_\_\_

FIRM: \_\_\_\_\_  
(Print Full Legal Name)

**AUTHORIZED SIGNATURE:** \_\_\_\_\_

Print Name: \_\_\_\_\_

Print Title: \_\_\_\_\_ Date: \_\_\_\_\_

Attestation: (A corporate attestation is required.)

BY: \_\_\_\_\_  
Corporate Secretary or Equivalent

Place corporate seal here, if applicable

***Bidder must complete and SUBMIT this form with bid/proposal or will be considered Non-Responsive and/or Non-Responsible and therefore disqualified from bidding.***

**CITY OF WHEAT RIDGE, CO**  
**NON-COLLUSION AFFIDAVIT**  
**ITB-16-20 BRIDGE REHABILITATION PROJECT**  
**MARSHALL STREET OVER CLEAR CREEK**  
**B-01-15**

COMPANY SUBMITTING BID \_\_\_\_\_

STATE OF: \_\_\_\_\_

COUNTY OF: \_\_\_\_\_

\_\_\_\_\_ of lawful age, being duly sworn, on oath says that (s)he is the agent authorized by the Bidder to submit the attached bid. Affidavit further states that the Bidder has not been a party of any collusion among Bidders in restraint of freedom of competition by agreement to bid at a fixed price or to refrain from bidding; or any Federal, State or Municipal official or employees as to quantity, quality, or price in the prospective Contract, or any other items of said prospective Contract; or in any discussions between bidders and any Federal, State or Municipal official concerning exchange of money or other thing of value for special consideration in the letting of a Contract.

NAME \_\_\_\_\_

TITLE \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_ day of \_\_\_\_\_, 2016

\_\_\_\_\_  
NOTARY PUBLIC SIGNATURE

My Commission Expires:

***Bidder must complete and SUBMIT this form with bid/proposal or will be considered Non-Responsive and/or Non-Responsible and therefore disqualified from bidding.***

**BID BOND FORM**

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned,

\_\_\_\_\_  
(name and address of Contractor)

as Principal, and

\_\_\_\_\_  
(name and address of surety)

as Surety, are hereby held and firmly bound unto the City of Wheat Ridge as Owner in the penal sum of

\_\_\_\_\_ for the payment of which, well and truly to be made, we

hereby jointly and severally bind ourselves, successors, and assigns.

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 2016.

The condition of the above obligation is such that whereas the Principal has submitted to the City of Wheat Ridge a certain BID, attached hereto and hereby made a part hereof, to enter a contract in writing for the Project titled **ITB-16-20, BRIDGE REHABILITATION PROJECT MARSHALL STREET OVER CLEAR CREEK, PROJECT #B-01-15**

NOW, THEREFORE,

- (a) If said Bid shall be rejected or,
- (b) If said Bid shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with the said Bid) and shall furnish a Bond for his faithful performance of said Contract, and for the payment for all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Bid.

Then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its Bond shall be in no way impaired or affected by an extension of the time within which the Owner may accept such Bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

\_\_\_\_\_  
(Principal/Contractor)

\_\_\_\_\_  
(Surety)

By: \_\_\_\_\_

**IMPORTANT:** Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the project is located.

**CITY OF WHEAT RIDGE  
ITB-16-20  
BRIDGE REHABILITATION PROJECT  
MARSHALL STREET OVER CLEAR CREEK  
PROJECT #B-01-15  
SAMPLE AGREEMENT**

THIS AGREEMENT, made this \_\_\_\_ day of \_\_\_\_\_ 2016 by and between the City of Wheat Ridge, Colorado, hereinafter called "Owner" and \_\_\_\_\_, doing business as an individual, whose business address is \_\_\_\_\_, hereinafter called "Contractor".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned the parties agree as follows:

1. The Contractor agrees to furnish all materials, supplies, tools, equipment, labor and other services necessary to complete the construction of the Project titled, **ITB-16-20, BRIDGE REHABILITATION PROJECT MARSHALL STREET OVER CLEAR CREEK, PROJECT #B-01-15** in accordance with the Contract Bid Documents.
2. The Contractor agrees to perform all the Work described in the Contract Bid Documents and comply with the terms therein for the Total Contract amount of \_\_\_\_\_ **DOLLARS (\$ \_\_\_\_\_)** which includes any alternates.
3. The Contractor agrees to commence the Work required by the Contract Documents within **Fourteen (14)** calendar days after the date of the Notice to Proceed and to complete the same within **60 WORKING DAYS** after the date of the Notice to Proceed unless the time for completion is extended otherwise by written changes to the Contract Bid Documents.
4. The term "CONTRACT BID DOCUMENTS" means and includes the following:

A	Signature Page	L	Bid Bond
B	Advertisement for Bids	M	Agreement
C	Information for Bidders	N	Payment Bond
D	Contractor Qualification	O	Performance Bond
E	Bid Form	P	Notice to Proceed
F	Bid Schedule	Q	Final Receipt
G	List of Subcontractors	R	Project Special Provisions
H	Non-Discrimination Assurance	S	General Provisions
I	Illegal Alien Certification	T	Addenda
J	Non-Collusion Affidavit	U	Drawings/Exhibits
K	Keep Jobs in Colorado		
5. The Owner will pay to the Contractor in the manner and at such times as set forth in the General Conditions, such amounts as required by the Contract Documents.
6. Section 2-3 of the City's Code of Laws is presented below:
  - (a) **FISCAL YEAR.** Fiscal year for the City shall commence on January 1 and end on December 31.
  - (b) **BUDGET CONTAINS APPROPRIATIONS.** The City Council shall annually adopt a budget in a manner consistent with the provisions of Chapter X of the Home Rule Charter of the City of Wheat Ridge. Upon the annual adoption by City Council of each year's budget, levels of authorized expenditures from the funds indicated within the annual budget itself and/or the adopting resolution shall constitute the appropriation of the amounts specified therein for the purposes specified therein. During the course of each fiscal year, approval by the City Council of contracts for goods or services, and/or approval of bids for the provision of specified goods or services, shall likewise constitute appropriations of the amounts specified therein for the purposes specified therein.
  - (c) **NO CONTRACT TO EXCEED APPROPRIATION.** During each and any fiscal year, no contract entered into by or on behalf of the City shall expend or contract to expend any money, or incur any liability, nor shall any contract be entered into nor any bid be awarded by on behalf of the City which, by its terms, involves the expenditure of money for any of the purposes for which provision is made either

in the adopted budget or adopting resolution is made either in the adopted budget or adopting resolution, including any legally authorized amendments thereto, in excess of the amount appropriated in the budget or the approved contract or bid amount. Any contract or bid award, either verbal or written, made in violation of the provisions of this Section shall be void as to the City and no City monies from any source whatsoever shall be paid thereon.

- (d) **AMENDMENTS AND AUTHORIZED EXPENDITURES.** Nothing contained herein shall preclude the City Council from adopting supplemental appropriation in a manner consistent with the provisions of Section 10.12 of the Home Rule Charter of the City of Wheat Ridge. Further, nothing contained in this Section shall prevent the making of contracts for governmental services or for capital outlay for a period exceeding one year if such contracts are otherwise allowed by the Home Rule Charter of the City; provided, however, any contract so made shall be executory only for the amounts agreed to be paid for such services to be rendered in succeeding fiscal years.

The City Manager is authorized to review and approve change orders and modifications up to ten (10%) percent of the original contract amount.

- (e) **NOTICE TO PARTIES CONTRACTING WITH THE CITY.** All persons contracting with, or selling goods or services to, the City are hereby placed on notice of the provisions of this Section. The provisions of this Section shall become a part of the Merit System Personnel Rules and Regulations of the City of Wheat Ridge; shall be referred to specifically in all public works bid documents and contracts; and shall be incorporated into, or specifically noted within, all other contracts entered into by or on behalf of the City wherein City funds are used to pay for said contract.
- (f) The City may, by contract, require the contractor awarded a public works contract to waive, release or extinguish its rights to recover costs or damages, or obtain an equitable adjustment, for delays in performing such contract, if such delay is caused, in whole or part, by acts or omissions of the City or its agents, if the contract provides that an extension of time for completion of the work is the Contractor's remedy for such delay. Such a clause is valid and enforceable, any provision of State Law to the contrary notwithstanding.
- (g) The City Council, by this ordinance, declares its local contracting powers to be a matter of purely local concern, and further specifically intends to supersede, pursuant to its powers under Article XX of the Colorado Constitution, the provisions of Sections 24-91-101 and 103.5, C.R.S., insofar as they conflict with the provisions of this Section of the Code of Laws of the City of Wheat Ridge, Colorado.

7. **NOTICES**

Any notice or communication given pursuant to this Agreement to the City shall be made in writing:

<b>City Contact:</b>	<b>Contractor Contact:</b>
Name:	Name:
Address:	Address:
E-mail:	Fax:
Phone:	Phone:
Fax:	Fax:

- 8. The Contractor agrees to abide by the requirements under EXECUTIVE ORDER NO. 11246 as amended, including specifically the provisions governed by the Equal Opportunity Commission and also to abide by the requirements of the IMMIGRATION REFORM AND CONTRACT ACT OF 1986 and the requirements of the AMERICANS WITH DISABILITIES Act of 1991; and the United States Department of Transportation Title VI Regulations at 49 CFR Part 21 requirements under the Civil Rights Act of 1964, assuring that no person shall on the grounds of race, color, or national origin be excluded from participation in the opportunity to bid, or be discriminated against in consideration of award of this project.
- 9. In accordance with CRS Title 24, Article 91, Section 103.6, Paragraph 2, Subparagraph a, the City of Wheat Ridge hereby states that funds have been appropriated for this Project in an amount equal to or in excess of the Original Contract Amount.
- 10. **Illegal Aliens – Public Contracts for Services.** CRS 8-17.5-101 and Public Law 208, 104<sup>th</sup> Congress, as amended and expanded in Public Law 156, 108<sup>th</sup> Congress, as amended:

The Contactor certifies that he/she shall comply with the provisions of CRS 8-17.5-101et seq. The Contractor shall not knowingly employ or contract with an illegal alien to perform work under this contract or enter into a contract with a subcontractor that knowingly employs or contracts with an illegal alien. The Contractor represents, warrants, and agrees that it (i) has verified that it does not employ any illegal aliens, through participation in the Basic Pilot Employment Verification Program administered by the Social Security Administration and Department of Homeland Security, or (ii) otherwise will comply with the requirements of CRS 8-17.5-101 (2)(b)(I). The Contractor shall comply with all reasonable requests made in the course of an investigation by the CO Department of Labor and Employment. If the Contractor fails to comply with any requirement of this provision or CRS 8-17.5-101 et seq., the City may terminate this contract for breach and the Contractor shall be liable for actual and consequential damages to the City.

11. This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement in **Two (2) copies**, each of which shall be deemed an original on the date first above written.

**ATTEST:**

\_\_\_\_\_  
JANELLE SHAVER, CITY CLERK

\_\_\_\_\_  
DATE

**OWNER**

**CITY OF WHEAT RIDGE  
7500 WEST 29TH AVENUE  
WHEAT RIDGE, CO 80033  
303-234-5900**

\_\_\_\_\_  
JOYCE JAY, MAYOR

(Seal)

**APPROVED AS TO FORM:**

\_\_\_\_\_  
GERALD DAHL, CITY ATTORNEY

\_\_\_\_\_  
NAME

\_\_\_\_\_  
TITLE

\_\_\_\_\_  
DATE

**CONTRACTOR**

\_\_\_\_\_  
COMPANY NAME

\_\_\_\_\_  
ADDRESS

\_\_\_\_\_  
AUTHORIZED SIGNATURE

\_\_\_\_\_  
PRINT NAME

\_\_\_\_\_  
TITLE

\_\_\_\_\_  
DATE

**PAYMENT BOND**

KNOW ALL MEN BY THESE PRESENTS: that

\_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
(Address of Contractor)

A \* \_\_\_\_\_ hereinafter called "PRINCIPAL", and

\_\_\_\_\_  
(Name of Surety)

\_\_\_\_\_  
(Address of Surety)

hereinafter called "Surety", are held and firmly bound unto the City of Wheat Ridge, 7500 West 29th Avenue, Wheat Ridge, Colorado 80033, hereinafter called "Owner", in the penal sum of \_\_\_\_\_ **DOLLARS (\$ \_\_\_\_\_)** in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the Owner, dated the \_\_\_\_\_ day of \_\_\_\_\_ 2016, a copy of which is hereto attached and made a part hereof for the Project titled, **ITB-16-20, BRIDGE REHABILITATION PROJECT MARSHALL STREET OVER CLEAR CREEK, PROJECT #B-01-15.**

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, Subcontractors and corporations furnishing materials for or performing labor in the prosecution of the Work provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such Work, and all insurance premiums on said WORK, and for all labor performed in such work whether by Subcontractor or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the Work to be performed or the Specifications accompanying the same shall in any wise affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the Work or to the Specifications.

\*Insert "a corporation", "a partnership", or "an individual" as applicable.

IN WITNESS WHEREOF, this instrument is executed in **ONE** part, each of which shall be deemed an original, this the

\_\_\_\_\_ day of \_\_\_\_\_, 2016

ATTEST:

**PRINCIPAL**

\_\_\_\_\_  
CORPORATE SECRETARY

\_\_\_\_\_  
PRINCIPAL

\_\_\_\_\_  
ADDRESS

\_\_\_\_\_  
BY

\_\_\_\_\_  
ADDRESS

(SEAL)

**ATTEST:**

**SURETY**

\_\_\_\_\_  
SURETY

\_\_\_\_\_  
ADDRESS

\_\_\_\_\_  
BY (ATTORNEY IN FACT)

\_\_\_\_\_  
ADDRESS

(SEAL)

**Note:** Date of Bond must not be prior to date of Contract. If Contractor is partnership, all partners should execute bond.

**IMPORTANT:** Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570, as amended) and be authorized to transact business in the State of Colorado.

**PERFORMANCE BOND**

KNOW ALL MEN BY THESE PRESENTS: that

\_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
(Address of Contractor)

a (\*) \_\_\_\_\_, hereinafter called "PRINCIPAL", and

\_\_\_\_\_  
(Name of Surety)

\_\_\_\_\_  
(Address of Surety)

hereinafter called "Surety", are held and firmly bound unto the City of Wheat Ridge, 7500 West 29th Avenue, Wheat Ridge, Colorado 80033, hereinafter called "Owner", in the penal sum of \_\_\_\_\_ **DOLLARS (\$\_\_\_\_\_)** in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the Owner, dated the \_\_\_\_\_, a copy of which is hereto attached and made a part hereof for the Project titled, **ITB-16-20, BRIDGE REHABILITATION PROJECT MARSHALL STREET OVER CLEAR CREEK, PROJECT #B-01-15**

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said Contract during the original term thereof, and any extensions thereof which may be granted by the Owner, with or without notice to the Surety and during the one year guarantee period, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the Owner from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the Owner all outlay and expense which the Owner may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said SURETY for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the Work to be performed or the Specifications accompanying the same shall in any wise affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the Work or the Specifications.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

\*Insert "a corporation", "a partnership", or "an individual" as applicable.

IN WITNESS WHEREOF, this instrument is executed in **ONE** part, each of which shall be deemed an original, this the \_\_\_\_\_ day of \_\_\_\_\_, 2016.

**ATTEST:**

**PRINCIPAL**

\_\_\_\_\_  
CORPORATE SECRETARY

\_\_\_\_\_  
PRINCIPAL

\_\_\_\_\_  
ADDRESS

\_\_\_\_\_  
BY

\_\_\_\_\_  
ADDRESS

(SEAL)

**ATTEST:**

**SURETY**

\_\_\_\_\_  
SURETY

\_\_\_\_\_  
ADDRESS

\_\_\_\_\_  
BY (ATTORNEY IN FACT)

\_\_\_\_\_  
ADDRESS

(SEAL)

**Note:** Date of Bond must not be prior to date of Contract. If Contractor is partnership, all partners should execute bond.

**IMPORTANT:** Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570, as amended) and be authorized to transact business in the State of Colorado.

**NOTICE TO PROCEED**

TO:

FROM: **CITY OF WHEAT RIDGE, CO**

RE: **ITB-16-20, BRIDGE REHABILITATION PROJECT MARSHALL STREET OVER CLEAR CREEK, PROJECT #B-01-15**

You are hereby notified to commence Work in accordance with the Agreement dated \_\_\_\_\_,

2016, on or before \_\_\_\_\_, 2016, and you are to complete the work within **60**

**WORKING DAYS.** The date of completion of all work is \_\_\_\_\_, 2016

Dated this \_\_\_\_ day of \_\_\_\_\_ 2016.

By: \_\_\_\_\_  
Title: Engineering Manager

\*\*\*\*\*

**RECEIPT OF NOTICE**

Receipt of the above Notice to Proceed is hereby acknowledged by

\_\_\_\_\_ on this \_\_\_\_\_ of \_\_\_\_\_, 2016.

Printed Name \_\_\_\_\_

Signature \_\_\_\_\_

Title \_\_\_\_\_

**FINAL RECEIPT**

DATE: \_\_\_\_\_

TO: \_\_\_\_\_  
(Contractor)

\_\_\_\_\_  
(Address)

FROM: **CITY OF WHEAT RIDGE, CO**

RE: **ITB-16-20, BRIDGE REHABILITATION PROJECT MARSHALL STREET OVER CLEAR CREEK,  
PROJECT #B-01-15**

Received this date, of the Owner, as full and final payment of the cost of the improvements provided for in the Project Contract Documents, the amount of \$ \_\_\_\_\_ in cash, being the remainder of the full amount accruing to the undersigned by virtue of said contract.

Said cash also covers and includes full payment for the cost of all extra work and material furnished by the undersigned in the construction of said improvements, and all incidentals thereto.

The undersigned hereby releases said Owner from all claims whatsoever which may develop from said contract.

These presents are to certify that all persons doing work upon or furnishing materials for said improvements under the foregoing contract have been paid in full.

Printed Name \_\_\_\_\_

Signature \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

**CITY OF WHEAT RIDGE  
GENERAL PROVISIONS**

1. DEFINITIONS:

"City" (also sometimes referred to as "Owner") means the City of Wheat Ridge, Colorado. The City is represented by employees who will assume Project administration, oversight, and inspection responsibilities as further defined in the Contract, the General and Special provisions, and the current edition of CDOT Standard Specifications for Road and Bridge Construction. At the time of the preconstruction meeting, or when requested by the Contractor, the City shall provide an official list of City representatives and their titles as applies to the Project.

"Contractor" means the person, partnership, firm or corporation responsible for the physical accomplishment of the project.

"Subcontractor" means only those having a direct contract with the Contractor and includes one who furnished materials worked to a special design according to the plans or specifications for the work under the Contract, but does not include one who merely furnishes material not so worked.

"Notice" means written demand, instruction or order duly served. Written notice shall be deemed to have been duly served if delivered in person to the Contractor, or if delivered in person or sent by registered mail to the address given in the Contract and shall have been duly served upon the City if delivered to the City Clerk of the City of Wheat Ridge, Municipal Building, Wheat Ridge, Colorado, either in person or by registered mail.

"Work" means performance of the Contractor or Subcontractor including labor and materials and all services incidental thereto.

"Cost" means all charges and expenditures of every kind applicable to the accomplishment of the work.

"Final Completion" means when all items are one hundred percent (100%) complete and when all known defective work has been corrected as certified by the City Representative.

"Substantial Completion Date" is the date on which the City Representative certifies the readiness of the work for beneficial occupancy or use, and is the date for terminating liability for liquidated damages and for determining incentive payments due for early completion.

2. MATERIALS, SERVICES, AND FACILITIES:

The Contractor shall and will, in good workmanlike manner, do and perform all work and furnish and pay for all labor, superintendence, material, utilities, machinery, equipment, tools, transportation, facilities, temporary construction of every nature and all other services and facilities of every nature, except as herein otherwise expressly specified, necessary or proper to perform and complete all the work, within the time stated, in accordance with the plans, drawings and specifications covered by the Contract, and any and all supplemental plans, drawings and specifications. He shall furnish, erect, maintain and remove such construction plant and such temporary works as may be required. It will be the responsibility of the Contractor to locate/negotiate a staging area. The City will not provide a staging area on City owned property. Any work necessary to be performed after regular working hours, on Saturdays, Sundays, or Legal Holidays, shall be performed without additional expense to the City.

3. CONTRACTOR'S TITLE TO MATERIALS:

No materials or supplies for the work shall be purchased by the Contractor or by any Subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. The Contractor warrants that he has good title to all materials and supplies used by him in the work, free from all liens, claims or encumbrances.

4. OBSERVATION AND TESTING:

All work performed and all workmanship, equipment and materials used in the construction shall be subject to Observation, examination and test, at any and all times during construction.

5. WEATHER CONDITIONS:

In the event of temporary suspension of work, or during inclement weather or whenever the City shall direct, the Contractor will, and will cause his Subcontractors to, protect carefully his and their work and materials against damage or injury from weather. If, in the opinion of the City, any work or materials shall have been damaged or injured by reason of failure on the part of the Contractor or any of his Subcontractors to so protect his work, such materials shall be removed and replaced at the expense of the Contractor.

6. EMERGENCY - PROTECTION OF LIFE AND PROPERTY:

In case of an emergency which threatens loss of injury or property, and/or safety of life, the Contractor is hereby permitted to act at his own discretion and in a diligent manner without prior instructions from the City to prevent the threatened loss or injury. He shall notify the City immediately thereafter. Any claim for compensation by the Contractor due to such extra work shall be promptly submitted in writing to the City for approval. The amount of any reimbursement claimed by the Contractor shall be determined in the manner provided in Article 9 of this Contract.

7. REPORTS, RECORDS, AND DATA:

The Contractor shall submit to the City such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data as may be requested concerning work performed or to be performed under this Contract.

8. SUPERINTENDENCE BY CONTRACTOR:

At the site of the work, the Contractor shall employ a construction superintendent or foreman who shall have full authority to act for the Contractor. It is understood that such Representative shall be acceptable to the City and shall be one who can be continued in that capacity for the particular job involved unless he ceases to be on the Contractor's payroll. All directions given to such Representative in the Contractor's absence shall be as binding as if given to the Contractor.

9. CHANGES IN THE WORK:

The City may, at any time, by written order and without notice to the sureties, require the performance of extra work or make changes by altering, adding to, or deducting from the work. The amount of compensation to be paid to the Contractor shall be adjusted accordingly without invalidating the Contract and in accordance with whichever of the following plans the City elects: (1) a price agreed upon, (2) a price based on unit prices of the Contract; or (3) a price determined by adding fifteen percent (15%) to the reasonable cost of the extra work, addition, alteration, or deduction; provided however, that no additions to the Contract Price shall be agreed upon by, or shall be binding upon the City if the effect of said price increase is to increase the Contract amount beyond the amount of money appropriated by the City Council, as specified in Section 2-3 of the Code of Laws of the City of Wheat Ridge.

In giving instructions, the City may authorize minor changes in the work, not involving extra cost and not inconsistent with the purpose of the project. Otherwise, except in an emergency endangering life or property, no extra work or change shall be made unless in pursuance of a written approved Change Order or RFI response by the City .

10. COMPLETION TIME; INCENTIVE PAYMENTS; LIQUIDATED DAMAGES:

-----DELETE THIS SECTION-----

11. TIME EXTENSIONS:

The Contractor shall, within seven (7) days from the beginning of any delay, notify the City, in writing, of the causes thereof and the City shall ascertain the facts, the extent of the delay and notify the Contractor of the decision in the matter.

The completion time shall be extended when delay in completion of the work by the Contractor is due to unforeseeable causes beyond his control and without his fault or negligence, including, but not restricted to, acts of God or the public enemy, acts or neglect of the City, acts of neglect of any other contractor, fires, floods, epidemics, quarantine restrictions, strikes, riots, civil commotions or freight embargoes. The time of completion of his work shall be extended by such time as shall be fixed by the City.

No such extension of time shall be deemed a waiver by the City of its right to terminate the Contract for abandonment or delay by the Contractor as herein provided or relieve the Contractor from full responsibility for performance of his obligations hereunder. The City's liability for delay shall be limited pursuant to the provisions of Section 2-4 of the Code of Laws of the City of Wheat Ridge and shall be limited to granting a time extension to the Contractor.

12. DEFECTIVE WORK:

The observation of the work by the City shall not relieve the Contractor of any of his obligations to fulfill his Contract as herein prescribed, and defective work shall be made good, and unsuitable materials may be rejected, notwithstanding that such work and material have been previously overlooked by City representative(s) and accepted or estimated for payment or paid for. If the work or any part thereof shall be found defective or at any time before the final acceptance of the whole work, or the final payment therefore, the Contractor shall forthwith make good such defect in a manner satisfactory to the City and if any material brought upon the ground for use in the work, or selected for the same, shall be condemned by the City as unsuitable, the Contractor shall forthwith remove such materials from the vicinity of the work and shall replace, at his own expense, damaged or unsuitable materials with the new materials of satisfactory quality.

Neither the foregoing nor any provision of these Contract Documents, nor any special guarantee time limit, shall be held to limit the Contractor's liability for defects to less than the legal limit of liability in accordance with the law of the place of the construction.

The Contractor shall pay the City all expenses, losses, and damages as determined by the City incurred in consequence of any defect, omission, or mistake of the Contractor or his employees or the making good thereof.

13. UNEXPECTED UNDERGROUND STRUCTURES; CHANGE OF CONDITIONS:

Should the Contractor encounter underground structures at the site materially differing from those shown on the Plans or indicated in the Specifications, he shall immediately give notice to the City of such conditions before they are disturbed. The City will thereupon promptly investigate the conditions, and if it is determined that they materially differ from those shown on the Plans, may authorize changes to be made to the Plan and/or Specifications as may be necessary.

It is understood and agreed that the Contractor has considered in his bid all of the permanent and temporary utility appurtenances in their present or relocated position as shown on the plans and that additional compensation will not be allowed except for any unreasonable delays, or damage sustained by him due to any interference from the said utility appurtenances. Unreasonable delays shall constitute delays caused by a complete shut down of all operations. It is understood that utilities are not owned, operated or controlled or subject to control by the City of Wheat Ridge. Relocations of facilities owned by said utilities are not a matter over which the City has control. The Contractor shall adjust his schedule in anticipation of such delays so that work in other areas may be completed away from the area of utility conflict.

The locations of all utilities shown on the Project plans should be considered approximate. It is therefore the responsibility of the Contractor to notify the appropriate utility and obtain more precise locations. No compensation will be made to the Contractor for any damage, delay or additional cost incurred as a result of failure to obtain utility locations.

Information on the Plans in the Contract Documents referring to the existence of utilities or other underground structures is not guaranteed to be correct or to be a complete representation of all existing data. Every effort has been made, however, to make this information complete and accurate on the basis of all data and information which could be procured by the City. The Contractor shall make his own examination and shall draw his own conclusions as to the underground facilities which will be encountered, and he shall have no claim for damages of any kind on account of any errors, inaccuracies or omission that may be found.

There shall be no adjustment in Contract Price based on changed site conditions. The Contractor is required hereby to make an on-site inspection and investigation, which includes determination of location of utilities and said and other natural conditions. Representations regarding site and soil conditions and utility locations are based on the best information available to the Owner and final determination as to both site and soil conditions and utility locations is left to the Contractor, without recourse to the City. The City shall allow reasonable and necessary access to the site to Contractor and his representatives to make such determination and site review.

14. CLAIMS FOR EXTRA COSTS:

No claim for extra work or cost shall be allowed unless the same was done in pursuance of written order of the City, as provided for in Article 9, and the claim was presented prior to the issuance of the final payment. When work is performed under the "reasonable cost" method as outlined in Article 9 of the General Conditions, the Contractor shall furnish satisfactory bills, payrolls and vouchers covering all items of cost, and when requested by the City, give the City access to accounts relating thereto.

**NO adjustments will be allowed for fuel cost of asphalt cement.**

15. RIGHT OF CITY TO TERMINATE CONTRACT:

If (1) the Contractor or any of his Subcontractors shall be adjudged bankrupt or (2) if he shall make a general assignment for the benefit of his creditors or (3) if a receiver shall be appointed of his property, or (4) if the work to be done under this Contract shall be abandoned, or (5) if this Contract or any part hereof shall be sublet, without the previous written consent of the City, or (6) if the Contract or any claim thereunder shall be assigned by the Contractor otherwise than as herein specified, or (7) at any time the City shall certify in writing that the rate of progress of the work or any part thereof is unsatisfactory or (8) that the work or any part thereof is unnecessarily or unreasonably delayed, or (9) that the Contractor, his subcontractors, agents or employees have violated any of the provisions of this Contract, or of the plans and specifications, or construction schedule, the City shall notify Contractor and the Surety, and shall be entitled immediately to terminate the Contract. The Surety shall have the right to take over and perform the Contract, provided, however, that if the Surety does not commence performance thereof within ten (10) days from the date of the mailing to such Surety of notice of termination, the City may take over the work and prosecute the same to completion by contract or by force account for the account and at the expense of the Contractor, and the Contractor and his Surety shall be liable to the City for any excess cost occasioned the City thereby, and in such event the City may take possession of and utilize in completing the work, such materials, machinery, appliances and plant as may be on the site of the work and necessary therefore. The Contractor, by signing this Contract, gives to the City in the event of default, right to use such aforesaid articles to the full extent which they could be used by the Contractor. The City shall not be liable to the Contractor for trespass or conversion.

All expenses charged under this article shall be deducted and paid for by the City out of money then due to become due the Contractor under this Contract or any part thereof, and in such account the City shall not be held to obtain the lowest figures for the work of completing the Contract or any part thereof or for insuring its proper completion, but all sums actually paid hereafter shall be charged to the Contractor and his Surety. In case the expenses so charged are less than the sum which would have been payable under this Contract if the same had been completed by the Contractor, the City shall be entitled to retain the difference and in case such expenses shall exceed the said sum, the Contractor and his Surety shall pay the amount of the excess to the City upon completion of the work without further demand being made therefore.

16. CONSTRUCTION SCHEDULE:

Before any work is begun, the Contractor shall provide to the City a written schedule detailing the order and manner of doing the work. Before the first partial payment is made, the Contractor shall deliver to the City an estimated construction progress schedule in form satisfactory to the City, showing the proposed dates of commencement and completion of each of the various subdivisions of work required under the Contract. The Contractor shall provide an updated schedule every two weeks.

17. PAYMENTS TO THE CONTRACTOR:

During the course of construction, the Contractor shall request payment of work actually performed during the preceding month. The City will once each month make a progress payment to the Contractor on the basis of an evaluation of the claim by the City as to amount of work done and that the City has received full value thereof. In accordance with House Bill 11-1115, the City shall retain five percent (5%) of the value of the completed work. Retainage shall be held until final completion and acceptance of all work, as part security for the fulfillment of the Contract by the Contractor. The amount of the progress payments shall be the balance not retained as aforesaid, after deducting all previous payments and all other sums to be kept or retained under the provisions of this Contract. The Contractor shall have no right to either terminate the Contract or to claim damages if he considers partial payments inadequate.

18. CERTIFICATE OF COMPLETION:

Upon completion of all work whatsoever required including completion of all known defective work, the City shall file a written certificate with the Contractor as to the entire amount of work performed and compensation earned by the Contractor including Extra Work and compensation therefore, and including the date of completion.

19. FINAL PAYMENT:

After the filing of the Certificate of Completion, the City shall pay to the Contractor in accordance with applicable Colorado laws (Article 38, Chapter 26, Section 101 Et. Seq. Colorado Revised Statutes) and upon authorization of funds disbursement by the City Council the amount therein stated, less all prior payments and advances whatsoever, to or for the Account of the Contractor. All prior estimates and payments including those relating to extra work shall be subject to correction by this payment.

20. PAYMENT WITHHELD:

The City, as a result of subsequent discovered evidence, may withhold or nullify the whole or a part of any payment to such extent as may be necessary to protect the City from loss on account of:

- (a) Defective work not remedied.
- (b) Claims filed or reasonable evidence indicating probable filing of claim.
- (c) Failure of the Contractor to make payments properly to Subcontractor or for material or labor, or to comply with laws relative thereto.
- (d) A reasonable doubt that the Contract can be completed for the balance then unpaid.
- (e) Damage to another Contractor.
- (f) Damage to the real or personal property of another and failure to repair or replace the same.

When the grounds for withholding payment have been corrected to the satisfaction of the City, the City shall proceed to process any amounts due.

21. FINAL PAYMENT TO TERMINATE LIABILITY OF CITY:

The acceptance by the Contractor of the last payment made as aforesaid under the provisions of Article 19 shall operate as and shall be a release to the City, its officers, or agents from all claims and liability to the Contractor, his vendors, laborers or Subcontractors for anything done or furnished for, relating to, or for any act or neglect of the City or of any persons relating to, or affecting the work, except the claim against the City for the remainder, if any there be, of the amounts kept or retained as provided in Article 17, 19 and 20 of these . Said acceptance shall also operate as a general release of the City by the Contractor.

22. EFFECT OF CERTIFICATION AND PAYMENT:

Neither the certification nor payment made to the Contractor, not partial or entire use or occupancy of the work by the City shall be an acceptance of any work or materials not in accordance with the Contract. The making and acceptance of the final payment shall constitute a bar of all claims by the Contractor, except those previously made in writing and still unsettled.

23. GENERAL WARRANTY:

The Contractor shall guarantee the work against defective materials or workmanship for a period of one (1) year from the final completion date. Upon discovery of any defects including any damage to other work resulting, repair and replacement that is required, in the opinion of the City, shall be done immediately by the Contractor at the Contractor's expense. Should the Contractor fail to repair such defective material and/or workmanship, or to make replacement within five (5) days after written notice by the City, it is agreed that the City shall make such repairs and replacements and the actual cost of the required labor and materials shall be chargeable to and payable by the Contractor.

24. INSURANCE:

The Contractor shall maintain general liability and property damage insurance (the "Liability Policy") to protect the Contractor and the City from any and all claims for damages including but not limited to claims for property damage and bodily injury, including death, which may arise from operations under this Contract, including the operations of subcontractors. The Liability Policy shall state that it is the primary insurance for such claims and shall not contain any "excess" or "other insurance" clauses which limit its application as the primary coverage for those claims. The

Contractor shall be individually liable for any and all defects in the Liability Policy. The Liability Policy shall not be terminated or cancelled prior to the completion of this Contract without at least 45 days prior written notice to the City.

For bodily injury	\$500,000 each person/ \$500,000 each accident/ \$500,000 each disease
For property damage	\$1,000,000 for each occurrence
For automobile liability	\$1,000,000 combined single limit

In lieu of the foregoing, a single limit public liability policy for personal injury, property and/or vehicle damage will be accepted in the amount of \$2,000,000.00.

Such insurance shall be without prejudice to coverage otherwise existing, and shall name as additional insured, the City of Wheat Ridge, its officers and employees.

Notwithstanding the naming of additional insured, the said policy shall protect each insured in the same manner as though a separate policy had been issued to each, but nothing herein shall operate to increase the insurer's liability as set forth elsewhere in the policy beyond the amount or amounts for which the insurer would have been liable if only one person or interest had been named as insured. A certificate evidencing such insurance, together with the proper endorsement, shall be filed, subject to approval as to the adequacy of protection.

Fire and Standard Extended Coverage Insurance -- The Contractor shall insure the work for 100 percent (100%) of the replacement value thereof for the life of the Contract against all loss or damage covered by the Standard Extended Coverage Insurance endorsement, including theft, vandalism, and malicious mischief, with an insurance company or companies acceptable to the City. The amount of the insurance may vary with the extent of the work completed but shall at all times be at least equal to the replaceable value of the amount paid for the work and materials installed and delivered plus the replaceable value of the work or materials furnished or delivered, but not yet paid for by the City. The insurance policy or policies shall be held jointly in the name of the City and Contractor as their respective interest may appear.

The issue, if any, shall be made adjustable with and payable to the City as a trustee for whom it may concern. Any payments made under such policy shall insure to the benefit of the City to the extent of balance for replacement of the loss suffered. The policy of insurance shall provide that it shall not be terminated or be canceled prior to the completion of this Contract. The Contractor shall be responsible for all damage to the work under construction, whether from fire, water, high winds or other cause during construction and until final completion and acceptance, even though partial payments or progress payments have been made under the Contract.

Workers' Compensation Insurance -- The Contractor shall provide workers' compensation insurance coverage for all persons employed on the work to be done under the Contract and assure that all workers will receive the compensation for compensable injuries.

Certificates of Insurance shall be attached to the executed Contract Documents and shall become a part of the Contract. These Certificates shall include a provision that thirty (30) days prior to insurance cancellation, written notice shall be given to the City of Wheat Ridge.

Indemnification of City -- Contractor hereby indemnifies and agrees to hold the City and its representatives and agents harmless for and on account of any act or omission in the completion and execution of the project specified herein, which indemnification shall extend to and include any damage of whatever sort or description, suffered by any person or entity, and shall include compensatory, punitive or special damages; and Contractor agrees to defend City hereunder, at Contractor's sole expense and if he fails to do so, to thereafter indemnify City, in addition to the above indemnification, for all court costs and attorneys fees incurred in any defense required to be undertaken by the City.

Notwithstanding the foregoing, nothing contained herein shall be deemed a waiver by the City of any of the protections afforded the City by virtue of the provisions of the Colorado Governmental Immunity Act (Colo. Rev. Stat. 24-10-101).

**25. RESPONSIBILITY FOR WORK; PRIORITY OF DOCUMENTS:**

- a) Debts and claims: The Contractor shall pay all debts for labor and materials contracted for by him on account of the work herein contemplated. The Contractor shall assume the defense of, and indemnify and save harmless, the City and its officers and agents, from all claims relating to labor and materials furnished for the work; to infringement or alleged infringement of invention patents and patent rights used in, or in connection with the work or however originating from any of the work under this Contractor from conditions created thereby; to injuries to any persons or corporation caused by the acts or negligence of the Contractor or any of his agents or employees, or of any Subcontractor or any

agents or employees of any Subcontractors, in doing the work or in consequence of any improper materials, implements or labor used therein; and shall fully reimburse and repay to the City all outlay and expense which the City may incur by reason of his failure to do so. The Contractor shall satisfy all suits and claims against the City arising from the violation of any law, ordinance, regulation, order, or decree on the part of the Contractor or any of his agents or employees, or any Subcontractor, or agent or employees of any Subcontractor; shall fully indemnify and save harmless the City against and from all cost, loss, and damage which the City may suffer by reason of his failure to do so; and shall fully reimburse and repay to the City all outlay and expense which the City may incur in making good any such default. The Contractor shall fully complete the work required to be done under this Contract, free from all liens and claims of any kind whatsoever.

- b) **Plans and Specifications:** It shall be the duty of the Contractor to carefully study and compare all drawings, specifications and instructions, visit the project site and acquaint himself with all conditions, and call to the attention of the City any discrepancy, error, omission or inconsistency that may exist in the plans or specifications, or between the plans and specifications, or any conflict between existing conditions and requirements of the plans and specifications. The execution or work in accordance with the plans, specifications or other instructions will be considered as evidence that the Contractor is thoroughly familiar with the true intent of the plans, specifications or other instructions. Change orders will not be issued to cover any cost, loss, or expense for additional labor or material required to rectify any discrepancies discovered or reported to the City after the execution of the work, unless the discrepancies are errors in structural, mechanical or electrical design as determined by the City.
- c) **Priority of Documents:** In case of discrepancy or inconsistency in the terms or conditions of any documents, the Contract Documents shall have the following order of priority such that a statement appearing in the document with the higher priority shall control any inconsistent statement in a document of lower priority. (The following are listed from the highest priority to the lowest priority):

1. The Agreement
2. Drawings and any notes appearing on the drawings
3. Project Special Provisions
4. Current edition of CDOT Standard Specifications for Road and Bridge Construction and all supplements thereto (English Version).
5. General Provisions of the Contract for construction.

26. NOT USED

27. CARE AND PROTECTION OF PROPERTY:

The Contractor expressly undertakes at his own expense:

To assume full responsibility for the preservation of all public and private property, and use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property or on account of any act, omission, neglect or misconduct in the execution of the work on the part of the Contractor, such property shall be restored by the Contractor, at his expense, to a condition similar or equal to that existing before the damage was done, or he shall make good the damage in another manner acceptable to the City. No representations are made by or on behalf of the City concerning the conditions, locations or state of repair or existing sewers, drains, water mains and other underground structures;

To store his apparatus, materials, supplies, and equipment in such orderly fashion at the site of the work as will not unduly interfere with the progress of his work or the work on any other Contractor;

To provide suitable storage facilities for all materials which are liable to injury or exposure to weather, theft, breakage, or otherwise;

To place upon the work or any part thereof only such loads as are consistent with the safety of that portion of the work;

To clean up frequently all refuse, rubbish, scrap materials, and debris caused by his operations, to the end that at all times the site of the work shall present a neat, orderly and workmanlike appearance;

To fully and completely remove all utility markings generated by or as a result of the project from public rights-of-way utilizing a method that is least destructive to the existing improvements, and which method has been approved by the City. Should the contractor propose to remove the markings with pressure washing, all pressure washing runoff and residue shall be contained and collected in accordance with Best Management Practices and Wheat Ridge Ordinance Chapter 20, Stormwater Quality and Control. Removal of all markings shall occur no later than twenty (20) days after completion of work.

To remove all surplus material, false-work, temporary structures, including foundations thereof, plant of any description and debris of every nature resulting from his operations, and to put the site in a neat, orderly condition before final payment;

To affect all cutting, fitting or patching of his work required to make the same to conform to the Plans and Specifications and, except with the consent of the City, not to cut or otherwise alter the work of any other Contractor. The Contractor shall not, except after written consent from proper parties enter or occupy with men, tools, materials or equipment, any privately owned land except on easements provided herein.

**28. LANDS FOR WORK AND RIGHT-OF-WAY:**

The City will provide land, right-of-way and easements for all work specified in the Contract.

**29. NO DAMAGES FOR CERTAIN DELAYS:**

The City may delay the commencement of the work, or any part thereof, if the City shall deem it for the best interest of the City to do so. The Contractor shall have no claim for damages on account of such delay, but he shall be entitled to so much additional time in which to complete the whole or any portion of the work required under this Contract as the City shall certify in writing to be just. The Contractor shall have no claim for damages on account of any delay on the part of another Contractor. Contractor expressly acknowledges and accepts the provisions of Section 2-4 of the Code of Laws of the City of Wheat Ridge as controlling this Project.

**30. REQUIRED PROVISIONS DEEMED INSERTED:**

Each and every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein, and the Contract shall be read and enforced as though it were included herein, and if through mistake or otherwise, any such provision is not inserted, or if not correctly inserted, then upon the applications of either party, the Contract shall forthwith be physically amended to make such insertion.

**31. PROTECTION OF LIVES AND HEALTH:**

The Contractor shall take all necessary precautions for the safety of employees of the work, and shall comply with all applicable provisions of Federal, State, and Municipal safety laws and building codes to prevent accidents or injury to persons on, about or adjacent to the premises where the work is being performed. He shall erect and properly maintain at all times, as required by the conditions and progress of the work, all necessary safeguards for the protection of workmen and the public and shall post danger signs warning against the hazards created by the construction such as protruding nails, hod hoists, well holes, elevator hatchways, scaffolding, window openings, stairways, and failing materials.

The Contractor shall comply with the Department of Labor Safety and Health Regulations for construction promulgated under the Occupational Safety and Health Act of 1970 (PL-91-596) and under Section 107 of the Contract Work Hours and Safety Standards Act (PL-19-54).

**32. WAGE RATES:**

The attention of the bidder is called to the requirements and provisions of all applicable laws and any amendments thereof or additions thereto as to the employment of labor, and to the schedule of any minimum wage rates established in compliance with such laws. If, after the award of the Contract, it becomes necessary to employ any person in a trade or occupation not classified in the wage determinations, such person shall be paid at not less than such rate as shall be determined by the officials administering the laws mentioned above.

The Contract is subject to the applicable provisions of the Contract Work Hours Standards Act. Public Law 87-581, 87th Congress. No Contractor or Subcontractor contracting for any part of the contract work shall require or permit any laborer or mechanic to be employed on such work in excess of eight (8) hours in any calendar day or in excess of forty (40) hours in any work week unless such laborer or mechanic received compensation at a rate not less than one and one-half times his basic rate of pay for all hours worked in excess of eight (8) hours in any calendar day or in excess of forty (40) hours in such work week, as the case may be.

**33. EMPLOYMENT OF LABOR:**

The Contractor and each of his Subcontractors shall hire qualified workers for the project who are citizens of the United States or legal resident aliens with first preference being given, insofar as practicable, to those having served in the armed forces of the United States and having been honorably discharged or released from active duty therein.

The Contractor shall employ only competent persons to do the work, and whenever requested in writing by the City Representative, the Contractor shall discharge any person who commits trespass or is, in the opinion of the City Representative, disorderly, dangerous, unfaithful, insubordinate, incompetent or otherwise unsatisfactory.

**34. SANITARY PRECAUTIONS:**

Sanitary conveniences for the use of all persons employed on the work, properly screened from public observation, shall be provided in sufficient numbers in such manner and at such points as shall be approved. The contents shall be removed and disposed of in a satisfactory manner as the occasion requires. The Contractor shall rigorously prohibit the committal of nuisances within, on, or about the work. Any employees found violating these provisions shall be discharged and not again employed on the work without the written consent of the City Representative.

The Contractor shall supply sufficient drinking water from approved sources to all of his employees.

The sanitary convenience specified above shall be the obligation and responsibility of the General Contractor until the completion of the work. The facilities shall be made available to all other Contractors and Subcontractors.

**35. SALES AND USE TAXES:**

Do not include sales or use taxes in your bid. House Bill 1451 provides that Contractors shall make application with the Colorado State Department of Revenue for a tax exempt number which will be issued for the duration of the project. This tax exempt number is for State taxes only. The City of Wheat Ridge will issue its own tax exempt number for local sales tax purposes. An affidavit must be signed by the General Contractor for such project before the City tax exempt number can be issued. Please be advised that a supplier is allowed by Colorado law (C.R.S. 39-26-703 (1)) to disallow any exemption because the seller is ultimately responsible for the tax. When a supplier exercises this right, please seek a refund of sales taxes paid from the appropriate jurisdiction (city or state).

**36. BUSINESS LICENSE:**

A business license is required for all Contractors performing work in the City prior to beginning work. Please contact the City Sales Tax Division to obtain a license.

## CDOT STANDARD SPECIFICATIONS

All work required for the project shall be in accordance with the latest edition of the COLORADO DEPARTMENT OF TRANSPORTATION (CDOT), Standard Specifications for Road and Bridge Construction, 2011 Edition, unless modified by these Specifications.

### CDOT STANDARD SPECIAL PROVISIONS

The CDOT Standard Specifications are modified with the following CDOT Standard Special Provisions.

April 30, 2015

### REVISION OF SECTIONS 101 AND 630 CONSTRUCTION ZONE TRAFFIC CONTROL

Sections 101 and 630 of the Standard Specifications are hereby revised for this project as follows:

In subsection 101.01 add the following:

MASH Manual for Assessing Safety Hardware

In subsection 630.01, delete the first paragraph and replace with the following:

**630.01** This work consists of furnishing, installing, moving, maintaining, and removing temporary traffic signs, advance warning arrow panels, flashing beacon (portable), barricades, channelizing devices, delineators, temporary traffic signals, mobile pavement marking zones, masking and unmasking existing signs in construction zones, and concrete barriers as required by the Manual on Uniform Traffic Control Devices for Streets and Highways and the Colorado Supplement thereto, in accordance with the Contract. Devices shall comply with the performance criteria contained in NCHRP Report 350 (only applicable for devices developed prior to 2011) or MASH (acceptable for all devices). Devices temporarily not in use shall, as a minimum, be removed from the shoulder area. Moving will include devices removed from the project and later returned to use.

In subsection 630.02, delete the second paragraph, and replace with the following:

Temporary sign support assembly shall be timber, perforated square metal tubing inserted into a larger base post or slip base or perforated metal U-channel with a slip base. The temporary sign support assembly shall conform to NCHRP (only applicable for sign support assemblies developed prior to 2011) or MASH (acceptable for all sign support assemblies), and AASHTO requirements regarding temporary sign supports during construction.

Subsection 630.02 shall include the following:

If a timber post is selected, it shall conform to the requirements of subsection 614.02.

In subsection 630.07(a), delete the first paragraph and replace with the following:

- (a) *Stackable Vertical Panels.* Stackable vertical panels shall comply with the crash test requirements contained in NCHRP Report 350 (only applicable for vertical panels developed prior to 2011) or MASH (acceptable for all vertical panels) and shall meet MUTCD requirements for vertical panels. Vertical panels shall be retroreflectorized with Type IV sheeting, in accordance with subsection 630.02. The stackable vertical panels shall have the following properties:

In subsection 630.07(b), delete the first paragraph and replace with the following:

- (b) *Stackable Tubular Markers.* Stackable tubular markers shall comply with the crash test requirements contained in NCHRP Report 350 (only applicable for stackable tubular markers developed prior to 2011) or MASH (acceptable for all stackable tubular markers) and shall conform to MUTCD requirements for Tubular Markers. The stackable tubular markers shall have the following properties:

In subsection 630.09, delete the second and third paragraphs, and replace with the following:

Work zone devices designated by FHWA as Category I, II, or III, shall comply with the performance criteria contained in NCHRP Report 350 (only applicable for devices developed prior to 2011) or MASH (acceptable for all devices). Devices designated as Category IV, including but not limited to portable or trailer-mounted devices such as flashing arrow panels, temporary traffic signals, area lighting supports, and changeable message signs are not required to meet NCHRP 350 or MASH requirements.

Except for Category IV devices, the Contractor shall obtain and present to the Engineer the manufacturer's written NCHRP 350 (only applicable for devices developed prior to 2011) or MASH (acceptable for all devices) certification for each work zone device before it is first used on the project.

In subsection 630.10(a) (3) (iii), delete the third paragraph, and replace with the following:

Groups 1 and 2 shall each be equipped with a truck-mounted Advance Warning Flashing or Sequencing Arrow Panel (C Type), and a truck mounted impact attenuator. The impact attenuator shall be located on the rearmost vehicle of each group. A separate vehicle for this attenuator may be used. Each truck-mounted impact attenuator shall be certified by the manufacturer to be able to withstand a 62 MPH impact in accordance with NCHRP 350, Test Level 3 (only applicable for truck-mounted impact attenuators developed prior to 2011) or MASH, Test Level 3 (acceptable for all truck-mounted impact attenuators). The cone setting truck and the cone pickup truck shall not be the same vehicle.

In subsection 630.16, delete the 5th paragraph.

February 3, 2011

### **REVISION OF SECTION 103 COLORADO RESIDENT BID PREFERENCE**

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

Subsection 103.01 shall include the following:

- (a) *Colorado Resident Bid Preference.* A resident bidder shall be allowed a preference against a nonresident bidder from a state or foreign country equal to the preference given or required by the state or foreign country in which the nonresident bidder is a resident.

Resident bidder means:

- (1) A person, partnership, corporation, or joint venture which is authorized to transact business in Colorado and which maintains its principal place of business in Colorado: or,
- (2) A person, partnership, corporation, or joint venture which is authorized to transact business in Colorado, which maintains a place of business in Colorado, and which has paid Colorado unemployment compensation taxes in at least seventy-five percent of the eight quarters immediately prior to bidding on a construction contract for a public project.

To determine the resident bid preference status of a bidder, the bidder shall submit a completed Form 604 with the proposal. Failure to submit the residency Form with the proposal will be justification for and may result in the rejection of the proposal and forfeiture of the proposal guaranty.

The proposals will be treated as follows:

- (1) All proposals will be checked for accuracy by the Department.
- (2) The dollar amount of the checked proposal from nonresident bidders will be adjusted by a percentage equal to the percentage preference given or required by the state or foreign country of the bidder's residency. If the state or foreign country does not give or require a residency preference, no adjustment in the proposal dollar amount will be made.
- (3) Adjusted proposals from nonresident bidders will then be compared to proposals from resident bidders, and the bidder with the lowest total will be considered the apparent low bidder.

(4) Should a nonresident bidder be the apparent low bidder, in accordance with paragraph (3) above, an award will be made on the basis of the original proposal, not the adjusted proposal.

(5) The Department will proceed with its normal award procedure.

February 3, 2011

**REVISION OF SECTION 105  
VIOLATION OF WORKING TIME LIMITATION**

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

Subsection 105.03 shall include the following:

If there is a violation of the working time limitations for traffic control as set forth in the special provisions, a written notice to stop work will be imposed on the Contractor at the start of the next working day. Work shall not resume until the Contractor assures the Engineer, in writing, that there will not be a reoccurrence of the working time violation. If more violations take place, the Engineer will notify the Contractor in writing that there will be a price reduction charge for each incident in accordance with this specification. This incident price reduction charge will be deducted from any money due the Contractor. This price reduction will not be considered a penalty but will be a price reduction for failure to perform traffic control in compliance with the Contract.

An incident is any violation up to 30 minutes in duration. Each 30 minutes or increment thereof will be considered as an incident. A price reduction will be assessed for each successive or cumulative 30 minute period in violation of the working time limitations, as determined by the Engineer. The price reduction for each incident will increase at a progressive rate starting with \$150 for the second incident and increasing to \$1200 for the fifth and subsequent incidents in accordance with the following schedule. A 15 minute grace period will be allowed at the beginning of the second incident on the project before the price reduction is applied. This 15 minute grace period applies only to the second incident.

The number of incident charges will be accumulative throughout the duration of the Contract.

**PRICE REDUCTION SCHEDULE**

Incident	Incident Rate	Total Price Reduction
1 <sup>st</sup>	Notice to Stop Work	----
2 <sup>nd</sup>	\$150	\$150
3 <sup>rd</sup>	300	450
4 <sup>th</sup>	600	1,050
5 <sup>th</sup>	1,200	2,250
6 <sup>th</sup>	1,200	3,450
Etc.	1,200	4,650
	Etc.	Etc.

January 15, 2015

**REVISION OF SECTIONS 105 AND 106  
CONFORMITY TO THE CONTRACT OF HOT MIX ASPHALT  
(LESS THAN 5000 TONS)**

Sections 105 and 106 of the Standard Specifications are hereby revised for this project as follows:

Delete subsection 105.05 and replace with the following:

**105.05 Conformity to the Contract of Hot Mix Asphalt.** Conformity to the Contract of all Hot Mix Asphalt, Item 403, except Hot Mix Asphalt (Patching) and temporary pavement will be determined by tests and evaluations of elements that include asphalt content, gradation, in-place density and joint density in accordance with the following:

All work performed and all materials furnished shall conform to the lines, grades, cross sections, dimensions, and material requirements, including tolerances, shown in the Contract.

For those items of work where working tolerances are not specified, the Contractor shall perform the work in a manner consistent with reasonable and customary manufacturing and construction practices.

When the Engineer finds the materials or work furnished, work performed, or the finished product are not in conformity with the Contract and has resulted in an inferior or unsatisfactory product, the work or material shall be removed and replaced or otherwise corrected at the expense of the Contractor.

Materials will be sampled randomly and tested by the Department in accordance with Section 106 and with the applicable procedures contained in the Department's Field Materials Manual. The approximate maximum quantity represented by each sample will be as set forth in Section 106. Additional samples may be selected and tested as set forth in Section 106 at the Engineer's discretion.

A process will consist of either a single test value or a series of test values resulting from related tests of an element of the Contractor's work and materials. An element is a material or workmanship property that can be tested and evaluated for quality level by the Department approved sampling, testing, and analytical procedures. All materials produced will be assigned to a process. A change in process is defined as a change that affects the element involved. For any element, with the exception of the process for joint density element, a process normally will include all produced materials associated with that element prior to a change in the job mix formula (Form 43). For joint density, a new process will be established for each new layer of pavement or for changes in joint construction. Density measurements taken within each compaction test section will be a separate process. The Engineer may separate a process in order to accommodate small quantities or unusual variations.

Evaluation of materials for pay factors (PF) will be done using only the Department's acceptance test results. Each process will have a PF computed in accordance with the requirements of this Section. Test results determined to have sampling or testing errors will not be used.

Except for in-place density measurements taken within a compaction test section, any test result for an element greater than the distance  $2 \times V$  (see Table 105-2) outside the tolerance limits will be designated as a separate process and the pay factor will be calculated in accordance with subsection 105.05(a). An element pay factor less than zero shall be zero. The calculated PF will be used to determine the Incentive/Disincentive Payment (I/DP) for the process.

In the case of in-place density or joint density the Contractor will be allowed to core the exact location (or immediately adjacent location for joint density) of a test result more than  $2 \times V$  outside the tolerance limit. The core must be taken and furnished to the Engineer within eight hours after notification by the Engineer of the test result. The result of this core will be used in lieu of the previous test result. Cores not taken within eight hours after notification by the Engineer will not be used in lieu of the test result. All costs associated with coring will be at the Contractor's expense.

(a) *Representing Small Quantities.* When it is necessary to represent a process by only one or two test results, PF will be the average of PFs resulting from the following:

If the test result is within the tolerance limits then  $PF = 1.00$

If the test result is above the maximum specified limit, then

$$PF = 1.00 - [0.25(T_O - T_U)/V]$$

If the test result is below the minimum specified limit, then

$$PF = 1.00 - [0.25(T_L - T_O)/V]$$

Where: PF = pay factor.  
V = V factor from Table 105-2.  
T<sub>O</sub> = the individual test result.  
T<sub>U</sub> = upper specification limit.  
T<sub>L</sub> = lower specification limit.

The calculated PF will be used to determine the I/DP for the process.

- (b) *Determining Quality Level.* Each process with three or more test results will be evaluated for a quality level (QL) in accordance with Colorado Procedure 71.
- (c) *Gradation Element.* Each specified sieve, with the exception of 100 percent passing sieves, will be evaluated for QL separately. The lowest calculated QL for a sieve will be designated as the QL for gradation element for the process.
- (d) *Joint Density Element.* Joint Density will be tested according to subsection 401.17.
- (e) *Process Pay Factor.* Using the calculated QL for the process, compute PF as follows: The final number of random samples (Pn) in each process will determine the final pay factor. . As test values are accumulated for each process, Pn will change accordingly. When the process has been completed, the number of random samples it contains will determine the computation of PF, based on Table 105-3 and formula (1) below. When Pn is from 3 to 9, or greater than 200, PF will be computed using the formulas designated in Table 105-3. Where Pn is equal to or greater than 10 and less than 201, PF will be computed by formula (1):

Where, when referring to Table 105-3:

$$(1) PF = \frac{(PF_1 + PF_2)}{2} + \left[ \frac{(PF_2 + PF_3)}{2} - \frac{(PF_1 + PF_2)}{2} \right] \times \frac{(Pn_2 - Pn_x)}{(Pn_2 - Pn_3)}$$

- PF<sub>1</sub>= PF determined at the next lowest Pn formula using process QL
- PF<sub>2</sub>= PF determined using the Pn formula shown for the process QL
- PF<sub>3</sub>= PF determined at the next highest Pn formula using process QL
- Pn<sub>2</sub>= the lowest Pn in the spread of values listed for the process Pn formula
- Pn<sub>3</sub>= the lowest Pn in the spread of values listed for the next highest Pn formula
- Pn<sub>x</sub>= the actual number of test values in the process

When evaluating the item of Furnish Hot mix asphalt, the PF for the element of In-Place Density shall be 1.0.

Regardless of QL, the maximum PF in relation to Pn is limited in accordance with Table 105-3.

As test results become available, they will be used to calculate accumulated QL and PF numbers for each process. The process I/DP's will then be calculated and accumulated for each element and for the item. The test results and the accumulated calculations will be made available to the Contractor upon request.

Numbers from the calculations will be carried to significant figures and rounded according to AASHTO Standard Recommended Practice R-11, Rounding Method.

- (f) *Evaluation of Work.* When the PF of a process is 0.75 or greater, the finished quantity of work represented by the process will be accepted at the appropriate pay factor. If the PF is less than 0.75, the Engineer may:
  1. Require complete removal and replacement with specification material at the Contractor's expense;
  - or
  2. Where the finished product is found to be capable of performing the intended purpose and the value of the finished product is not affected, permit the Contractor to leave the material in place.

If the material is permitted to remain in place the PF for the process will not be greater than 0.75. When condition red, as described in Section 106, exists for any element, resolution and correction will be in accordance with Section 106. Material, which the Engineer determines is defective, may be isolated and rejected without regard to sampling sequence or location within a process.

If removal and replacement is required because the joint density PF for a process is below 0.75, the Contractor shall remove and replace the full lane width adjacent to and including at least 6 inches beyond the visible joint line for the entire length of joint representing the process. If the lane removed is adjacent to another joint, that joint shall

also be removed to a point 6 inches beyond the visible joint line. When a single joint density core is more than 2V outside the tolerance limits, the removal and replacement limits shall be identified by coring the failing joint at 25 foot intervals until two successive cores are found to be 1V or less below the minimum tolerance limit. If removal and replacement is required, the Contractor shall submit documentation identifying the process to be used to correct the area in question in writing. The process will be approved by the Engineer before commencing the corrective work.

**Table 105-2  
“W” AND “V” FACTORS FOR VARIOUS ELEMENTS**

Hot Mix Asphalt		
Element	V Factor	W Factor
2.36 mm (No. 8) mesh and larger sieves	2.80	N/A
600 µm (No. 30) mesh sieve	1.80	N/A
75 µm (No. 200) mesh sieve	0.80	N/A
Gradation	N/A	15
Asphalt Content	0.20	25
In-place Density	1.10	45
Joint Density	1.60	15

**Table 105-3  
FORMULAS FOR CALCULATING PF BASED ON PN**

Pn	When Pn as shown at left is 3 to 9, or greater than 200, use designated formula below to calculate Pay Factor, PF = ..., when Pn is 10 to 200, use formula (1) above:	Maximum PF
3	$0.31177 + 1.57878 (QL/100) - 0.84862 (QL/100)^2$	1.025
4	$0.27890 + 1.51471 (QL/100) - 0.73553 (QL/100)^2$	1.030
5	$0.25529 + 1.48268 (QL/100) - 0.67759 (QL/100)^2$	1.030
6	$0.19468 + 1.56729 (QL/100) - 0.70239 (QL/100)^2$	1.035
7	$0.16709 + 1.58245 (QL/100) - 0.68705 (QL/100)^2$	1.035
8	$0.16394 + 1.55070 (QL/100) - 0.65270 (QL/100)^2$	1.040
9	$0.11412 + 1.63532 (QL/100) - 0.68786 (QL/100)^2$	1.040
10 to 11	$0.15344 + 1.50104 (QL/100) - 0.58896 (QL/100)^2$	1.045
12 to 14	$0.07278 + 1.64285 (QL/100) - 0.65033 (QL/100)^2$	1.045
15 to 18	$0.07826 + 1.55649 (QL/100) - 0.56616 (QL/100)^2$	1.050
19 to 25	$0.09907 + 1.43088 (QL/100) - 0.45550 (QL/100)^2$	1.050
26 to 37	$0.07373 + 1.41851 (QL/100) - 0.41777 (QL/100)^2$	1.055
38 to 69	$0.10586 + 1.26473 (QL/100) - 0.29660 (QL/100)^2$	1.055
70 to 200	$0.21611 + 0.86111 (QL/100)$	1.060
≥ 201	$0.15221 + 0.92171 (QL/100)$	1.060

(g)  Process I/DP Computation.

$$I/DP = (PF - 1)(QR)(UP)(W/100)$$

Where:	I/DP	=	Incentive/Disincentive Payment
	PF	=	Pay Factor
	QR	=	Quantity in Tons of HMA Represented by the Process
	UP	=	Unit Bid Price of Asphalt Mix
	W	=	Element Factor from Table 105-2

When AC is paid for separately UP shall be:

$$UP = [(Ton_{HMA})(UP_{HMA}) + (Ton_{AC})(UP_{AC})]/Ton_{HMA}$$

Where:	Ton <sub>HMA</sub>	=	Tons of Asphalt Mix
	UP <sub>HMA</sub>	=	Unit Bid Price of Asphalt Mix
	Ton <sub>AC</sub>	=	Tons of Asphalt Cement
	UP <sub>AC</sub>	=	Unit Bid Price of Asphalt Cement

For the joint density element:

$$UP = UP_{HMA}$$

Where: UP<sub>HMA</sub> is as defined above.

When AC is paid for separately UP shall be:

$$UP = [(BTon_{HMA})(BUP_{HMA}) + (BTon_{AC})(BUP_{AC})]/BTon_{HMA}$$

Where:	BTon <sub>HMA</sub>	=	Bid Tons of Asphalt Mix
	BUP <sub>HMA</sub>	=	Unit Bid Price of Asphalt Mix
	BTon <sub>AC</sub>	=	Bid Tons of Asphalt Cement
	BUP <sub>AC</sub>	=	Unit Bid Price of Asphalt Cement

- (h) *Element I/DP.* The I/DP for an element shall be computed by accumulating the process I/DP's for that element.
- (i) *I/DP for a Mix Design.* The I/DP for a mix design shall be computed by accumulating the individual I/DP's for the asphalt content, in-place density, and gradation elements for that mix design. The accumulated quantities of materials for each element must be the same at the end of I/DP calculations for a mix design.
- (j) *Project I/DP.* The I/DP for the project shall be computed by accumulating the mix design I/DP's and the joint density I/DP's. The accumulated quantities of materials for each element must be the same at the end of I/DP calculations for the project.

Delete subsection 106.05 and replace with the following:

**106.05 Sampling and Testing of Hot Mix Asphalt.** All hot mix asphalt, Item 403, except Hot Mix Asphalt (Patching) and temporary pavement shall be tested in accordance with the following program of process control testing and acceptance testing:

The Contract will specify whether process control testing by the Contractor is mandatory or voluntary.

(a) *Process Control Testing.*

1. **Mandatory Process Control.** When process control testing is mandatory the Contractor shall be responsible for process control testing on all elements and at the frequency listed in Table 106-1. Process control testing shall be performed at the expense of the Contractor.

After completion of compaction, in-place density tests for process control shall be taken at the frequency shown in Table 106-1. The results shall be reported in writing to the Engineer on a daily basis. Daily plots of the test results with tonnage represented shall be made on a chart convenient for viewing by the Engineer. All of the testing equipment used for in-place density testing shall conform to the requirements of acceptance testing standards, except nuclear testing devices need not be calibrated on the Department's calibration blocks.

For elements other than in-place density, results from quality control tests need not be plotted, or routinely reported to the Engineer. This does not relieve the Contractor from the responsibility of performing such testing along with appropriate plant monitoring as necessary to assure that produced material conforms to the applicable specifications. Quality control test data shall be made available to the Engineer upon request.

2. Voluntary Process Control. The Contractor may conduct process control testing. Process control testing is not required, but is recommended on the elements and at the frequency listed in Table 106-1.

All of the testing equipment used for in-place density testing shall conform to the requirements of acceptance testing standards, except nuclear testing devices need not be calibrated on the Department's calibration blocks.

- (b) *Acceptance Testing.* Acceptance testing is the responsibility of the Department. For acceptance testing the Department will determine the locations where samples or measurements are to be taken and as designated in Section 403. The maximum quantity of material represented by each test result, the elements, the frequency of testing and the minimum number of test results will be in accordance with Table 106-1. The location or time of sampling will be based on the stratified random procedure as described in CP 75. Acceptance sampling and testing procedures will be in accordance with the Schedule for Minimum Materials Sampling, Testing and Inspection in the Department's Field Materials Manual. Samples for project acceptance testing shall be taken by the Contractor in accordance with the designated method. The samples shall be taken in the presence of the Engineer. Where appropriate, the Contractor shall reduce each sample to the size designated by the Engineer. The Contractor may retain a split of the each sample which cannot be included as part of the Contractor's process control testing. Dispute of the acceptance test results in accordance with CP-17 will not be allowed unless a provision for check testing has been included in the Contract and it has been successfully completed. All materials being used are subject to inspection and testing at any time prior to or during incorporation into the work.

**Table 106-1  
SCHEDULE FOR MINIMUM SAMPLING AND TESTING**

Element	Process Control	Acceptance
Asphalt Content	1/500 tons	1/1000 tons
Theoretical Maximum Specific Gravity	1.1000 tons, minimum 1/day	1/1000 tons, minimum 1/day
Gradation	1/Day	1/2000 tons
In-Place Density	1/500 tons	1/500 tons
Joint Density	1 core/2500 linear feet of joint	1 core /5000 linear feet of joint
Aggregate Percent Moisture <sup>(3)</sup>	1/2000 tons or 1/Day if less than 2000 tons	1/2000 tons
Percent Lime <sup>(3) (4)</sup>	1/Day	Not applicable
Notes:		
(1) The minimum number of in-place density tests for acceptance will be 5.		
(2) Process control tests for gradation are not required if less than 250 tons are placed in a day. The minimum number of process control tests for gradation shall be one test for each 1000 tons or fraction thereof.		
(3) Not to be used for incentive/disincentive pay. Test according to CP 60B and report results from Form 106 or Form 565 on Form 6.		
(4) Verified per Contractor's QC Plan.		

- (c) *Reference Conditions.* Three reference conditions can exist determined by the Moving Quality Level (MQL). The MQL will be calculated in accordance with the procedure in CP 71 for Determining Quality Level (QL). The MQL will be calculated using only acceptance tests. The MQL will be calculated on tests 1 through 3, then tests 1 through 4, then tests 1 through 5, then thereafter on the last five consecutive test results. The MQL will not be used to determine pay factors. The three reference conditions and actions that will be taken are described as follows:

1. Condition green will exist for an element when an MQL of 90 or greater is reached, or maintained, and the past five consecutive test results are within the specification limits.
2. Condition yellow will exist for all elements at the beginning of production or when a new process is established because of changes in materials or the job-mix formula, following an extended suspension of work, or when the MQL is less than 90 and equal to or greater than 65. Once an element is at condition green, if the MQL falls below 90 or a test result falls outside the specification limits, the condition will revert to yellow or red as appropriate.
3. Condition red will exist for any element when the MQL is less than 65. The Contractor shall be notified immediately in writing and the process control sampling and testing frequency increased to a minimum rate of 1/250 tons for that element. The process control sampling and testing frequency shall remain at 1/250 tons until the process control QL reaches or exceeds 78. If the QL for the next five process control tests is below 65, production will be suspended.

If gradation is the element with MQL less than 65, the Department will test one randomly selected sample in the first 1250 tons produced in condition red. If this test result is outside the tolerance limits, production will be suspended. (This test result will not be included as an acceptance test.)

After condition red exists, a new MQL will be started. Acceptance testing will stay at the frequency shown in Table 106-1. After three acceptance tests, if the MQL is less than 65, production will be suspended.

Production will remain suspended until the source of the problem is identified and corrected. Each time production is suspended, corrective actions shall be proposed in writing by the Contractor and approved in writing by the Engineer before production may resume.

Upon resuming production, the process control sampling and testing frequency for the elements causing the condition red shall remain at 1/250 tons. If the QL for the next five process control tests is below 65, production will be suspended again. If gradation is the element with MQL less than 65, the Department will test one randomly selected sample in the first 1250 tons produced in condition red. If this test result is outside the tolerance limits, production will be suspended.

May 8, 2014

### **REVISION OF SECTION 105 HOT MIX ASPHALT PAVEMENT SMOOTHNESS**

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

Delete subsection 105.07 and replace with the following:

**105.07 Conformity to Roadway Smoothness Criteria of HMA.** Roadway smoothness testing and corrective work shall be performed as described below. The pavement smoothness category shall be HRI Category II unless shown on the plans.

(a) *Smoothness Quality Control Testing.*

1. The Contractor shall perform Smoothness Quality Control (SQC) testing. The test results shall be submitted to the Engineer within 48 hours of completion. SQC test results shall show the Half Car Roughness Index (HRI) for each 0.10 mile section and shall show the results for localized roughness.

All traffic control costs associated with SQC testing will be paid for in accordance with Section 630.

SQC testing shall be performed on the first 2,000 tons for the final layer.

SQC testing shall be performed using the Contractor's inertial profiler, pursuant to the methods described in subsection 105.07(b) and in accordance with the manufacturer's recommendations. The Contractor's Profiler shall be certified according to CP 78. A list of certified profilers is located at <http://www.dot.state.co.us/DesignSupport/>.

Production shall be suspended if SQC testing indicates that corrective work is required in accordance with subsection 105.07 (c). If the SQC data becomes available after production has started for the day, suspension

will begin at the end of that production day. Production will remain suspended until the problem is identified and corrected. Each time production is suspended, corrective actions shall be proposed in writing by the Contractor. Production will not be allowed to resume until the proposed corrective actions have been accepted by the Project Engineer in writing.

When production resumes, the Contractor shall profile the first 2,000 tons of HMA. The conditions above for suspension of work will apply.

2. The finished transverse and longitudinal surface elevation of the pavement shall be measured using a 10 foot straightedge. Areas to be measured will be directed by the Engineer. The Contractor shall furnish an approved 10 foot straightedge, depth gauge and operator to aid the Engineer in testing the pavement surface. Areas showing high spots of more than 3/16 inch in 10 feet shall be marked and diamond ground until the high spot does not exceed 3/16 inch in 10 feet.

(b) *Initial Smoothness Acceptance Testing.* The Contractor shall perform Smoothness Acceptance Testing (SA) which will be used for acceptance and calculation of incentive and disincentive adjustments.

All traffic control costs associated with SA testing will be paid for in accordance with Section 630.

1. Longitudinal Pavement Surface Smoothness Acceptance. Pavement surfaces shall be tested and accepted for longitudinal smoothness as described herein.
  - A. Testing Procedure (General). The longitudinal surface smoothness of the final pavement surface shall be tested by the Contractor in accordance with CP 74 and using the Contractor's high-speed profiler (HSP). The Contractor's Profiler shall be certified according to CP 78. A list of certified profilers is located at <http://www.dot.state.co.us/DesignSupport/>

The HSP instrumentation shall be verified in accordance with CP 74 prior to measurements. The Contractor shall lay out a distance calibration site. The distance calibration site shall be located no more than ten miles from the Project limits. The distance calibration site shall be 1056 feet long and shall be on a relatively flat, straight section of pavement as approved by the Engineer. The site shall have a speed limit equal to the Project's highest speed limit that allows for the HSP to operate uninterrupted. The limits of the site shall be clearly marked and the distance shall be measured to an accuracy of +/- 3 inches. The Contractor shall provide in writing the site location to the Engineer. The cost of the distance calibration site will not be measured and paid for separately, but shall be included in the work.

The entire length of each through lane, climbing lane and passing lane including bridge approaches, bridge decks and intersections from the beginning to the end of the project shall be profiled in their planned final configuration. Shoulders less than 12 foot in width and medians will not be profiled and will not be subject to incentive/disincentive adjustments. Shoulders with a width of 12 feet or greater, ramps, tapers, turn slots, acceleration lanes and deceleration lanes will be profiled, but will not be subject to incentive/disincentive adjustments. Shoulders with a width of 12 feet or more, ramps, tapers, turn slots, acceleration lanes and deceleration lanes will be evaluated for localized roughness corrective work. The profile of the entire length of a lane shall be taken at one time. However, the Engineer may break a project into sections to accommodate Project phasing.

A sufficient distance shall be deleted from the profile to allow the profiler to obtain the testing speed plus a 300 foot distance to stop and start when required. Incentive/disincentive adjustments will not be made for this area. The final surface of these areas shall be tested in accordance with subsection 105.07(a) 2.

Shoulders less than 12 foot in width and medians constructed as part of this project shall be measured in accordance with subsection 105.07(a) 2.

The profile shall include transverse joints when pavement is placed by the project on both sides of the joint. When pavement is placed on only one side of the joint, the profile shall start 25 feet outside the project paving limits. The profile of the section of pavement 25 feet outside the paving limits to 25 feet inside paving limits will not be subjected to incentive or disincentive adjustments, but will be evaluated for localized roughness.

The profile of the area 25 feet each side of every railroad crossing, cattle guard, bus pad, manhole, gutter pan and intersection (where there is a planned breakpoint in the profile grade line in the direction of traffic) shall be deleted from the profile before the HRI is determined. Incentive/disincentive adjustments

will not be made for these areas. Areas deleted from the profile shall be tested in accordance with subsection 105.07(a) 2.

When both new pavement and a new bridge or new bridge pavement are being constructed in a project, the profile of the area 25 feet each side of the bridge deck shall be deleted from the profile before the HRI is determined. Incentive/disincentive adjustments will not be made for this area. Areas deleted from the profile shall be tested in accordance with subsection 105.07(a) 2. The bridge deck will be evaluated for localized roughness. Corrective work required in these areas will not be measured and paid for separately, but shall be included in the work. For all other projects, the profile of the area 25 feet each side of the bridge deck shall be deleted from the profile before the HRI is determined. Incentive/disincentive adjustments will not be made for this area. If the Engineer determines that corrective work is required in this area, payment will be made in accordance with subsection 109.04.

The Contractor shall notify the Engineer in writing at least five working days in advance of his intention to perform SA testing. The Contractor shall profile the Project within 14 days after the completion of paving operations. The Engineer will witness the SA profiling and take immediate possession of the SA data.

The Contractor shall not perform any corrective work that will affect the pavement smoothness for ten working days after completion of the SA testing or as approved by the Engineer. This time is to allow for the Department to analyze the data and perform smoothness verification testing.

- B. Smoothness Testing Procedures. The Contractor shall mark the profiling limits and excluded areas. The Engineer will verify that the Contractor's marks are located properly. The Contractor shall use traffic cones with reflective tape or reflective tape on the pavement at the beginning and end of each lane for triggering the start and stop locations on the profiler and at any other location, where portions of the profile are being deleted. These locations shall be marked with temporary paint so that the Department's profiler uses the same locations for smoothness verification testing.

The ambient temperature shall be at least 34 °F for the profiler to operate.

The Contractor shall clear the lanes to be tested of all debris before profiling.

The Contractor shall submit a Method for Handling Traffic (MHT) to the Engineer for approval at least five days in advance of SA testing. The MHT shall detail the methods for traffic control that will allow for continuous non-stop profiling of each lane to be profiled at a minimum speed of 15 mph. The Contractor shall provide the traffic control in accordance with the approved MHT.

Each lane shall be profiled at least once. Profiling shall be at a constant speed (+/- 5 mph of the distance calibration speed ) with a minimum speed of 15 mph and a maximum speed of 70 mph. Shoulders with a width of 12 feet or more, ramps, tapers, turn slots, acceleration lanes and deceleration lanes shall be profiled. The profile shall be taken in the planned direction of travel. The left and right wheel paths shall be profiled simultaneously. The collected profiles shall be turned over immediately to the Engineer and will be analyzed using CP 74.

- (1) The Department will determine a HRI for each 0.1 mile section or fraction thereof of completed pavement. The HRI consists of the left and right wheel path's profile passed through the International Roughness Index (IRI) filter.

The Contractor's SA test results will be available within ten working days of the completion of SA testing. The Engineer will give the Contractor a report that will include the lane profiled, the HRI in 0.10 mile increments and a summary of areas requiring corrective work. The Engineer may determine that it is necessary for the Contractor to re-profile a lane.

Areas requiring corrective work will be determined according to subsection 105.07(c) 1.

Sections less than 0.01 miles in length shall not be subject to corrective work as specified by Table 105-6. Sections less than 0.01 miles in length shall be included in the Localized Roughness determination.

- C. Acceptance and incentive/disincentive adjustments for pavement smoothness will be made on a square yard basis in accordance with the following:

Incentive and Disincentive adjustments will be based on the HRI for each 0.1 mile section or fraction thereof. Incentive/Disincentive adjustments for Pavement Smoothness will be made in accordance with Table 105-6. Sections less than 0.01 miles in length will not be subject to disincentives.

Incentive payments will not be made until all localized roughness areas have been corrected.

**Table 105-6  
HMA PAVEMENT SMOOTHNESS (INCHES/MILE)  
HALF-CAR ROUGHNESS INDEX**

Pavement Smoothness Category	Incentive Payment (\$/sqyd)	No Incentive or Disincentive	Disincentive Payment (\$/sqyd)	Corrective Work Required
I	When HRI ≤ 40.0 I = \$1.28	When HRI ≥ 63.0 and ≤ 72.0 I = \$0.00	When HRI > 72.0 and < 90.0 I = 5.12 – 0.07111 x HRI	When HRI > 90.0
	When HRI > 40.0 and < 63.0 I = 3.51 – 0.05565 x HRI		When HRI ≥ 90.0 I = – \$1.28	
II	When HRI ≤ 35.0 I = \$1.28	When HRI ≥ 58.0 and ≤ 67.0 I = \$0.00	When HRI > 67.0 and < 85.0 I = 4.76 – 0.07111 x HRI	When HRI > 85.0
	When HRI > 35.0 and < 58.0 I = 3.23 – 0.05565 x HRI		When HRI ≥ 85.0 I = – \$1.28	
III	When HRI ≤ 45.0 I = \$1.28	When HRI ≥ 70.0 and ≤ 80.0 I = \$0.00	When HRI > 80.0 and < 100.0 I = 5.12 – 0.064 x HRI	When HRI > 100.0
	When HRI > 45.0 and < 70.0 I = 3.584 – 0.0512 x HRI		When HRI ≥ 100 I = - \$1.28	

(c) *Corrective Work.*

The Department will analyze the SA testing for acceptance and indicate areas requiring corrective work in accordance with subsection 105.07(b). Corrective work shall be proposed in writing by the Contractor. Corrective work shall not be performed until approved in writing by the Engineer. The Contractor shall not perform any corrective work on the final layer until after the Engineer returns the results of the Initial Smoothness Acceptance testing and after the Department's Smoothness Verification testing, if performed. The Contractor shall perform corrective work in the areas indicated by the SA testing.

Corrective work on lower layers shall be at the Contractor's discretion.

The Contractor shall profile the roadway to verify the required corrective work has been completed.

If the Contractor elects to perform corrective work prior to the completion of initial SA testing, the entire 0.10 mile section, or fraction thereof, will not be eligible for incentive payment, but will be eligible for disincentive. The Engineer will not modify the limits of the 0.10 mile sections to group corrective work areas in an effort to reduce the number of sections impacted by this decision.

The Contractor may elect to perform additional corrective work to reduce or eliminate the disincentive payment for each 0.1 mile section or fraction thereof after the initial SA testing and the Department's verification testing.

The criteria for determining if a 0.1 mile section or fraction thereof requires corrective work is specified in Table 105-6. In addition to determining if a 0.1 mile section or fraction thereof requires corrective work, the profiles shall be analyzed for areas of Localized Roughness.

Localized Roughness. The profiles shall be analyzed to determine where areas of localized roughness occur. The profile shall be summarized using the continuous HRI reporting system using an averaging length of 25 feet. The FHWA's latest version of ProVal software will shall be used to generate the continuous HRI report. ProVal can be downloaded at <http://www.roadprofile.com>.

Areas of localized roughness are determined to be where the continuous HRI report exceeds the values in Table 105-9. Areas of localized roughness greater than 15.0 feet in length shall be considered deficient, and require corrective work.. Areas of localized roughness less than 25 feet in distance that contain a valve box shall be tested in accordance with subsection 105.07 (a) 2. for corrective work.

**Table 105-9  
CONTINUOUS HRI USING 25 FOOT AVERAGING FOR LOCALIZED  
ROUGHNESS CORRECTIVE WORK ON HMA PAVEMENTS**

HRI SMOOTHNESS CATEGORY	HRI In/mile
I	135.0
II	125.0
III	150.0

1. Corrective Methods. Corrective work shall consist of diamond grinding, an approved overlay, or removal and replacement.

Corrective work shall conform to of one of the following conditions:

- (1) Removal and Replacement. The pavement requiring corrective work shall be removed, full width of the lane and the full thickness of the layer in accordance with subsection 202.09.

The removal area shall begin and end with a transverse butt joint, which shall be constructed with a transverse saw cut perpendicular to centerline. Replacement material shall be placed in sufficient quantity so the finished surface conforms to grade and smoothness requirements. Sections removed and replaced shall be at least 0.20 miles in length.

- (2) Overlay. The overlay shall cover the full width of the pavement including shoulders. The area overlaid shall begin and end with a transverse butt joint, which shall be constructed with a transverse saw cut and asphalt removal. All material shall be approved hot bituminous mixtures that meet all contract requirements. The overlay shall be placed so that the finished surface conforms to grade and smoothness requirements. The overlay area shall be compacted to the specified density. The overlay thickness shall be equivalent to that of the final layer in accordance with the Contract. Sections overlaid shall be at least 0.20 miles in length.

- (3) Diamond Grinding. Grinding shall not reduce planned pavement thickness by more than 0.3 inches. Diamond grinding shall be the full width of the lane. The entire ground area of the final pavement surface shall be covered with a Tack Coat conforming to Section 407 (CSS-1h at 0.1 gallons per square yard of diluted emulsion; the emulsion shall be diluted with water at the rate of 50 percent water and 50 percent emulsion) when grinding is complete. Cores shall be taken to verify that minimum pavement thicknesses have been maintained. A minimum of one core shall be taken every 100 cumulative feet or fraction thereof per lane of diamond grinding, as directed by the Engineer. Coring shall be at the Contractor's expense.

- (d) *Final Smoothness Acceptance Testing.* After the Contractor has completed the required corrective work and any additional corrective work, the Contractor shall retest the pavement in accordance with subsection 105.07(b). If the Contractor requests to do additional corrective work to reduce disincentive after Final SA Testing, the Contractor shall perform an additional Final SA Testing for the project. A charge of \$500 will be assessed to the Contractor for each additional Final SA Testing. Time count will be charged pursuant to contract requirements during the time period required for all Final SA Testing. Delays associated with additional Final SA Testing will be considered non-excusable and non-compensable.

The Contractor shall notify the Engineer pursuant to 105.07(b) to schedule the final SA testing.

Final acceptance and incentive/disincentive adjustments for pavement smoothness will be made on a square yard basis in accordance with the following:

Incentive payments will be based on the HRI for each 0.1 mile section or fraction thereof from the Contractor's initial SA testing. Those sections which earned incentives or full payment based on the initial SA testing will not be re-evaluated for incentive after final SA testing.

The disincentive payment will be based on the HRI for each 0.1 mile section or fraction thereof from the Contractor's Initial SA testing or the Contractor's Final SA testing, whichever is less. Those sections which had disincentive levels indicated by the initial SA, will be re-evaluated for disincentive. The Contractor may eliminate all disincentives on those 0.1 mile sections; however, no incentives may be earned in these areas, regardless of the final smoothness.

- (e) *Department Smoothness Verification Testing (SV)*. The Department may elect to perform smoothness verification (SV) testing using the Department's inertial profiler, with the methods described in subsection 105.07(b). The Engineer will notify the Contractor of the Department's intention to perform SV testing. All traffic control costs associated with Department SV testing will be paid for by the Department in accordance with Section 630.

The Contractor's SA test results will be compared to the Department's SV test results. The Contractor's SA test results will be considered acceptable and will be used for incentive/disincentive payment if the following criteria are met:

- 2 The difference in HRI for a 1/10 mile section is less than 6.1 inches/mile for a minimum of 90 percent of the 1/10 mile sections for each lane.
- 3 The difference in average HRI for each lane is less than 6.1 inches/mile.
- 4 The difference in the length of each lane is less than 0.2 percent

When the Contractor's SA test results are not considered acceptable, the Department's SV test results will be used for incentive/disincentive payment and the Contractor's profiler certification will be evaluated pursuant to CP 78. The Department will have 30 days to complete this evaluation.

The Contractor will be assessed a charge of \$1,000 for SV testing when the Contractor's SA test results are not considered acceptable.

- (f) *HRI Category IV: HMA Recycling Treatments Thin Lifts and Urban Rehabilitation treatments smoothness criteria*. For HRI Category IV pavements, the following shall be used for acceptance:

An HRI for each 0.1 mile section shall be determined on the original pavement surface prior to beginning the work.

An HRI for each 0.1 mile section shall be determined on the pavement surface after the work is complete.

When a 0.1 mile section has a final HRI greater than 80.0 in/mile and the final HRI is greater than the HRI prior to performing the work, that 0.1 mile section shall be corrected by a method approved in writing by the Engineer. Corrective work shall be such that the resulting final HRI is equal to or less than the initial HRI or 80.0 in/mile, whichever is greater. All costs associated with corrective work shall be at the Contractor's expense, including but not limited to traffic control, additional hot mix asphalt, grinding and milling.

Incentive/disincentive adjustments for smoothness will not be made for Category IV. Localized Roughness determinations will not be made for HRI Category IV.

The pavement smoothness for HMA Recycling Treatments and Thin Lifts that will be overlaid with a final riding surface will not be evaluated by the Department for acceptance.

**REVISION OF SECTION 105  
DISPUTES AND CLAIMS FOR CONTRACT ADJUSTMENTS**

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

Delete subsections 105.22, 105.23 and 105.24 and replace with the following:

**105.22 Dispute Resolution.** Subsections 105.22, 105.23, and 105.24 detail the process through which the parties (CDOT and the Contractor) agree to resolve any issue that may result in a dispute. The intent of the process is to resolve issues early, efficiently, and as close to the project level as possible. Figure 105-1 in the standard special provisions outlines the process. Specified time frames may be extended by mutual agreement of the Engineer and the Contractor. In these subsections, when a time frame ends on a Saturday, Sunday or holiday, the time frame shall be extended to the next scheduled work day.

A dispute is a disagreement concerning contract price, time, interpretation of the Contract, or all three between the parties at the project level regarding or relating to the Contract. Disputes include, but are not limited to, any disagreement resulting from a delay, a change order, another written order, or an oral order from the Project Engineer, including any direction, instruction, interpretation, or determination by the Project Engineer, interpretations of the Contract provisions, plans, or specifications or the existence of alleged differing site conditions.

The term "merit" refers to the right of a party to recover on a claim or dispute, irrespective of quantum, based on the substance, elements, and grounds of that claim or dispute. The term "quantum" refers to the quantity or amount of compensation or time deserved when a claim or dispute is found to have merit.

Disputes from subcontractors, material suppliers, or any other entity not party to the Contract shall be submitted through the Contractor. Review of a pass-through dispute does not create privity of Contract between CDOT and the subcontractor.

If CDOT does not respond within the specified timelines, the Contractor may advance the dispute to the next level.

When the Project Engineer is a Consultant Project Engineer, actions, decisions, and determinations specified herein as made by the Project Engineer shall be made by the Resident Engineer.

The dispute resolution process set forth in this subsection shall be exhausted in its entirety prior to initiation of litigation or arbitration. Failure to comply with the requirements set forth in this subsection shall bar either party from any further administrative, equitable, or legal remedy. If a deadline is missed that does not prejudice either party, further relief shall be allowed.

All disputes and claims shall be submitted within 30 days of the date of the certified letter submitting the CDOT Form 96, Contractor Acceptance of Final Estimate, to the Contractor.

When a project has a landscape maintenance period, the Project Engineer will grant partial acceptance in accordance with subsection 105.21(a). This partial acceptance will be project acceptance of all the construction work performed prior to this partial acceptance. All disputes and claims related to the work in which this partial acceptance is granted shall be submitted within 30 days of the Project Engineer's partial acceptance.

Failure to provide notification of a dispute or claim within the time periods listed above releases the State of Colorado from all disputes and claims for which notice has not already been submitted in accordance with the Contract.

All disputes and claims seeking damages calculated on a Total Cost or Modified Total Cost basis will not be considered unless the party asserting such damages establishes all the legal requirements therefore, which include:

- (1) The nature of the particular losses makes it impossible or highly impractical to determine them with a reasonable degree of accuracy.
- (2) The Contractor's bid or estimate was realistic.
- (3) The Contractor's actual costs were reasonable.
- (4) The Contractor was not responsible for the cost overrun.

Should the Contractor's dispute use the Total Cost approach for calculating damages, damages will be determined by subtracting the contract amount from the total cost of performance. Should the Contractor's dispute use the Modified Total Cost approach for calculating damages, if the Contractor's bid was unrealistic in part, and/or some of its costs were unreasonable and/or some of its damages were caused by its own errors, those costs and damages will be deducted from the total cost of performance to arrive at the Modified Total Cost. The Total Cost or Modified Total Cost

basis for calculating damages shall not be available for any disputes or claims seeking damages where the Contractor could have kept separate cost records at the time the dispute arose as described in subsection 105.22(a).

- (a) *Document Retention.* The Contractor shall keep full and complete records of the costs and additional time incurred for each dispute for a period of at least three years after the date of final payment or until dispute is resolved, whichever is more. The Contractor, subcontractors, and lower tier subcontractors shall provide adequate facilities, acceptable to the Engineer, for an audit during normal business hours. The Contractor shall permit the Engineer or Department auditor to examine and copy those records and all other records required by the Engineer to determine the facts or contentions involved in the dispute. The Contractor shall identify and segregate any documents or information that the Contractor considers particularly sensitive, such as confidential or proprietary information.

Throughout the dispute, the Contractor and the Project Engineer shall keep complete daily records of extra costs and time incurred, in accordance with the following procedures:

1. Daily records shall identify each operation affected, the specific locations where work is affected, and the potential effect to the project's schedule. Such records shall also reflect all labor, material, and equipment applicable to the affected operations.
2. On the first work day of each week following the date of the written notice of dispute, the Contractor shall provide the Project Engineer with the daily records for the preceding week. If the Contractor's records indicate costs greater than those kept by the Department, the Project Engineer will meet with the Contractor and present his records to the Contractor at the meeting. The Contractor shall notify the Engineer in writing within three work days of any inaccuracies noted in, or disagreements with, the Department's records.

- (b) *Initial Dispute Resolution Process.* To initiate the dispute resolution process the Contractor shall provide a written notice of dispute to the Project Engineer upon the failure of the Parties to resolve the issue through negotiation. Disputes will not be considered unless the Contractor has first complied with specified issue resolution processes such as those specified in subsections 104.02, 106.05, 108.08(a), and 108.08(d).

The Contractor shall supplement the written notice of dispute within 15 days with a written Request for Equitable Adjustment (REA) providing the following:

- (2) The date of the dispute
- (3) The nature of the circumstances which caused the dispute
- (4) A statement explaining in detail the specific provisions of the Contract and any basis, legal or factual, which support the dispute.□
- (5) If any, the estimated quantum, calculated in accordance with methods set forth in subsection 105.24(b)12., of the dispute with supporting documentation
- (6) An analysis of the progress schedule showing the schedule change or disruption if the Contractor is asserting a schedule change or disruption.

The Contractor shall submit as much information on the quantum and impacts to the Contract time as is reasonably available with the REA and then supplement the REA as additional information becomes available. If the dispute escalates to the DRB process the DRB shall not hear any issue or consider any information that was not contained in the Request for Equitable Adjustment and fully submitted to the Project Engineer and Resident Engineer during the 105.22 process.

- (c) *Project Engineer Review.* Within 15 days after receipt of the REA, the Project Engineer will meet with the Contractor to discuss the merits of the dispute. Within seven days after this meeting, the Project Engineer will issue a written decision on the merits of the dispute.

The Project Engineer will either deny the merits of the dispute or notify the Contractor that the dispute has merit. This determination will include a summary of the relevant facts, Contract provisions supporting the determination, and an evaluation of all scheduling issues that may be involved.

If the dispute is determined to have merit, the Contractor and the Project Engineer will determine the adjustment in payment, schedule, or both within 30 days. When a satisfactory adjustment is determined, it shall be implemented in accordance with subsections 106.05, 108.08, 109.04, 109.05 or 109.10 and the dispute is resolved.

If the Contractor accepts the Project Engineer's denial of the merits of the dispute, the dispute is resolved and no further action will be taken. If the Contractor does not respond in seven days, it will be assumed he has accepted the denial. If the Contractor rejects the Project Engineer's denial of the merits of the dispute or a satisfactory

adjustment of payment or schedule cannot be agreed upon within 30 days, the Contractor may further pursue resolution of the dispute by providing written notice to the Resident Engineer within seven days, according to subsection 105.22(d).

- (d) *Resident Engineer Review.* Within seven days after receipt of the Contractor's written notice to the Resident Engineer of unsatisfactory resolution of the dispute, the Project Engineer and Resident Engineer will meet with the Contractor to discuss the dispute. Meetings shall continue weekly for a period of up to 30 days and shall include a Contractor's representative with decision authority above the project level.

If these meetings result in resolution of the dispute, the resolution will be implemented in accordance with subsections 108.08, 109.04, 109.05, or 109.10 and the dispute is resolved.

If these meetings do not result in a resolution or the participants mutually agree that they have reached an impasse, the dispute shall be presented to the Dispute Review Board in accordance with subsection 105.23.

**105.23 Dispute Review Board.** A Dispute Review Board (DRB) is an independent third party that will provide specialized expertise in technical areas and administration of construction contracts. The DRB will assist in and facilitate the timely and equitable resolution of disputes between CDOT and the Contractor in an effort to avoid animosity and construction delays, and to resolve disputes as close to the project level as possible. The DRB shall be established and operate as provided herein and shall serve as an independent and impartial board.

There are two types of DRBs: the "On Demand DRB" and the "Standing DRB". The DRB shall be an "On Demand DRB" unless a "Standing DRB" is specified in the Contract. An On Demand DRB shall be established only when the Project Engineer initiates a DRB review in accordance with subsection 105.23(a). A Standing DRB, when specified in the Contract, shall be established at the beginning of the project.

- (a) *Initiation of Dispute Review Board Review.* When a dispute has not been resolved in accordance with subsection 105.22, the Project Engineer will initiate the DRB review process within 5 days after the period described in subsection 105.22(d).

- (b) *Formation of Dispute Review Board.* DRBs will be established in accordance with the following procedures:

1. CDOT, in conjunction with the Colorado Contractors Association, will maintain a statewide list of suggested DRB candidates experienced in construction processes and the interpretation of contract documents and the resolution of construction disputes. The Board members shall be experienced in highway and transportation projects. After December 31, 2013 only individuals who have completed training (currently titled DRB Administration & Practice Training) through the Dispute Resolution Board Foundation or otherwise approved by CDOT can be a DRB member. When a DRB is formed, the parties shall execute the agreement set forth in subsection 105.23(l).
2. If the dispute has a value of \$250,000 or less, the On Demand DRB shall have one member. The Contractor and CDOT shall select the DRB member and execute the agreement within 30 days of initiating the DRB process. If the parties do not agree on the DRB member, each shall select five candidates. Each party shall numerically rank their list using a scale of one to five with one being their first choice and five being their last choice. If common candidates are listed, but the parties cannot agree, that common candidate with the lowest combined numerical ranking shall be selected. If there is no common candidate, the lists shall be combined and each party shall eliminate three candidates from the list. Each party shall then numerically rank the remaining candidates, with No. 1 being the first choice. The candidate with the lowest combined numerical ranking shall be the DRB member. The CDOT Project Engineer will be responsible for having all parties execute the agreement.
3. If the dispute has a value over \$250,000, the On Demand DRB shall have three members. The Contractor and CDOT shall each select a member and those two members shall select a third. Once the third member is approved the three members will nominate one of them to be the Chair and execute the agreement within 45 days of initiating the DRB process.
4. The Standing DRB shall always have three members. The Contractor and CDOT shall each select a member and those two members shall select a third member. Once the third member is approved the three members will nominate one of them to be the Chair.. The Contractor and CDOT shall submit their proposed Standing DRB members within 5 days of execution of the Contract. The third member shall be selected within 15 days of execution of the Contract. Prior to construction starting the parties shall execute the Three Party Agreement. The CDOT Project Engineer will be responsible for having all parties execute the agreement. The Project Engineer will invite the Standing DRB members to the Preconstruction and any Partnering conferences.

5. DRB members shall not have been involved in the administration of the project under consideration. DRB candidates shall disclose to the parties the following relationships:
  - (1) Prior employment with either party
  - (2) Prior or current financial interests or ties to either party
  - (3) Prior or current professional relationships with either party
  - (4) Anything else that might bring into question the impartiality or independence of the DRB member
  - (5) Prior to agreeing to serve on a DRB, members shall notify all parties of any other CDOT DRB's they are serving or that they will be participating in another DRB.

If either party objects to the selection of a potential DRB member based on the disclosures of the potential member, that potential member shall not be placed on the Board.

6. There shall be no ex parte communications with the DRB at any time.
7. The service of a Board member may be terminated only by written agreement of both parties.
8. If a Board member resigns, is unable to serve, or is terminated, a new Board member shall be selected within four weeks in the same manner as the Board member who was removed was originally selected.

(c) *Additional Responsibilities of the Standing Disputes Review Board*

1. General. Within 120 days after the establishment of the Board, the Board shall meet at a mutually agreeable location to:
  - (1) Obtain copies of the Contract documents and Contractor's schedules for each of the Board members.
  - (2) Agree on the location of future meetings, which shall be reasonably close to the project site.
  - (3) Establish an address and telephone number for each Board member for the purposes of Board business.
2. Regular meetings. Regular meetings of the Board shall be held approximately every 120 to 180 days throughout the life of the Contract, except that this schedule may be modified to suit developments on the job as the work progresses. Regular meetings shall be attended by representatives of the Contractor and the Department.
3. The Board shall establish an agenda for each meeting which will cover all items that the Board considers necessary to keep it abreast of the project such as construction status, schedule, potential problems and solutions, status of past claims and disputes, and potential claims and disputes. Copies of each agenda shall be submitted to the Contractor and the Department at least seven days before the meeting date. Oral or written presentations or both shall be made by the Contractor and the Department as necessary to give the Board all the data the Board requires to perform its functions. The Board will prepare minutes of each meeting, circulate them to all participants for comments and approval, and issue revised minutes before the next meeting. As a part of each regular meeting, a field inspection trip of all active segments of the work at the project site may be made by the Board, the Contractor, and the Department.
4. Advisory Opinions
  - (1) Advisory opinions are typically used soon after the parties find they have a potential dispute and have conducted preliminary negotiations but before expenditure of additional resources and hardening their positions. Advisory opinions provide quick insight into the DRB's likely assessment of the dispute. This process is quick and may be entirely oral and does not prejudice the opportunity for a DRB hearing.
  - (2) Both parties must agree to seek an advisory opinion and so notify the chairperson. The procedure for requesting and issuing advisory opinions should be discussed with the DRB at the first meeting with the parties.
  - (3) The DRB may or may not issue a written opinion, but if a written advisory opinion is issued, it must be at the specific request of both parties.
  - (4) The opinion is only advisory and does not require an acceptance or rejection by either party. If the dispute is not resolved and a hearing is held, the oral presentations and advisory opinion are completely disregarded and the DRB hearing procedure is followed.
  - (5) Advisory opinions should be limited to merit issues only.

- (d) *Arranging a Dispute Review Board Hearing.* When the Project Engineer initiates the DRB review process, the Project Engineer will:
1. Contact the Contractor and the DRB to coordinate an acceptable hearing date and time. The hearing shall be held at the Resident Engineer's office unless an alternative location is agreed to by both parties. Unless otherwise agreed to by both parties the DRB hearing will be held within 30 days after the DRB agreement is signed by the CDOT Chief Engineer.
  2. Ensure DRB members have copies of all documents previously prepared by the Contractor and CDOT pertaining to the dispute, the DRB request, the Contract documents, and the special provisions at least two weeks before the hearing.
- (e) *Pre-Hearing Submittal:* At least fifteen days prior to the hearing, CDOT and the Contractor shall submit by e-mail to the DRB Chairperson their parties pre-hearing position paper. The DRB Chairperson shall simultaneously distribute by e-mail the pre-hearing position papers to all parties and other DRB members, if any. At the same time, each party shall submit a copy of all its supporting documents to be used at the hearing to all DRB Members and the other party unless the parties have agreed to a common set of documents as discussed in #2 below. In this case, CDOT shall submit the common set of documents to the Board and the Contractor. The pre-hearing position paper shall contain the following:
1. A joint statement of the dispute, and the scope of the desired decision. The joint statement shall summarize in a few sentences the nature of the dispute. If the parties are unable to agree on the wording of the joint statement, each party's position paper shall contain both statements, and identify the party authoring each statement. The parties shall agree upon a joint statement at least 20 days prior to the hearing and submit it to the DRB or each party's independent statement shall be submitted to the DRB and the other party at least 20 days prior to the hearing.
  2. The basis and justification for the party's position, with reference to specific contract language and other supporting documents for each element of the dispute. To minimize duplication and repetitiveness, the parties may identify a common set of documents that will be referred to by both parties and submit them in a separate package to the DRB. The engineer will provide a hard copy of the project plans and Project and Standard Special Provisions, if necessary, to the DRB. Other standard CDOT documents such as Standard Specifications and M&S Standards are available on the CDOT website.
    - (1) If any party contends that they are not necessary to the proceedings, the DRB shall determine that issue in the first instance. Should the DRB determine that a dispute does not involve a party, that party shall be relieved from participating in the DRB hearing and paying any further DRB costs.
    - (2) When the scope of the hearing includes quantum, the requesting party's position paper shall include full cost details, calculated in accordance with methods set forth in subsection 105.24(b)12. The Scope of the hearing will not include quantum if CDOT has ordered an audit and that audit has not been completed.
  3. A list of proposed attendees at the hearing. In the event of any disagreement, the DRB shall make the final determination as to who attends the hearing.
  4. A list of any intended experts including their qualifications and a summary of what their presentation will include and an estimate of the length of the presentation.

The number of copies, distribution requirements, and time for submittal shall be established by the DRB and communicated to the parties by the Chairperson.

A pre-hearing phone conference with all DRB members and the parties shall be conducted as soon as a hearing date is established but no later than 10 days prior to the hearing. The DRB Chairperson shall explain the specifics of how the hearing will be conducted including how the two parties will present their information to the DRB (Ex: Each party makes a full presentation of their position or presentations will be made on a "point by point" basis with each party making a presentation only on an individual dispute issue before moving onto to the next issue). If the pre-hearing position papers and documents have been received by the Board prior to the conference call, the DRB Chairperson shall at this conference discuss the estimated hours of review and research activities for this dispute (such as time spent evaluating and preparing recommendations on specific issues presented to the DRB). If the pre-hearing position papers and documents have not been received by the Board prior to the conference call, another conference call will be scheduled during the initial conference call to discuss the estimated hours of review. Compensation for time agreed to in advance by the parties will be made at an agreed rate of \$125 per hour in accordance with subsection 105.23 (k) 2. Compensation for the phone

conference time will also be made at an agreed to rate of \$125 per hour in accordance with subsection 105.23 (k) 2. The Engineer shall coordinate the phone conference.

- (f) *Dispute Review Board Hearing.* The DRB shall preside over a hearing. The chairperson shall control the hearing and conduct it as follows:
1. An employee of CDOT presents a brief description of the project and the status of construction on the project.
  2. The party that requested the DRB presents the dispute in detail as supported by previously submitted information and documentation in the pre-hearing position paper. No new information or disputes will be heard or addressed by the DRB.
  3. The other party presents its position in detail as supported by previously submitted information and documentation in the pre-hearing position paper. No new information or disputes will be heard or addressed by the DRB.
  4. Employees of each party are responsible for leading presentations at the DRB hearing.
  5. Attorneys shall not participate in the hearing unless the DRB specifically addresses an issue to them or unless agreed to by both parties. Should the parties disagree on attorney participation, the DRB shall decide on what, if any, participation will be permitted. Attorneys representing the parties are permitted to attend the hearing, provided their presence has been noted in the pre-hearing submittal.
  6. Either party may use experts. A party intending to offer an outside expert's analysis at the hearing shall disclose such intention in the pre-hearing position paper. The expert's name and a general statement of the area of the dispute that will be covered by his presentation shall be included in the disclosure. The other party may present an outside expert to address or respond to those issues that may be raised by the disclosing party's outside expert.
  7. If both parties approve, the DRB may retain an outside expert. The DRB chairperson shall include the cost of the outside expert in the DRB's regular invoice. CDOT and the Contractor shall equally bear the cost of the services of the outside expert employed by the DRB.
  8. Upon completion of their presentations and rebuttals, both parties and the DRB will be provided the opportunity to exchange questions and answers. All questions shall be directed to the chairperson first. Attendees may respond only when board members request a response.
  9. The DRB shall hear only those disputes identified in the written request for the DRB and the information contained in the pre-hearing submittals. The board shall not hear or address other disputes. If either party attempts to discuss a dispute other than those to be heard by the DRB or attempts to submit new information, the chairperson shall inform such party that the board shall not hear the issue and shall not accept any additional information. The DRB shall not hear any issue or consider any information that was not contained in the Request for Equitable Adjustment and fully submitted to the Project Engineer and Resident Engineer during the 105.22 process.
  10. If either party fails to timely deliver a position paper, the DRB may reschedule the hearing one time. On the final date and time established for the hearing, the DRB shall proceed with the hearing using the information that has been submitted.
  11. If a party fails to appear at the hearing, the DRB shall proceed as if all parties were in attendance.
- (g) *Dispute Review Board Recommendation.* The DRB shall issue a Recommendation in accordance with the following procedures:
1. The DRB shall not make a recommendation on the dispute at the meeting. Prior to the closure of the hearing, the DRB members and the Contractor and CDOT together will discuss the time needed for analysis and review of the dispute and the issuance of the DRB's recommendation. The maximum time shall be 30 days unless otherwise agreed to by both parties. At a minimum, the recommendation shall contain all the elements listed in Rule 35, Form of Award, of the Arbitration Regular Track Provisions listed at the end of subsection 105.24.
  2. After the meeting has been closed, the DRB shall prepare a written Recommendation signed by each member of the DRB. In the case of a three member DRB, where one member dissents that member shall prepare a written dissent and sign it.
  3. The chairperson shall transmit the signed Recommendation and any supporting documents to both parties.

- (h) *Clarification and Reconsideration of Recommendation.* Either party may request clarification or reconsideration of a decision within ten days following receipt of the Recommendation. Within ten days after receiving the request, the DRB shall provide written clarification or reconsideration to both parties unless otherwise agreed to by both parties.

Requests for clarification or reconsideration shall be submitted in writing simultaneously to the DRB and to the other party.

The Board shall not accept requests for reconsideration that amount to a renewal of a prior argument or additional argument based on facts available at the time of the hearing. The Board shall not consider any documents or arguments which have not been made a part of the pre-hearing submittal other than clarification and data supporting previously submitted documentation.

Only one request for clarification or reconsideration per dispute from each party will be allowed.

- (i) *Acceptance or Rejection of Recommendation.* CDOT and the Contractor shall submit their written acceptance or rejection of the Recommendation, in whole or in part, concurrently to the other party and to the DRB within 14 days after receipt of the Recommendation or following receipt of responses to requests for clarification or reconsideration.

If the parties accept the Recommendation or a discreet part thereof, it will be implemented in accordance with subsections 108.08, 109.04, 109.05, or 109.10 and the dispute is resolved.

If either party rejects the Recommendation in whole or in part, it shall give written explanation to the other party within 14 days after receiving the Recommendation. When the Recommendation is rejected in whole or in part by either party, the other party may either abandon the dispute or pursue a formal claim in accordance with subsection 105.24.

If either party fails to submit its written acceptance or rejection of the Dispute Board's recommendation, according to these specifications, such failure shall constitute that party's acceptance of the Board's recommendation.

- (j) *Admissibility of Recommendation.* Recommendations of a DRB issued in accordance with subsection 105.23 are admissible in subsequent proceedings but shall be prefaced with the following paragraph:

This Recommendation may be taken under consideration with the understanding that:

1. The DRB Recommendation was a proceeding based on presentations by the parties.
2. No fact or expert witnesses presented sworn testimony or were subject to cross-examination.
3. The parties to the DRB were not provided with the right to any discovery, such as production of documents or depositions.
4. There is no record of the DRB hearing other than the Recommendation.

- (k) *Cost and Payments.*

1. General Administrative Costs. The Contractor and the Department shall equally share the entire cost of the following to support the Board's operation:

- (1) Copies of Contract and other relevant documentation
- (2) Meeting space and facilities
- (3) Secretarial Services
- (4) Telephone
- (5) Mail
- (6) Reproduction
- (7) Filing

2. The Department and the Contractor shall bear the costs and expenses of the DRB equally. Each DRB board member shall be compensated at an agreed rate of \$1,200 per day if time spent on-site per meeting is greater than four hours. Each DRB board member shall be compensated at an agreed rate of \$800 per day if time spent on-site per meeting is less than or equal to four hours. The time spent traveling to and from each meeting shall be reimbursed at \$50 per hour if the travel distance is more than 50 miles. The agreed daily and travel time rates shall be considered full compensation for on-site time, travel expenses, transportation, lodging, time for travel of more than 50 miles and incidentals for each day, or portion thereof that the DRB member is at an authorized DRB meeting. No additional compensation will be made for time spent by DRB members in review and research activities outside the official DRB meetings unless that time, (such as time spent evaluating and preparing recommendations on specific issues presented to the DRB), has been specifically

agreed to in advance by the Department and Contractor. Time away from the project that has been specifically agreed to in advance by the parties will be compensated at an agreed rate of \$125 per hour. The agreed amount of \$125 per hour shall include all incidentals. Members serving on more than one DRB, regardless of the number of meetings per day, shall not be paid more than the all-inclusive rate per day or rate per hour for an individual project.

3. Payments to Board Members and General Administrative Costs. Each Board member shall submit an invoice to the Contractor for fees and applicable expenses incurred each month following a month in which the Board members participated in Board functions. Such invoices shall be in the format established by the Contractor and the Department. The Contractor shall submit to the Department copies of all invoices. No markups by the Contractor will be allowed on any DRB costs. The Department will split the cost by authorizing 50 percent payment on the next progress payment. The Contractor shall make all payments in full to Board members within seven calendar days after receiving payment from the Department for this work.

(l) *Dispute Review Board Three Party Agreement.*

DISPUTE REVIEW BOARD

THREE PARTY AGREEMENT

COLORADO PROJECT NO. \_\_\_\_\_

THIS THREE PARTY AGREEMENT, made as of the date signed by the Chief Engineer below, by and between: the Colorado Department of Transportation, hereinafter called the "Department"; and

\_\_\_\_\_  
hereinafter called the "Contractor"; and

\_\_\_\_\_  
\_\_\_\_\_  
and

\_\_\_\_\_  
hereinafter called the "Dispute Review Board" or "Board".

WHEREAS, the Department is now engaged in the construction of the \_\_\_\_\_  
**[Project Name]**

and

WHEREAS, the Contract provides for the establishment of a Board in accordance with subsections 105.22 and 105.23 of the specifications.

NOW, THEREFORE, it is hereby agreed:

ARTICLE I  
DESCRIPTION OF WORK AND SERVICES

The Department and the Contractor shall form a Board in accordance with this agreement and the provisions of subsection 105.23.

ARTICLE II  
COMMITMENT ON PART OF THE PARTIES HERETO

The parties hereto shall faithfully fulfill the requirements of subsection 105.23 and the requirements of this agreement.

ARTICLE III  
COMPENSATION

The parties shall share equally in the cost of the Board, including general administrative costs (meeting space and facilities, secretarial services, telephone, mail, reproduction, filing) and the member's individual fees. Reimbursement of the Contractor's share of the Board expenses for any reason is prohibited.

The Contractor shall make all payments in full to Board members. The Contractor will submit to the Department an itemized statement for all such payments, and the Department will split the cost by including 50 percent payment on the

next progress payment. The Contractor and the Department will agree to accept invoiced costs prior to payment by the Contractor.

Board members shall keep all fee records pertaining to this agreement available for inspection by representatives of the Department and the Contractor for a period of three years after the termination of the Board members' services.

Payment to each Board member shall be at the fee rates established in subsection 105.23 and agreed to by each Board member, the Contractor, and the Department. In addition, reimbursement will be made for applicable expenses.

Each Board member shall submit an invoice to the Contractor for fees incurred each month following a month in which the members participated in Board functions. Such invoices shall be in the format established by the Contractor and the Department.

Payments shall be made to each Board member within 60 days after the Contractor and Department have received all the applicable billing data and verified the data submitted by that member. The Contractor shall make payment to the Board member within seven calendar days of receipt of payment from the Department.

ARTICLE IV  
ASSIGNMENT

Board members shall not assign any of the work to be performed by them under this agreement. Board members shall disclose any conflicts of interest including but not limited to any dealings with the either party in the previous five years other than serving as a Board member under other contracts.

ARTICLE V  
COMMENCEMENT AND TERMINATION OF SERVICES

The commencement of the services of the Board shall be in accordance with subsection 105.23 of the specifications and shall continue until all assigned disputes under the Contract which may require the Board's services have been heard and a Recommendation has been issued by the Board as specified in subsection 105.23. If a Board member is unable to fulfill his responsibilities for reasons specified in subsection 105.23(b)7, he shall be replaced as provided therein, and the Board shall fulfill its responsibilities as though there had been no change.

ARTICLE VI  
LEGAL RELATIONS

The parties hereto mutually agree that each Board member in performance of his duties on the Board is acting as an independent contractor and not as an employee of either the Department or the Contractor. Board members will guard their independence and avoid any communication about the substance of the dispute without both parties being present.

The Board members are absolved of any personal liability arising from the Recommendations of the Board. The parties agree that members of the dispute review board panel are acting as mediators for purposes of C.R.S. § 13-22-302(4) and, as such, the liability of any dispute review board member shall be limited to willful and wanton misconduct as provided for in C.R.S. § 13-22-305(6)

IN WITNESS HEREOF, the parties hereto have caused this agreement to be executed the day and year first written above.

BOARD MEMBER: \_\_\_\_\_.

BY: \_\_\_\_\_.

BOARD MEMBER: \_\_\_\_\_.

BY: \_\_\_\_\_.

BOARD MEMBER: \_\_\_\_\_.

BY: \_\_\_\_\_.

CONTRACTOR: \_\_\_\_\_.

BY: \_\_\_\_\_.

TITLE:

COLORADO DEPARTMENT OF TRANSPORTATION

BY: \_\_\_\_\_ Date: \_\_\_\_\_.

TITLE: CHIEF ENGINEER

**105.24 Claims for Unresolved Disputes.** The Contractor may file a claim only if the disputes resolution process described in subsections 105.22 and 105.23 has been exhausted without resolution of the dispute. Other methods of nonbinding dispute resolution, exclusive of arbitration and litigation, can be used if agreed to by both parties.

This subsection applies to any unresolved dispute or set of disputes between CDOT and the Contractor with an aggregate value of more than \$15,000. Unresolved disputes with an aggregate value of more than \$15,000 from subcontractors, materials suppliers or any other entity not a party to the Contract shall be submitted through the Contractor in accordance with this subsection as a pass-through claim. Review of a pass-through claim does not create privity of Contract between CDOT and any other entity.

Subsections 105.22, 105.23 and 105.24 provide both contractual alternative dispute resolution processes and constitute remedy-granting provisions pursuant to Colorado Revised Statutes which must be exhausted in their entirety.

Merit-binding arbitration or litigation proceedings must commence within 180-calendar days of the Chief Engineer's decision, absent written agreement otherwise by both parties.

The venue for all unresolved disputes with an aggregate value \$15,000 or less shall be the County Court for the City and County of Denver.

Non-binding Forms of alternative dispute resolution such as Mediation are available upon mutual agreement of the parties for all claims submitted in accordance with this subsection.

The cost of the non-binding ADR process shall be shared equally by both parties with each party bearing its own preparation costs. The type of nonbinding ADR process shall be agreed upon by the parties and shall be conducted within the State of Colorado at a mutually acceptable location. Participation in a nonbinding ADR process does not in any way waive the requirement that merit-binding arbitration or litigation proceedings must commence within 180-calendar days of the Chief Engineer's decision, absent written agreement otherwise by both parties.

(a) *Notice of Intent to File a Claim.*

Within 30 days after rejection of the Dispute Resolution Board's Recommendation issued in accordance with subsection 105.23, the Contractor shall provide the Region Transportation Director with a written notice of intent to file a claim. The Contractor shall also send a copy of this notice to the Resident Engineer. For the purpose of this subsection Region Transportation Director shall mean the Region Transportation Director or the Region Transportation Director's designated representative. CDOT will acknowledge in writing receipt of Notice of Intent within 7 days.

(b) *Claim Package Submission.* Within 60 days after submitting the notice of intent to file a claim, the Contractor shall submit five copies of a complete claim package representing the final position the Contractor wishes to have considered. All claims shall be in writing and in sufficient detail to enable the RTD to ascertain the basis and amount of claim. The claim package shall include all documents supporting the claim, regardless of whether such documents were provided previously to CDOT.

If requested by the Contractor the 60 day period may be extended by the RTD in writing prior to final acceptance. As a minimum, the following information shall accompany each claim.

1. A claim certification containing the following language, as appropriate:

A. For a direct claim by the Contractor:

<b>CONTRACTOR'S CLAIM CERTIFICATION</b>
Under penalty of law for perjury or falsification, the undersigned, _____ (name) _____, (title) _____, of _____ (company) _____, hereby certifies that the claim of \$ _____ for extra compensation and ____ Days additional time, made herein for work on this contract is true to the best of my knowledge and belief and supported under the Contract between the parties.
This claim package contains all available documents that support the claims made herein and I understand that no additional information, other than for clarification and data supporting previously submitted documentation, may be presented by me.
Dated _____ /s/ _____
Subscribed and sworn before me this ____ day of _____.
_____
NOTARY PUBLIC
My Commission Expires: _____

B. For a pass-through claim:

<b>PASS-THROUGH CLAIM CERTIFICATION</b>
Under penalty of law for perjury or falsification, the undersigned, _____ (name) _____, (title) _____, of _____ (company) _____, hereby certifies that the claim of \$ _____ for extra compensation and ____ Days additional time, made herein for work on this Project is true to the best of my knowledge and belief and supported under the contract between the parties.
This claim package contains all available documents that support the claims made herein and I understand that no additional information, other than for clarification and data supporting previously submitted documentation, may be presented by me.
Dated _____ /s/ _____
Subscribed and sworn before me this ____ day of _____.
_____
NOTARY PUBLIC
My Commission Expires: _____
Dated _____ /s/ _____
The Contractor certifies that the claim being passed through to CDOT is passed through in good faith and is accurate and complete to the best of my knowledge and belief.
Dated _____ /s/ _____
Subscribed and sworn before me this ____ day of _____.
_____
NOTARY PUBLIC
My Commission Expires: _____

2. A detailed factual statement of the claim for additional compensation, time, or both, providing all necessary dates, locations, and items of work affected by the claim. The Contractor's detailed factual statement shall expressly describe the basis of the claim and factual evidence supporting the claim. This requirement is not satisfied by simply incorporating into the claim package other documents that describe the basis of the claim and supporting factual evidence.
3. The date on which facts were discovered which gave rise to the claim.
4. The name, title, and activity of all known CDOT, Consultant, and other individuals who may be knowledgeable about facts giving rise to such claim.
5. The name, title, and activity of all known Contractor, subcontractor, supplier and other individuals who may be knowledgeable about facts giving rise to such claim.

6. The specific provisions of the Contract, which support the claim and a statement of the reasons why such provisions support the claim.
7. If the claim relates to a decision of the Project Engineer, which the Contract leaves to the Project Engineer's discretion, the Contractor shall set out in detail all facts supporting its position relating to the decision of the Project Engineer.
8. The identification of any documents and the substance of all oral communications that support the claim.
9. Copies of all known documents that support the claim.
10. The Dispute Review Board Recommendation.
11. If an extension of contract time is sought, the documents required by subsection 108.08(d).
12. If additional compensation is sought, the exact amount sought and a breakdown of that amount into the following categories:
  - A. These categories represent the only costs that are recoverable by the Contractor. All other costs or categories of costs are not recoverable:
    - (1) Actual wages and benefits, including FICA, paid for additional labor
    - (2) Costs for additional bond, insurance and tax
    - (3) Increased costs for materials
    - (4) Equipment costs calculated in accordance with subsection 109.04(c) for Contractor owned equipment and based on certified invoice costs for rented equipment
    - (5) Costs of extended job site overhead
    - (6) Salaried employees assigned to the project
    - (7) Claims from subcontractors and suppliers at any level (the same level of detail as specified herein is required for all such claims)
    - (8) An additional 16 percent will be added to the total of items (1) through (7) as compensation for items for which no specific allowance is provided, including profit and home office overhead.
    - (9) Interest shall be paid in accordance with CRS 5-12-102 beginning from the date of the Notice of Intent to File Claim
  - B. In adjustment for the costs as allowed above, the Department will have no liability for the following items of damages or expense:
    - (1) Profit in excess of that provided in 12.A.(8) above
    - (2) Loss of Profit
    - (3) Additional cost of labor inefficiencies in excess of that provided in A. above
    - (4) Home office overhead in excess of that provided in A. above
    - (5) Consequential damages, including but not limited to loss of bonding capacity, loss of bidding opportunities, and insolvency
    - (6) Indirect costs or expenses of any nature in excess of that provided in A. above
    - (7) Attorney's fees, claim preparation fees, and expert fees
- (c) *Audit.* An audit may be performed by the Department for any dispute or claim, and is mandatory for all disputes and claims with amounts greater than \$250,000. All audits will be complete within 60 days of receipt of the complete claim package, provided the Contractor allows the auditors reasonable and timely access to the Contractor's books and records. For all claims with amounts greater than \$250,000 the Contractor shall submit a copy of certified claim package directly to the CDOT Audit Unit at the following address:

Division of Audit  
4201 E. Arkansas Ave  
Denver, Co. 80222

- (d) *Region Transportation Director Decision.* When the Contractor properly files a claim, the RTD will review the claim and render a written decision to the Contractor to either affirm or deny the claim, in whole or in part, in accordance with the following procedure.

The RTD may consolidate all related claims on a project and issue one decision, provided that consolidation does not extend the time period within which the RTD is to render a decision. Consolidation of unrelated claims will not be made.

The RTD will render a written decision to the Contractor within 60 days after the receipt of the claim package or receipt of the audit whichever is later. In rendering the decision, the RTD: (1) will review the information in the Contractor's claim; (2) will conduct a hearing if requested by either party; and (3) may consider any other information available in rendering a decision.

The RTD will assemble and maintain a claim record comprised of all information physically submitted by the Contractor in support of the claim and all other discoverable information considered by the RTD in reaching a decision. Once the RTD assembles the claim record, the submission and consideration of additional information, other than for clarification and data supporting previously submitted documentation, at any subsequent level of review by anyone, will not be permitted.

The RTD will provide a copy of the claim record and the written decision to the Contractor describing the information considered by the RTD in reaching a decision and the basis for that decision. If the RTD fails to render a written decision within the 60 day period, or within any extended time period as agreed to by both parties, the Contractor shall either: (1) accept this as a denial of the claim, or (2) appeal the claim to the Chief Engineer, as described in this subsection.

If the Contractor accepts the RTD decision, the provisions of the decision shall be implemented in accordance with subsections 108.08, 109.04, 109.05, or 109.10 and the claim is resolved.

If the Contractor disagrees with the RTD decision, the Contractor shall either: (1) accept the RTD decision as final, or (2) file a written appeal to the Chief Engineer within 30 days from the receipt of the RTD decision. The Contractor hereby agrees that if a written appeal is not properly filed, the RTD decision is final.

- (e) *Chief Engineer Decision.* When a claim is appealed, the RTD will provide the claim record to the Chief Engineer. Within 15 days of the appeal either party may submit a written request for a hearing with the Chief Engineer or duly authorized Headquarters delegates. The Chief Engineer or a duly authorized Headquarters delegate will review the claim and render a decision to affirm, overrule, or modify the RTD decision in accordance with the following.

The Contractor's written appeal to the Chief Engineer will be made a part of the claim record.

The Chief Engineer will render a written decision within 60 days after receiving the written appeal. The Chief Engineer will not consider any information that was not previously made a part of the claim record, other than clarification and data supporting previously submitted documentation.

The Contractor shall have 30 days to accept or reject the Chief Engineer's decision. The Contractor shall notify the Chief Engineer of its acceptance or rejection in writing.

If the Contractor accepts the Chief Engineer's decision, the provisions of the decision will be implemented in accordance with subsections 108.08, 109.04, 109.05, or 109.10 and the claim is resolved.

If the Contractor disagrees with the Chief Engineer's decision, the Contractor shall either (1) pursue an alternative dispute resolution process in accordance with this specification or (2) initiate litigation or merit binding arbitration in accordance with subsection 105.24(f).

If the Chief Engineer does not issue a decision as required, the Contractor may immediately initiate either litigation or merit binding arbitration in accordance with subsection 105.24(f).

For the convenience of the parties to the Contract it is mutually agreed by the parties that any merit binding arbitration or De Novo litigation shall be brought within 180-calendar days from the date of the Chief Engineer's decision. The parties understand and agree that the Contractor's failure to bring suit within the time period provided, shall be a complete bar to any such claims or causes of action.

- (f) *De Novo Litigation or Merit Binding Arbitration.* If the Contractor disagrees with the Chief Engineer's decision, the Contractor may initiate de novo litigation or merit binding arbitration to finally resolve the claim that the Contractor submitted to CDOT, depending on which option was selected by the Contractor on Form 1378 which shall be submitted at the preconstruction conference. Such litigation or arbitration shall be strictly limited to those claims that were previously submitted and decided in the contractual dispute and claims processes outlined herein. This does not preclude the joining in one litigation or arbitration of multiple claims from the same project provided that each claim has gone through the dispute and claim process specified in subsections 105.22 through 105.24. The parties may agree, in writing, at any time, to pursue some other form of alternative dispute resolution.

Any offer made by the Contractor or the Department at any stage of the claims process, as set forth in this subsection, shall be deemed an offer of settlement pursuant to Colorado Rule of Evidence 408 and therefore inadmissible in any litigation or arbitration.

If the Contractor selected litigation, then de novo litigation shall proceed in accordance with the Colorado Rules of Civil Procedure and the proper venue is the Colorado State District Court in and for the City and County of Denver, unless both parties agree to the use of arbitration.

If the Contractor selected merit binding arbitration, or if both parties subsequently agreed to merit binding arbitration, arbitration shall be governed by the modified version of ARBITRATION PROVIDER's Construction Industry Arbitration Rules which follow. Pursuant to the modified arbitration rules (R35 through R39), the arbitrators shall issue a binding decision with regard to entitlement and a non-binding decision with regard to quantum. If either party disagrees with the decision on quantum, the disagreeing party may seek a trial de novo in Denver District Court with regard to quantum only.

## **AMERICAN ARBITRATION ASSOCIATION CONSTRUCTION INDUSTRY ARBITRATION RULES MODIFIED FOR USE WITH CDOT SPECIFICATION SUBSECTION 105.24**

### **REGULAR TRACK PROCEDURES**

#### **R-1. Agreement of Parties**

- (a) The parties shall be deemed to have made these rules a part of their Contract. These rules and any amendments shall apply in the form in effect at the time the administrative requirements are met for a demand

for arbitration. The parties, by written agreement, may vary the procedures set forth in these rules. After appointment of the arbitrator, such modifications may be made only with the consent of the arbitrator.

- (b) Unless the parties determine otherwise, the Fast Track Procedures shall apply in any case in which aggregate claims do not exceed \$100,000, exclusive of interest and arbitration fees and costs. Parties may also agree to use these procedures in larger cases. Unless the parties agree otherwise, these procedures will not apply in cases involving more than two parties except for pass-through claims. The Fast Track Procedures shall be applied as described in Sections F-1 through F-13 of these rules, in addition to any other portion of these rules that is not in conflict with the Fast Track Procedures.
- (c) Unless the parties agree otherwise, the Procedures for Large, Complex Construction Disputes shall apply to all cases in which the disclosed aggregate claims of any party is at least \$1,000,000, exclusive of claimed interest, arbitration fees and costs. Parties may also agree to use these procedures in cases involving claims under \$1,000,000, or in nonmonetary cases. The Procedures for Large, Complex Construction Disputes shall be applied as described in Sections L-1 through L-4 of these rules, in addition to any other portion of these rules that is not in conflict with the Procedures for Large, Complex Construction Disputes.
- (d) All other cases shall be administered in accordance with Sections R-1 through R-45 of these rules.

#### **R-2. Independent Arbitration Provider and Delegation of Duties**

When parties agree to arbitrate under these rules, or when they provide for arbitration by an independent third-party (Arbitration Provider) and arbitration is initiated under these rules, they thereby authorize the Arbitration Provider to administer the arbitration. The authority and duties of the Arbitration Provider are prescribed in the parties' Contract and in these rules, and may be carried out through such of the Arbitration Provider's representatives as it may direct. The Arbitration Provider will assign the administration of an arbitration to its Denver office

#### **R-3. Initiation of Arbitration**

Arbitration shall be initiated in the following manner.

- (a) The Contractor shall, within 30 days after the Chief Engineer issues a decision, submit to the Chief Engineer written notice of its intention to arbitrate (the "demand"). The demand shall indicate the appropriate qualifications for the arbitrator(s) to be appointed to hear the arbitration.
- (b) CDOT may file an answering statement with the Contractor within 15 days after receiving the demand. If a counterclaim is asserted, it shall contain a statement setting forth the nature of the counterclaim, the amount involved, if any, and the remedy sought.

- (c) The Chief Engineer shall retain an Arbitration Provider, such as the American Arbitration Association, which will administer an arbitration pursuant to these Rules, except to the extent that such rules conflict with the specifications, in which case the specifications shall control.
- (d) The Arbitration Provider shall confirm its retention to the parties.

#### **R-4. Consolidation or Joinder**

If the parties' agreement or the law provides for consolidation or joinder of related arbitrations, all involved parties will endeavor to agree on a process to effectuate the consolidation or joinder.

If they are unable to agree, the Arbitration Provider shall directly appoint a single arbitrator for the limited purpose of deciding whether related arbitrations should be consolidated or joined and, if so, establishing a fair and appropriate process for consolidation or joinder. All requests for consolidation or joinder must be submitted to the Arbitration Provider prior to the appointment of an arbitrator or within 90 days of the date the Arbitration Provider determined that all administrative filing requirements were satisfied, whichever is later. The Arbitration Provider may take reasonable administrative action to accomplish the consolidation or joinder as directed by the arbitrator. Requests for consolidation or joinder submitted beyond these timeframes shall not be permitted absent a determination by the Merits Arbitrator that good cause was shown for the late request.

To request consolidation of arbitrations, the requesting party must have filed a demand for arbitration, including the applicable arbitration provision(s) from the parties' contract(s) and must provide a written request for consolidation which provides the supporting reasons for such request.

To request joinder of parties, the requesting party must file with the AAA a written request to join parties to an existing arbitration which provides the names and contact information for such parties, names and contact information for the parties' representatives, if known, and supporting reasons for such request.

#### **R-5. Appointment of Arbitrator**

An arbitrator shall be appointed in the following manner:

- (a) Immediately after the Arbitration Provider is retained, the Arbitration Provider shall send simultaneously to each party to the dispute an identical list of 10 names of potential arbitrators. The parties are encouraged to agree to an arbitrator from the submitted list and to advise the ARBITRATION PROVIDER of their agreement. Absent agreement of the parties, the arbitrator shall not have served as the mediator in the mediation phase of the instant proceeding.
- (b) If the parties cannot agree to arbitrator(s), each party to the dispute shall have 15 calendar days from the transmittal date in which to strike names objected to, number the remaining names in order of preference, and return the list to the Arbitration Provider. If a party does not return the list within the time specified, all persons named therein shall be deemed acceptable. From among the persons who have been approved on both lists, and in accordance with the designated order of mutual preference, the Arbitration Provider shall invite an arbitrator to serve.
- (c) Unless both parties agree otherwise one arbitrator shall be used for claims less than \$250,000 and three arbitrators shall be used for claims \$250,000 and greater. Within 15 calendar days from the date of the appointment of the last arbitrator, the Arbitration Provider shall appoint a chairperson.
- (d) The entire claim record will be made available to the arbitrators by the Chief Engineer within 15 calendar days from the date of the appointment of the last arbitrator.

#### **R-6. Changes of Claim**

The arbitrator(s) will not consider any information that was not previously made a part of the claim record as transmitted by the Chief Engineer, other than clarification and data supporting previously submitted documentation.

## **R-7. Disclosure**

- (a) Any person appointed or to be appointed as an arbitrator shall disclose to the Arbitration Provider any circumstance likely to give rise to justifiable doubt as to the arbitrator's impartiality or independence, including any bias or any interest in the result of the arbitration or any relationship with the parties or their representatives. Such obligation shall remain in effect throughout the arbitration.
- (b) Upon receipt of such information from the arbitrator or another source, the Arbitration Provider shall communicate the information to the parties and, if it deems it appropriate to do so, to the arbitrator and others.
- (c) In order to encourage disclosure by arbitrators, disclosure of information pursuant to this Section R-6 is not to be construed as an indication that the arbitrator considers that the disclosed circumstances are likely to affect impartiality or independence.
- (d) In no case shall an arbitrator be employed by, affiliated with, or have consultative or business connection with the claimant Contractor or CDOT. An arbitrator shall not have assisted either in the evaluation, preparation, or presentation of the claim case either for the Contractor or the Department or have rendered an opinion on the merits of the claim for either party, and shall not do so during the proceedings of arbitration.

## **R-8. Disqualification of Arbitrator**

- (a) Any arbitrator shall be impartial and independent and shall perform his or her duties with diligence and in good faith, and shall be subject to disqualification for: (i) partiality or lack of independence, (ii) inability or refusal to perform his or her duties with diligence and in good faith; and/or (iii) any grounds for disqualification provided by applicable law.
- (b) Upon objection of a party to the continued service of an arbitrator, or on its own initiative, the Arbitration Provider shall determine whether the arbitrator should be disqualified under the grounds set out above, and shall inform the parties of its decision, which decision shall be conclusive.

## **R-9. Communication with Arbitrator**

No party and no one acting on behalf of any party shall communicate *ex parte* with an arbitrator or a candidate for arbitrator concerning the arbitration.

## **R-10. Vacancies**

- (a) If for any reason an arbitrator is unable to perform the duties of the office, the Arbitration Provider may, on proof satisfactory to it, declare the office vacant. Vacancies shall be filled in accordance with the applicable provisions of these rules.
- (b) In the event of a vacancy in a panel of neutral arbitrators after the hearings have commenced, the remaining arbitrator or arbitrators may continue with the hearing and determination of the controversy, unless the parties agree otherwise.
- (c) In the event of the appointment of a substitute arbitrator, the panel of arbitrators shall determine in its sole discretion whether it is necessary to repeat all or part of any prior hearings.

## **R-11. Jurisdiction**

- (a) The arbitrator shall have the power to rule on his or her own jurisdiction, including any objections with respect to the existence, scope or validity of the arbitration agreement.
- (b) The arbitrator shall have the power to determine the existence or validity of a contract of which an arbitration clause forms a part. Such an arbitration clause shall be treated as an agreement independent of the other terms of the contract. A decision by the arbitrator that the contract is null and void shall not for that reason alone render invalid the arbitration clause.

- (c) A party must object to the jurisdiction of the arbitrator or to the arbitrability of a claim or counterclaim no later than 15 days after the Arbitration Provider confirms its retention to the parties. The arbitrator may rule on such objections as a preliminary matter or as part of the final award.

## **R-12. Administrative Conference**

At the request of any party or upon the Arbitration Provider's own initiative, the Arbitration Provider may conduct an administrative conference, in person or by telephone, with the parties and/or their representatives. The conference may address such issues as arbitrator selection, potential exchange of information, a timetable for hearings and any other administrative matters.

## **RuleR-13. Preliminary Hearing**

- (a) At the request of any party or at the discretion of the arbitrator or the Arbitration Provider, the arbitrator may schedule as soon as practicable a preliminary hearing with the parties and/or their representatives. The preliminary hearing may be conducted by telephone at the arbitrator's discretion.
- (b) During the preliminary hearing, the parties and the arbitrator should discuss the future conduct of the case, including clarification of the issues and claims, a schedule for the hearings and any other preliminary matters.

## **R-14. Pre-Hearing Exchange and Production of Information**

(a) *Authority of arbitrator.* The arbitrator shall manage any necessary exchange of information among the parties with a view to achieving an efficient and economical resolution of the dispute, while at the same time promoting equality of treatment and safeguarding each party's opportunity to fairly present its claims and defenses.

(b) *Documents.* The arbitrator may, on application of a party or on the arbitrator's own initiative:

- i. require the parties to exchange documents in their possession or custody on which they intend to rely;
- ii. require the parties to update their exchanges of the documents on which they intend to rely as such documents become known to them;
- iii. require the parties, in response to reasonable document requests, to make available to the other party documents, in the responding party's possession or custody, not otherwise readily available to the party seeking the documents, reasonably believed by the party seeking the documents to exist and to be relevant and material to the outcome of disputed issues; and
- iv. require the parties, when documents to be exchanged or produced are maintained in electronic form, to make such documents available in the form most convenient and economical for the party in possession of such documents, unless the arbitrator determines that there is good cause for requiring the documents to be produced in a different form. The parties should attempt to agree in advance upon, and the arbitrator may determine, reasonable search parameters to balance the need for production of electronically stored documents relevant and material to the outcome of disputed issues against the cost of locating and producing them.

(a) At the request of any party or at the discretion of the arbitrator, consistent with the expedited nature of arbitration, the arbitrator may direct:

- i. the production of documents and other information;
- ii. require the parties to update their exchanges of the documents on which they intend to rely as such documents become known to them;  
and/or
- iii. the identification of any witnesses to be called.

(b) At least five business days prior to the hearing, the parties shall exchange copies of all exhibits they intend to submit at the hearing.

(c) The arbitrator is authorized to resolve any disputes concerning the exchange of information.

(d) Additional discovery may be ordered by the arbitrator in extraordinary cases when the demands of justice require it.

### **R-15. Date, Time, and Place of Hearing**

- (a) The arbitrator shall set the date, time, and place for each hearing and/or conference. The parties shall respond to requests for hearing dates in a timely manner, be cooperative in scheduling the earliest practicable date, and adhere to the established hearing schedule.
- (b) The parties may mutually agree on the locale where the arbitration is to be held. Absent such agreement, the arbitration shall be held in the City and County of Denver.
- (c) The Arbitration Provider shall send a notice of hearing to the parties at least ten calendar days in advance of the hearing date, unless otherwise agreed by the parties.

### **R-16. Attendance at Hearings**

The arbitrator and the Arbitration Provider shall maintain the privacy of the hearings unless the law provides to the contrary. Any person having a direct interest in the arbitration is entitled to attend hearings. The arbitrator shall otherwise have the power to require the exclusion of any witness, other than a party or other essential person, during the testimony of any other witness. It shall be discretionary with the arbitrator to determine the propriety of the attendance of any person other than a party and its representative.

### **R-17. Representation**

Any party may be represented by counsel or other authorized representative. A party intending to be so represented shall notify the other party and the Arbitration Provider of the name and address of the representative at least three calendar days prior to the date set for the hearing at which that person is first to appear.

### **R-18. Oaths**

Before proceeding with the first hearing, each arbitrator may take an oath of office and, if required by law, shall do so. The arbitrator may require witnesses to testify under oath administered by any duly qualified person and, if it is required by law or requested by any party, shall do so.

### **R-19. Stenographic Record**

Any party desiring a stenographic record shall make arrangements directly with a stenographer and shall notify the other parties of these arrangements at least three days in advance of the hearing. The requesting party or parties shall pay the cost of the record. If the transcript is agreed by the parties, or determined by the arbitrator to be the official record of the proceeding, it must be provided to the arbitrator and made available to the other parties for inspection, at a date, time, and place determined by the arbitrator.

### **R-20. Interpreters**

Any party wishing an interpreter shall make all arrangements directly with the interpreter and shall assume the costs of the service.

### **R-21. Postponements**

The arbitrator for good cause shown may postpone any hearing upon agreement of the parties, upon request of a party, or upon the arbitrator's own initiative.

### **R-22. Arbitration in the Absence of a Party or Representative**

Unless the law provides to the contrary, the arbitration may proceed in the absence of any party or representative who, after due notice, fails to be present or fails to obtain a postponement. An award shall not be made solely on the default of a party. The arbitrator shall require the party who is present to submit such evidence as the arbitrator may require for the making of an award.

### **R-23. Conduct of Proceedings**

- (a) The Contractor shall present evidence to support its claim. CDOT shall then present evidence supporting its defense. Witnesses for each party shall also submit to questions from the arbitrator and the adverse party. The arbitrator has the discretion to vary this procedure; provided that the parties are treated with equality and that each party has the right to be heard and is given a fair opportunity to present its case.
- (b) The arbitrator, exercising his or her discretion, shall conduct the proceedings with a view to expediting the resolution of the dispute and may direct the order of proof, bifurcate proceedings, and direct the parties to focus their presentations on issues the decision of which could dispose of all or part of the case. The arbitrator shall entertain motions, including motions that dispose of all or part of a claim or that may expedite the proceedings, and may also make preliminary rulings and enter interlocutory orders.
- (c) The parties may agree to waive oral hearings in any case.

### **R-24. Evidence**

- (a) The arbitrators shall consider all written information available in the claim record and all oral presentations in support of that record by the Contractor and CDOT. Conformity to legal rules of evidence shall not be necessary.
- (b) The arbitrators shall not consider any written documents or arguments which have not previously been made a part of the claim record, other than clarification and data supporting previously submitted documentation. The arbitrators shall not consider an increase in the amount of the claim, or any new claims.
- (c) The arbitrator shall determine the admissibility, relevance, and materiality of any evidence offered. The arbitrator may request offers of proof and may reject evidence deemed by the arbitrator to be cumulative, unreliable, unnecessary, or of slight value compared to the time and expense involved. All evidence shall be taken in the presence of all of the arbitrators and all of the parties, except where: (i) any of the parties is absent, in default, or has waived the right to be present, or (ii) the parties and the arbitrators agree otherwise.
- (d) The arbitrator shall take into account applicable principles of legal privilege, such as those involving the confidentiality of communications between a lawyer and client.
- (e) An arbitrator or other person authorized by law to subpoena witnesses or documents may do so upon the request of any party or independently.

### **R-25. Evidence by Affidavit and Post-hearing Filing of Documents or Other Evidence**

- (a) The arbitrator may receive and consider the evidence of witnesses by declaration or affidavit, but shall give it only such weight as the arbitrator deems it entitled to after consideration of any objection made to its admission.
- (b) If the parties agree or the arbitrator directs that documents or other evidence be submitted to the arbitrator after the hearing, the documents or other evidence, unless otherwise agreed by the parties and the arbitrator, shall be filed with the Arbitration Provider for transmission to the arbitrator. All parties shall be afforded an opportunity to examine and respond to such documents or other evidence.

### **R-26. Inspection or Investigation**

An arbitrator finding it necessary to make an inspection or investigation in connection with the arbitration shall direct the Arbitration Provider to so advise the parties. The arbitrator shall set the date and time and the Arbitration Provider shall notify the parties. Any party who so desires may be present at such an inspection or investigation. In the event that one or all parties are not present at the inspection or investigation, the arbitrator shall make an oral or written report to the parties and afford them an opportunity to comment.

### **R-27. Interim Measures**

- (a) The arbitrator may take whatever interim measures he or she deems necessary, including injunctive relief and measures for the protection or conservation of property and disposition of perishable goods.

- (b) A request for interim measures addressed by a party to a judicial authority shall not be deemed incompatible with the agreement to arbitrate or a waiver of the right to arbitrate.

### **R-28. Closing of Hearing**

When satisfied that the presentation of the parties is complete, the arbitrator shall declare the hearing closed.

If documents or responses are to be filed as provided in Section R-24, or if briefs are to be filed, the hearing shall be declared closed as of the final date set by the arbitrator for the receipt of documents, responses, or briefs. The time limit within which the arbitrator is required to make the award shall commence to run, in the absence of other agreements by the parties and the arbitrator, upon the closing of the hearing.

### **R-29. Reopening of Hearing**

The hearing may be reopened on the arbitrator's initiative, or by direction of the arbitrator upon application of a party, at any time before the award is made. If reopening the hearing would prevent the making of the award within the specific time agreed to by the parties in the arbitration agreement, the matter may not be reopened unless the parties agree to an extension of time. When no specific date is fixed by agreement of the parties, the arbitrator shall have 15 calendar days from the closing of the reopened hearing within which to make an award.

### **R-30. Waiver of Rules**

Any party who proceeds with the arbitration after knowledge that any provision or requirement of these rules has not been complied with and who fails to state an objection in writing shall be deemed to have waived the right to object.

### **R-31. Extensions of Time**

The parties may modify any period of time by mutual agreement. The Arbitration Provider or the arbitrator may for good cause extend any period of time established by these rules, except the time for making the award. The Arbitration Provider shall notify the parties of any extension.

### **R-32. Serving of Notice**

- (a) Any papers, notices, or process necessary or proper for the initiation or continuation of an arbitration under these rules; for any court action in connection therewith, or for the entry of judgment on any award made under these rules, may be served on a party by mail addressed to the party or its representative at the last known address or by personal service, in or outside the state where the arbitration is to be held, provided that reasonable opportunity to be heard with regard thereto has been granted to the party.
- (b) The Arbitration Provider, the arbitrator and the parties may also use overnight delivery, electronic facsimile transmission (fax), or electronic mail (email) to give the notices required by these rules.
- (c) Unless otherwise instructed by the Arbitration Provider or by the arbitrator, any documents submitted by any party to the Arbitration Provider or to the arbitrator shall simultaneously be provided to the other party or parties to the arbitration.

### **R-33. Majority Decision**

When the panel consists of more than one arbitrator, unless required by law or by the arbitration agreement, a majority of the arbitrators must make all decisions; however, in a multi-arbitrator case, if all parties and all arbitrators agree, the chair of the panel may make procedural decisions.

Where there is a panel of three arbitrators, absent an objection of a party or another member of the panel, the chairperson of the panel is authorized to resolve or delegate to another member of the panel to resolve any disputes related to the exchange of information or procedural matters without the need to consult the full panel.

### **R-34. Time of Award**

The award shall be made promptly by the arbitrator and, unless otherwise agreed by the parties or specified by law, no later than 30 calendar days from the date of closing the hearing, or, if oral hearings have been waived, from the date of the Arbitration Provider's transmittal of the final statements and proofs to the arbitrator.

### **R-35. Form of Award**

After complete review of the facts associated with the claim, the arbitrators shall render a written explanation of their decision. When three arbitrators are used, and only two arbitrators agree then the award shall be signed by the two arbitrators. The arbitrator's decision shall include:

- (a) A summary of the issues and factual evidence presented by the Contractor and the Department concerning the claim;
- (b) Decisions concerning the validity of the claim;
- (c) Decisions concerning the value of the claim as to cost impacts if the claim is determined to be valid;
- (d) The contractual and factual bases supporting the decisions made including an explanation as to why each and every position was accepted or rejected;
- (e) Detailed and supportable calculations which support any decisions.

### **R-36. Scope of Award**

- (a) The arbitrator may grant any remedy or relief that the arbitrator deems just and equitable and within the scope of the agreement of the parties, including, but not limited to, equitable relief and specific performance of a contract.
- (b) In addition to the final award, the arbitrator may make other decisions, including interim, interlocutory, or partial rulings, orders, and awards. (c) The award of the arbitrator may include interest at the statutory rate and from such date as the arbitrator may deem appropriate.

### **R-37. Delivery of Award to Parties**

Parties shall accept as notice and delivery of the award the placing of the award or a true copy thereof in the mail addressed to the parties or their representatives at the last known address, personal or electronic service of the award, or the filing of the award in any other manner that is permitted by law.

### **R-38. Modification of Award**

Within 10 calendar days after the transmittal of an award, the arbitrator on his or her initiative, or any party, upon notice to the other parties, may request that the arbitrator correct any clerical, typographical, technical or computational errors in the award. The arbitrator is not empowered to redetermine the merits of any claim already decided.

If the modification request is made by a party, the other parties shall be given 10 calendar days to respond to the request. The arbitrator shall dispose of the request within 25 calendar days after transmittal by the Arbitration Provider to the arbitrator of the request.

If applicable law provides a different procedural time frame, that procedure shall be followed.

### **R-39. Appeal of Award**

Appeal of the arbitrators' decision concerning the merit of the claim is governed by the Colorado Uniform Arbitration Act, C.R.S. §§ 13-22-202 to -230. Either party may appeal the arbitrator's decision on the value of the claim to the Colorado State District Court in and for the City and County of Denver for trial de novo.

#### **R-40. Release of Documents for Judicial Proceedings**

The Arbitration Provider shall, upon the written request of a party, furnish to the party, at its expense, certified copies of any papers in the Arbitration Provider's possession that may be required in judicial proceedings relating to the arbitration.

#### **R-41. Applications to Court and Exclusion of Liability**

- (a) No judicial proceeding by a party relating to the subject matter of the arbitration shall be deemed a waiver of the party's right to arbitrate.
- (b) Neither the Arbitration Provider nor any arbitrator in a proceeding under these rules is a necessary or proper party in judicial proceedings relating to the arbitration.
- (c) Parties to these rules shall be deemed to have consented that judgment upon the arbitration award may be entered in any federal or state court having jurisdiction thereof.
- (d) Parties to an arbitration under these rules shall be deemed to have consented that neither the Arbitration Provider nor any arbitrator shall be liable to any party in any action for damages or injunctive relief for any act or omission in connection with any arbitration under these rules.

#### **R-42. Administrative Fees**

The Arbitration Provider shall prescribe filing and other administrative fees and service charges to compensate it for the cost of providing administrative services. The fees in effect when the fee or charge is incurred shall be applicable. Such fees and charges shall be borne equally by the parties.

The Arbitration Provider may, in the event of extreme hardship on the part of any party, defer or reduce the administrative fees.

#### **R-43. Expenses**

The expenses of witnesses for either side shall be paid by the party producing such witnesses. All other expenses of the arbitration, including required travel and other expenses of the arbitrator, Arbitration Provider representatives, and any witness and the cost of any proof produced at the direct request of the arbitrator, shall be borne equally by the parties.

#### **R-44. Neutral Arbitrator's Compensation**

Arbitrators shall be compensated a rate consistent with the arbitrator's stated rate of compensation.

If there is disagreement concerning the terms of compensation, an appropriate rate shall be established with the arbitrator by the Arbitration Provider and confirmed to the parties.

Such compensation shall be borne equally by the parties.

#### **R-45. Deposits**

The Arbitration Provider may require the parties to deposit in advance of any hearings such sums of money as it deems necessary to cover the expense of the arbitration, including the arbitrator's fee, if any, and shall render an accounting to the parties and return any unexpended balance at the conclusion of the case.

#### **R-46. Interpretation and Application of Rules**

The arbitrator shall interpret and apply these rules insofar as they relate to the arbitrator's powers and duties by a majority vote. If that is not possible, either an arbitrator or a party may refer the question to the Arbitration Provider for final decision. All other rules shall be interpreted and applied by the Arbitration Provider.

## **R-45. Suspension for Nonpayment**

If arbitrator compensation or administrative charges have not been paid in full, the Arbitration Provider may so inform the parties in order that the parties may advance the required payment. If such payments are not made, the arbitrator may order the suspension or termination of the proceedings. If no arbitrator has yet been appointed, the Arbitration Provider may suspend the proceedings.

## **FAST TRACK PROCEDURES**

### **F-1. Limitations on Extensions**

In the absence of extraordinary circumstances, the Arbitration Provider or the arbitrator may grant a party no more than one seven-day extension of the time in which to respond to the demand for arbitration or counterclaim as provided in Section R-3.

### **F-2. Changes of Claim**

The arbitrator will not consider any information that was not previously made a part of the claim record as transmitted by the Chief Engineer, other than clarification and data supporting previously submitted documentation

### **F-3. Serving of Notice**

In addition to notice provided above, the parties shall also accept notice by telephone. Telephonic notices by the Arbitration Provider shall subsequently be confirmed in writing to the parties. Should there be a failure to confirm in writing any such oral notice, the proceeding shall nevertheless be valid if notice has, in fact, been given by telephone.

### **F-4. Appointment and Qualification of Arbitrator**

Immediately after the retention of the Arbitration Provider, the Arbitration Provider will simultaneously submit to each party a listing and biographical information from its panel of arbitrators knowledgeable in construction who are available for service in Fast Track cases. The parties are encouraged to agree to an arbitrator from this list, and to advise the Arbitration Provider of their agreement, or any factual objections to any of the listed arbitrators, within 7 calendar days of the transmission of the list. The Arbitration Provider will appoint the agreed-upon arbitrator, or in the event the parties cannot agree on an arbitrator, will designate the arbitrator from among those names not stricken for factual objections.

The parties will be given notice by the Arbitration Provider of the appointment of the arbitrator, who shall be subject to disqualification for the reasons specified above. Within the time period established by the Arbitration Provider, the parties shall notify the Arbitration Provider of any objection to the arbitrator appointed. Any objection by a party to the arbitrator shall be for cause and shall be confirmed in writing to the Arbitration Provider with a copy to the other party or parties.

### **F-5. Preliminary Telephone Conference**

Unless otherwise agreed by the parties and the arbitrator, as promptly as practicable after the appointment of the arbitrator, a preliminary telephone conference shall be held among the parties or their attorneys or representatives, and the arbitrator.

### **F-6. Exchange of Exhibits**

At least 2 business days prior to the hearing, the parties shall exchange copies of all exhibits they intend to submit at the hearing. The arbitrator is authorized to resolve any disputes concerning the exchange of exhibits.

### **F-7. Discovery**

There shall be no discovery, except as provided in Section F-4 or as ordered by the arbitrator in extraordinary cases when the demands of justice require it.

### **F-8. Date, Time, and Place of Hearing**

The arbitrator shall set the date and time, and place of the hearing, to be scheduled to take place within 30 calendar days of confirmation of the arbitrator's appointment. The Arbitration Provider will notify the parties in advance of the hearing date. All hearings shall be held within the City and County of Denver.

### **F-9. The Hearing**

- (a) Generally, the hearing shall not exceed 1 day. Each party shall have equal opportunity to submit its proofs and complete its case. The arbitrator shall determine the order of the hearing, and may require further submission of documents within two business days after the hearing. For good cause shown, the arbitrator may schedule 1 additional hearing day within 7 business days after the initial day of hearing.
- (b) Generally, there will be no stenographic record. Any party desiring a stenographic record may arrange for one pursuant to the provisions above.

### **F-10. Time of Award**

Unless otherwise agreed by the parties, the award shall be rendered not later than 14 calendar days from the date of the closing of the hearing or, if oral hearings have been waived, from the date of the Arbitration Provider's transmittal of the final statements and proofs to the arbitrator.

### **F-11. Time Standards**

The arbitration shall be completed by settlement or award within 45 calendar days of confirmation of the arbitrator's appointment, unless all parties and the arbitrator agree otherwise or the arbitrator extends this time in extraordinary cases when the demands of justice require it and such agreement is memorialized by the arbitrator prior to the expiration of the initial 45-day period.

### **F-12. Arbitrator's Compensation**

Arbitrators will receive compensation at a rate to be suggested by the Arbitration Provider regional office.

## **PROCEDURES FOR LARGE, COMPLEX CONSTRUCTION DISPUTES**

### **L-1. Large, Complex Construction Disputes**

The procedures for large, complex construction disputes shall apply to any claim with a value exceeding \$500,000 or as agreed to by the parties.

### **L-2. Administrative Conference**

Prior to the dissemination of a list of potential arbitrators, the Arbitration Provider shall, unless the parties agree otherwise, conduct an administrative conference with the parties and/or their attorneys or other representatives by conference call. The conference call will take place within 14 days after the retention of the Arbitration Provider. In the event the parties are unable to agree on a mutually acceptable time for the conference, the Arbitration Provider may contact the parties individually to discuss the issues contemplated herein. Such administrative conference shall be conducted for the following purposes and for such additional purposes as the parties or the Arbitration Provider may deem appropriate:

- (a) To obtain additional information about the nature and magnitude of the dispute and the anticipated length of hearing and scheduling;
- (b) To discuss the views of the parties about the technical and other qualifications of the arbitrators;
- (c) To obtain conflicts statements from the parties; and

- (d) To consider, with the parties, whether mediation or other non-adjudicative methods of dispute resolution might be appropriate.

**L-3. Arbitrators**

- (a) Large, Complex Construction Cases shall be heard and determined by three arbitrators.
- (b) The Arbitration Provider shall appoint arbitrator(s) in the manner provided in the Regular Construction Industry Arbitration Rules.

**L-4. Preliminary Hearing**

As promptly as practicable after the selection of the arbitrator(s), a preliminary hearing shall be held among the parties and/or their attorneys or other representatives and the arbitrator(s). Unless the parties agree otherwise, the preliminary hearing will be conducted by telephone conference call rather than in person.

At the preliminary hearing the matters to be considered shall include, without limitation:

- (a) Service of a detailed statement of claims, damages and defenses, a statement of the issues asserted by each party and positions with respect thereto, and any legal authorities the parties may wish to bring to the attention of the arbitrator(s);
- (b) Stipulations to uncontested facts;
- (c) The extent to which discovery shall be conducted;
- (d) Exchange and premarking of those documents which each party believes may be offered at the hearing;
- (e) The identification and availability of witnesses, including experts, and such matters with respect to witnesses including their biographies and expected testimony as may be appropriate;
- (f) Whether, and the extent to which, any sworn statements and/or depositions may be introduced;
- (g) The extent to which hearings will proceed on consecutive days;
- (h) Whether a stenographic or other official record of the proceedings shall be maintained;
- (i) The possibility of utilizing mediation or other non-adjudicative methods of dispute resolution; and
- (j) The procedure for the issuance of subpoenas.

By agreement of the parties and/or order of the arbitrator(s), the pre-hearing activities and the hearing procedures that will govern the arbitration will be memorialized in a Scheduling and Procedure Order.

**L-5. Management of Proceedings**

- (a) Arbitrator(s) shall take such steps as they may deem necessary or desirable to avoid delay and to achieve a just, speedy and cost-effective resolution of Large, Complex Construction Cases.
- (b) Parties shall cooperate in the exchange of documents, exhibits and information within such party's control if the arbitrator(s) consider such production to be consistent with the goal of achieving a just, speedy and cost effective resolution of a Large, Complex Construction Case.
- (c) The parties may conduct such discovery as may be agreed to by all the parties provided, however, that the arbitrator(s) may place such limitations on the conduct of such discovery as the arbitrator(s) shall deem appropriate. If the parties cannot agree on production of document and other information, the arbitrator(s), consistent with the expedited nature of arbitration, may establish the extent of the discovery.

- (d) At the discretion of the arbitrator(s), upon good cause shown and consistent with the expedited nature of arbitration, the arbitrator(s) may order depositions of, or the propounding of interrogatories to such persons who may possess information determined by the arbitrator(s) to be necessary to a determination of the matter.
- (e) The parties shall exchange copies of all exhibits they intend to submit at the hearing 10 business days prior to the hearing unless the arbitrator(s) determine otherwise.
- (f) The exchange of information pursuant to this rule, as agreed by the parties and/or directed by the arbitrator(s), shall be included within the Scheduling and Procedure Order.
- (g) The arbitrator is authorized to resolve any disputes concerning the exchange of information.
- (h) Generally hearings will be scheduled on consecutive days or in blocks of consecutive days in order to maximize efficiency and minimize costs.

The following flow chart provides a summary of the disputes and claims process described in subsections 105.22, 105.23, and 105.24

October 31, 2013

**REVISION OF SECTION 106  
MATERIAL SOURCES**

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

In subsection 106.02 (a), delete the third paragraph and replace with the following:

The Contract will indicate whether the Department has or has not obtained the necessary County or City Zoning Clearance and the required permit from Colorado Department of Natural Resources needed to explore and remove materials from the available source. If the Department did not obtain the necessary clearances or permits, the Contractor shall obtain them. Any delays to the project or additional expenses that are incurred while these clearances or permits are being obtained shall be the responsibility of the Contractor. The Contractor shall ensure that the requirements of the permits do not conflict with the pit construction and reclamation requirements shown in the Contract for the available source.

In subsection 106.02 (b), delete the first paragraph and replace with the following:

(b) *Contractor Source.* Sources of sand, gravel, or borrow other than available sources will be known as contractor sources. The contractor source will be tested by the Department and approved by the Engineer prior to incorporation of the material into the project. If the submitted materials do not meet the contract specifications it will become the Contractor's responsibility to re-sample and test the material. The Contractor will supply the Department with passing test results from an AASHTO accredited laboratory and signed and sealed by a Professional Engineer. If requested by the Engineer, the Department will then re-sample and re-test the material for compliance to the contract specifications. The Contractor shall produce material which meets contract specifications throughout construction of the project.

The cost of sampling, testing, and corrective action by the Contractor will not be paid for separately but shall be included in the work.

May 12, 2016

**REVISION OF SECTIONS 106, 627 AND 713  
GLASS BEADS FOR PAVEMENT MARKING**

Sections 106, 627, and 713 are hereby revised for this project as follows:

Subsection 106.11 shall include the following:

All post-consumer and industrial glass beads for pavement marking shall have been manufactured from North American glass waste streams in the United States of America. The bead manufacturer shall submit a COC in accordance with subsection 106.12 confirming that North American glass waste streams were used in the manufacture of the glass beads.

Subsection 627.06 (c) shall include the following:

Glass beads shall be applied into the thermoplastic pavement marking by means of a low pressure, gravity drop bead applicator.

In subsection 713.08, delete the first and third paragraphs and replace with the following:

**713.08 Glass Beads for Pavement Marking.** Glass beads for pavement marking shall conform to AASHTO M 247, except for the following:

(1) Gradation:

U.S. Mesh	Microns	% Passing	
		Epoxy and MMA	Waterborne, Low VOC and High Build
16	1180	90-100	100
18	1000	65-80	97-100
20	850		85-100
30	600	30-50	50-70
40	425		10-35
50	300	0-5	0-10
80	180		0-5

- (2) Roundness: All beads shall meet a minimum of 80 percent true spheres in accordance with the Office of Federal Lands Highways FLH T520 or a computerized optical testing method.
- (3) Color / Clarity: Beads shall be colorless, clear, and free of carbon residues.
- (4) Refractive Index: Minimum 1.51 by oil immersion method.
- (5) Air Inclusions: Less than 5 percent by visual count.
- (6) Coatings: Per manufacturer's recommendation for optimum adhesion and embedment.
- (7) Chemical Resistance: Beads shall be resistant to hydrochloric acid, water, calcium chloride, and sodium sulfide as tested per methods outlined in sections 4.3.6 to 4.3.9 of the TT-B Federal Spec.1325D.
- (8) For Epoxy Pavement Marking, a minimum of 40 percent of the total weight shall be manufactured using a molten kiln direct melt method. For Waterborne and Low VOC Paint, a minimum of 15 percent of the total weight shall be manufactured using a molten kiln direct melt method. All molten kiln direct melt glass beads shall be above the 600 µm (#30) sieve.
- (9) Glass beads used for any type of pavement marking shall not contain more than 75 parts per million (ppm) arsenic, 75 ppm antimony and 100 ppm lead, as tested in accordance with EPA methods 3052 and 6010C, or other approved testing method

February 3, 2011

**REVISION OF SECTION 106  
CERTIFICATES OF COMPLIANCE AND  
CERTIFIED TEST REPORTS**

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

In subsection 106.12, delete the second paragraph and replace it with the following:

The original Certificate of Compliance shall include the Contractor's original signature as directed above. The original signature (including corporate title) on the Certificate of Compliance, under penalty of perjury, shall be of a person having legal authority to act for the manufacturer. It shall state that the product or assembly to be incorporated into the project has been sampled and passed all specified tests in conformity to the plans and

specifications for this project. One legible copy of the fully signed Certificate of Compliance shall be furnished to the Engineer prior to installation of material. The original shall be provided to the Engineer before payment for the represented item will be made.

In subsection 106.13, delete the second paragraph and replace it with the following:

The Certified Test Report shall be a legible copy or an original document and shall include the Contractor's original signature as directed above. The signature (including corporate title) on the Certified Test Report, under penalty of perjury, shall be of a person having legal authority to act for the manufacturer or the independent testing laboratory. It shall state that the test results show that the product or assembly to be incorporated into the project has been sampled and passed all specified tests in conformity to the plans and specifications for this project. One legible copy or original document of the fully signed Certified Test Report shall be furnished to the Engineer prior to installation of material. Failure to comply may result in delays to the project or rejection of the materials.

January 30, 2014

**REVISION OF SECTION 107  
WARNING LIGHTS FOR WORK VEHICLES AND EQUIPMENT**

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

Subsection 107.06 (b) shall include the following:

All work vehicles and mobile equipment shall be equipped with one or more functioning warning lights mounted as high as practicable, which shall be capable of displaying in all directions one or more flashing, oscillating, or rotating lights for warning roadway traffic. The lights shall be amber in color. The warning lights shall be activated when the work vehicle or mobile equipment is operating within the roadway, right of way or both. All supplemental lights shall be SAE Class 1 certified.

February 3, 2011

**REVISION OF SECTION 107  
RESPONSIBILITY FOR DAMAGE CLAIMS,  
INSURANCE TYPES AND COVERAGE LIMITS**

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

Delete subsection 107.15(c) and replace it with the following:

(c) Each insurance policy shall include provisions preventing cancellation or non-renewal without at least 30 days prior notice to Contractor. The Contractor shall forward to the Engineer any such notice received within seven days of the Contractor's receipt of such notice.

March 29, 2016

**REVISION OF SECTIONS 107 AND 208  
WATER QUALITY CONTROL  
UNDER ONE ACRE OF DISTURBANCE**

Sections 107 and 208 of the Standard Specifications are hereby revised for this project as follows:

In subsection 107.25(b) 6 delete the second paragraph and replace it with the following:

The Contractor shall record the location of potential pollutants on the plans. Descriptions of the potential pollutants shall be submitted to and approved by the Engineer.

In subsection 208.03 delete the first paragraph and replace it with the following:

Prior to construction the Contractor shall implement BMPs in accordance with the approved project schedule as described in subsection in 208.03(b).

In subsection 208.03 delete the third, fourth, and fifth paragraphs and replace them with the following:

The Contractor shall evaluate all non-stormwater coming onto the site, such as springs, seeps, and landscape irrigation return flow. If such flow is identified, BMPs shall be used to protect off-site water from becoming contaminated with sediment or other pollutants.

The Contractor shall review existing inlets and culverts to determine if inlet protection is needed due to water flow patterns. Prior to beginning construction, inlets and culverts needing protection shall be protected and the location of the implemented BMP added to the plans.

When additional BMPs are required and approved by the Engineer, the Contractor shall implement the additional BMPs and shall record and describe them on the plans. The approved BMPs will be measured and paid for in accordance with subsections 208.11 and 208.12.

Delete subsections 208.03(c) and (d) and replace them with the following:

(c) *Implementation, Maintenance and Revision of the SWMP.*

The Contractor's responsibilities shall be as follows:

- (1) Install, construct, and maintain all BMPs specified in the Contract and coordinate the construction of BMPs with all other construction operations.
- (2) Implement suitable temporary erosion and sediment control features as necessary to correct unforeseen conditions or emergency situations. Dismantle those features when their purpose has been fulfilled unless the Engineer directs that the features be left in place.
- (3) Implement necessary actions to reduce anticipated or presently existing water quality or erosion problems resulting from construction activities.
- (4) Make available, all labor, material, and equipment needed to install, maintain, and remove BMPs.
- (5) The Contractor shall assign to the project an individual to serve in the capacity of Stormwater Administrator (SWMP Administrator). These duties may be assumed by the Superintendent. The SWMP Administrator shall be experienced in all aspects of construction and have satisfactorily completed a Transportation Erosion Control Supervisor Certification (TECS) training authorized by the Department. Proof that this requirement has been met shall be submitted to the Engineer prior to or at the preconstruction conference. A list of authorized TECS training programs will be provided by the Engineer upon request by the Contractor. The SWMP Administrator shall be the person responsible for ensuring that the responsibilities listed in (1) through (7) in (d) are fulfilled.

(d) *Documentation Available on the Project.* The following Contract documents and references will be made available for reference in one location on the project during construction.

1. Project Documents. The following documents shall be kept, maintained, and updated in a single notebook:

- (1) SWMP Sheets
- (2) SWMP site map, if applicable to the project.
- (3) Details of BMPs used on the project not covered in Standard Plan M-208-1.
- (4) List of potential pollutants as described in subsection 107.25.
- (5) Spill Response Plan and reports of spills submitted to CDPHE.
- (6) Form 105s and all other correspondence relating to water quality.
- (7) Project environmental permits and associated applications and certifications.

2. Reference Materials

- (1) CDOT *Erosion Control and Stormwater Quality Guide*.
- (2) CDOT *Erosion Control and Stormwater Quality Field Guide*.
- (3) Copy of biological opinion, if applicable.

In subsection 208.04 delete the first and second paragraphs and replace them with the following:

The Contractor shall modify the SWMP to clearly describe and locate all BMPs implemented at the site to control potential sediment discharges from vehicle tracking.

Vehicle tracking pads shall be used at all vehicle and equipment access points to the site to prevent sediment exiting the project site onto paved public roads. Access shall be provided only at locations approved by the Engineer.

Delete subsection 208.04(e) and replace it with the following:

(e) *Stabilization.* Once earthwork has begun on a section, it shall be pursued until completion.

Clearing and grubbing operations shall be scheduled and performed so that grading operations and final stabilization measures can follow immediately thereafter if the project conditions permit. Otherwise temporary

stabilization measures shall be taken between successive construction stages. Additional work required because the Contractor has failed to properly coordinate the entire erosion control schedule, thus causing previously seeded areas to be disturbed by operations that could have been performed prior to the seeding shall be performed at the Contractor's expense.

In subsection 208.06 delete the first paragraph and replace it with the following:

**208.06 Materials Handling and Spill Prevention.** The Contractor shall clearly describe and record on the SWMP, all practices implemented at the site to minimize impacts from procedures or significant material that could contribute pollutants to runoff. Areas or procedures where potential spills can occur shall have spill contingency plans in place as specified in subsections 107.25(b) 6 or 208.06(c).

In subsection 208.07 delete the second paragraph and replace it with the following:

Erodible stockpiles (including topsoil) shall be contained with acceptable BMPs at the toe (or within 20 feet of the toe) throughout construction. BMPs shall be approved by the Engineer.

In subsection 208.08, delete the first paragraph and replace it with the following:

The Contractor shall limit construction activities to those areas within the limits of disturbance shown on the plans and cross-sections. Construction activities, in addition to the Contract work, shall include the on-site parking of vehicles or equipment, on-site staging, on-site batch plants, haul roads or work access, and all other action which would disturb existing conditions. Off road staging areas must be pre-approved by the Engineer, unless otherwise designated in the Contract. Construction activities beyond the limits of disturbance due to Contractor negligence shall be restored to the original condition by the Contractor at the Contractor's expense. The Contractor shall tabulate additional disturbances not identified in the SWMP and indicate locations and quantities on the SWMP and report to the Engineer.

In subsection 208.06 (c), delete (1) and replace with the following:

- (1) Identification and contact information of the Contractor, CDOT spill cleanup coordinators and the SWMP Administrator.

In subsection 208.09, second paragraph, delete the list and replace it with the following:

- (1) Failure to include erosion control in the project schedule or failure to include erosion control in each schedule update as specified in subsection 208.03(b).
- (2) Failure of the Contractor to implement necessary actions required by the Engineer as required by subsection 208.03(c) 4.
- (3) Failure to amend SWMP and implement BMPs as required by subsection 208.04.
- (4) Failure to keep documentation and records current.
- (5) Failure to construct or implement erosion control or spill containment measures required by the Contract, or failure to construct or implement them in accordance with the Contractor's approved schedule as required by subsection 208.06(c).
- (6) Failure to stabilize disturbed areas as required by subsections 208.04(e) and 208.08.
- (7) Failure to replace or perform maintenance on an erosion control feature after notice from the Engineer to replace or perform maintenance as required by subsection 208.04(f).
- (8) Failure to remove and dispose of sediment from BMPs as required.
- (9) Failure to install and properly utilize a concrete washout structure for containing washout from concrete placement operations.
- (10) Failure to perform permanent stabilization as required by subsection 208.04 (e).

The Engineer will immediately notify the Contractor in writing of each incident of failure to perform erosion control in accordance with these specifications, including items (1) through (10) above. Correction shall be made as soon as possible but no later than 48 hours from the date of notification to correct the failure. The Contractor will be charged liquidated damages in the amount of \$970 for each day after the 48 hour period has expired, that one or more of the

incidents of failure to perform the requirements for each notification, including items (1) through (10) above, remains uncorrected. Liquidated damages will begin at Midnight of the date the 48 hours has expired.

This deduction will not be considered a penalty, but will be considered liquidated damages based on estimated additional construction engineering costs. The liquidated damages will accumulate, for each cumulative day that one or more of the incidents remain uncorrected. The number of days for which liquidated damages are assessed will be cumulative for the duration of the project; that is: the damages for a particular day will be added to the total number of days for which liquidated damages are accumulated on the project. The liquidated damages will be deducted from any monies due the Contractor.

When a failure meets any one of the following conditions, the Engineer will immediately issue a Stop Work Order in accordance with subsection 105.01 irrespective of any other available remedy:

- (1) It may endanger health or the environment.
- (2) It consists of a spill or discharge of hazardous substances or oil which may cause pollution of the waters of the state.
- (3) It consists of a discharge which may cause an exceedance of a water quality standard.

If the Contractor requires more than 96 hours to perform the corrective work from the date on the Form 105, the Contractor shall submit a request for deferment. The deferment request shall be in writing and shall include the specific failure, temporary measures until final correction is made, the methodology which will be employed to make the correction and interim milestones to completing the work. The Region Water Pollution Control Manager (RWPCM), Engineer, the SWMP Administrator and the Contractor shall concur on this deferral and set a proposed date of completion. If approved, the Contractor shall complete the corrective measures by Midnight of the proposed completion date. If corrective work is not corrected by the completion date the Engineer will issue a Stop Work Order. Liquidated Damages will apply retroactively back to the 48 hours after the 105 date of notification. Liquidated Damages will be assessed until the corrective work has been completed and accepted.

Deferment of work to correct failure to perform erosion control will not affect the Contractor's other Contractual responsibilities, notifications for other non-compliance, nor the final completion date of the project. Liquidated damages for other non-compliance notifications will continue to apply during the deferment period in addition to liquidated damages associated with the deferment.

Based on the submittal date of the approved deferment Liquidated Damages and a Stop Work Order may not be mandated to the Contractor.

Disagreements regarding the suggested corrective action for a BMP compliance issue between the Engineer, SWMP Administrator, and Superintendent, shall be discussed with the Resident Engineer. If after the discussions, the SWMP Administrator, Engineer and the Contractor are still in disagreement and feel that additional compensation is owed, the Contractor will follow the decision of the Project Engineer, keep track of the costs and negotiate further with the Project Engineer. If after pursuing the issue, the Contractor is unable to reach agreement with the Project Engineer, then the Contractor can follow the dispute process outlined in subsection 105.22.

If the Contractor's corrective action plan and schedule are not submitted and approved within 96 hours of the initial notice, the Engineer will issue a Stop Work Order and have an on-site meeting with the Superintendent, SWMP Administrator. This meeting will also be attended by the Resident Engineer and the Region Program Engineer. This meeting will identify and document needed corrective actions and a schedule for completion. If after the meeting, the unacceptable work is not remedied within the schedule as agreed to in the meeting, the Engineer will take action to effect compliance by utilizing CDOT Maintenance personnel or other non-Contractor forces and deduct the cost from any moneys due or to become due to the Contractor pursuant to subsection 105.17. Delays due to these Stop Work Orders shall be considered non-excusable. The Stop Work Order shall be in place until the project is in compliance.

If the Contractor remains non-responsive to requirements of the on-site meeting, the Engineer will start default or Contract termination procedures in accordance with subsections 108.09 and 108.10. CDOT will proceed with corrective or disciplinary action in accordance with the Rules for Prequalification, Debarment, Bidding and Work on Transportation, Road, Highway and Bridge Public Projects.

Delete subsection 208.10 and replace it with the following:

**208.10 Items to Be Accomplished Prior to Requesting Partial Acceptance of Water Quality Work.**

- (a) *Reclamation of Washout Areas.* After concrete operations are complete, washout areas shall be reclaimed in accordance with subsection 208.05(n) at the Contractor's expense.
- (b) *Survey.* The Contractor shall survey Permanent Water Quality BMPs (Permanent BMPs) on the project after they are constructed and confirm they are at final configuration and grade. The Engineer will identify which Permanent

BMPs shall be surveyed prior to the final walk through. The survey shall be performed in accordance with Section 625.

- (c) *Removal of Temporary BMPs.* Temporary BMPs subject to removal will be determined by the Engineer at the final walk through of the project and shall be removed by the Contractor. If any temporary BMPs are left in place, the Region's Water Pollution Control Manager shall be notified of the BMP locations.

In subsection 208.12, delete the first paragraph and replace with the following:

SWMP Administrator duties on projects having less than one acre of total disturbed area will not be measured and paid for separately but shall be included in the work. The Erosion Control Management Pay Item will not apply to these projects.

January 31, 2013

### **REVISION OF SECTION 108 SUBLETTING OF CONTRACT**

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

Delete subsection 108.01 and replace with the following:

**108.01 Subletting of Contract.** The Contractor shall not sublet, sell, transfer, assign, or dispose of the Contract or Contracts, or any portion thereof without written permission of the Engineer. Prior to beginning any work by subcontractor, the Contractor shall request permission from the Engineer by submitting a completed Sublet Permit Application, CDOT Form No. 205. The subcontract work shall not begin until the Contractor has received the Engineer's written permission. The Contractor shall make all project related written subcontracts, agreements, and purchase orders available to the Engineer for viewing, upon request and at a location convenient to the Engineer.

The Contractor will be permitted to sublet a portion of the Contract, however, the Contractor's organization shall perform work amounting to 30 percent or more of the total original contract amount. Any items designated in the contract as "specialty items" may be performed by subcontract. The cost of "specialty items" so performed by subcontract may be deducted from the total original contract amount before computing the amount of work required to be performed by the Contractor's own organization. The original contract amount includes the cost of material and manufactured products which are to be purchased or produced by the Contractor and the actual agreement amounts between the Contractor and a subcontractor. Proportional value of a subcontracted partial contract item will be verified by the Engineer. When a firm both sells material to a prime contractor and performs the work of incorporating the materials into the project, these two phases shall be considered in combination and as constituting a single subcontract.

The calculation of the percentage of subcontracted work shall be based on subcontract unit prices.

Subcontracts or transfer of Contract shall not release the Contractor of liability under the Contract and Bond.

July 31, 2014

### **REVISION OF SECTION 108 NOTICE TO PROCEED**

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

Delete subsection 108.02 and replace with the following:

**108.02 Notice to Proceed.** The Contractor shall not commence work prior to the issuance of a Notice to Proceed. The "Notice to Proceed" will stipulate the date on which contract time commences. When the Contractor proceeds with work prior to that date, contract time will commence on the date work actually begins. The Contractor shall commence work under the Contract on or prior to the 15th day following Contract execution or the 30th day following the date of award, whichever comes later, or in accordance with the selected start date allowed in the special provisions.

**REVISION OF SECTION 108  
PROJECT SCHEDULE**

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

Delete subsection 108.03 and replace with the following:

**108.03 Project Schedule.**

(a) *Definitions.*

**Activity.** An activity is a project element on a schedule that affects completion of the project. An activity has a description, start date, finish date, duration, and one or more logic ties.

**Activity ID.** A unique, alphanumeric, identification code assigned to an activity and remains constant throughout the project.

**Bar Chart.** A simple depiction of a Project Schedule without relationships or supporting logic of the schedule.

**Calendar.** Defined work periods and no work periods that determine when project activities can occur. Multiple calendars may be used for different activities; e.g., a 5-day work-week and a 7-day work-week calendar.

**Constraint.** A restriction imposed in a schedule, which fixes a value that would otherwise be calculated within the schedule. Examples of values that can be fixed by a constraint include start date, end date, and completion date.

**Critical Path.** The sequence of activities that determines the duration of the project.

**Critical Path Method Scheduling. (CPM Scheduling)** is a logic-based planning technique using activity durations and relationships between activities to calculate a schedule determining the minimum total project duration.

**Data Date.** The starting point from which to schedule all remaining work.

**Duration.** The estimated amount of time needed to complete an activity.

**Float.** The amount of time between the earliest date an activity can start and the latest date when an activity must start, or the earliest date an activity can finish and latest date when an activity can finish before the activity becomes critical. The time between the Project Schedule completion date and the Contract completion date is not considered float.

**Gantt Chart.** A time-scaled graphical display of the project's schedule.

**Lag.** A time-value assigned to a relationship.

**Logic.** Relationships between activities defining the sequence of work (See also predecessor activity and successor activity).

**Milestone.** An activity, with no duration used to represent an event.

**Open-Ended Activity.** An activity that does not have both a predecessor activity and a successor activity.

**Predecessor Activity.** An activity that is defined by schedule logic to precede another activity.

**Relationship.** The interdependence between activities.

**Salient Feature.** An item of work that is of special interest for CDOT in coordinating the project schedule but may not affect the overall completion of the project.

**Successor Activity.** An activity that is defined by schedule logic to follow another activity.

Time-Scaled Logic Diagram. Gantt chart that illustrates logic links depicting both schedule logic and the time at which activities are performed.

(b) *Project Schedule - General*

The Contractor shall use either Microsoft Project or Primavera Scheduling software to develop and manage a CPM Project Schedule to plan, schedule, and report the progress of the work. Prior to, or at the Pre-construction Conference, the Contractor shall notify the Engineer in writing, which scheduling software the Contractor shall use to manage the project. The Contractor's selection and use of particular scheduling software cannot be changed after the first schedule submittal. If the Contractor selects Primavera, the Contractor shall calculate the schedule using the Retained Logic scheduling option. The Department will not allow use of bar charts for the Project Schedule.

The Contractor shall submit schedules for approval by the Engineer. The purpose of these schedules is to allow the Contractor and the Department to jointly manage the work and evaluate progress. The schedules also serve to evaluate the effect of changes and delays to the scheduled project completion. Either party may require a formal schedule review meeting.

The Contractor's schedule shall consist of a time-scaled logic diagram and shall show the logical progression of all activities required to complete the work.

The Contractor shall use activity descriptions that ensure the work is easily identifiable. The Contractor shall show the no-work days in the schedule calendars.

The Contractor shall use durations for individual construction activities that do not exceed 15 calendar days unless approved by the Engineer. The Contractor may group a series of activities with an aggregate duration of five days or less into a single activity. Non-construction activities may have durations exceeding 15 working days, as approved by the Engineer.

The Contractor may include summary bars in the schedule as long as the detailed activities to complete the work are displayed.

The Contractor shall not use the following:

- (1) Negative lags
- (2) Lags in excess of 10 working days without approval by the Engineer. The Contractor's written request shall justify the need for the lag. Lags shall be identified.
- (3) Start-to-finish relationships.
- (4) Open-ended activities - every activity shall have at least one predecessor activity and at least one successor activity, except for the first and last activities in the network. If the contractor uses a start-to-start relationship to link two activities, then both of those two activities should also have successor activities linked by either a finish-to-start or a finish-to-finish relationship.
- (5) Constraints without approval by the Engineer. The Contractor's written request shall explain why the use of constraints in the schedule is necessary.

The Project Schedule shall show all activities required by all parties to complete the work. The Project Schedule shall include subcontracted work, delivery dates for critical material, submittal and review periods, permits and governmental approvals, milestone requirements, utility work by others and no work periods. The Contractor, its subcontractors, suppliers, and engineers, at any tier, shall perform the work according to the approved Project Schedule.

Float within the Baseline Schedule or any other Project Schedule is not for the exclusive use or benefit of either party, but is a project resource available to both parties as needed until it is depleted.

For any schedule submittal that shows completion in less than 85 percent of the Contract Time, the Contractor shall submit planned production rates in the schedule for all activities with float of 10 days or less. The Engineer may require additional methods statements for activities with float of 10 days or less.

The Engineer's review of the schedule will not exceed 10 calendar days. The Engineer will provide the Contractor with one of the following responses within 10 days after receipt of the Project Schedule:

- (1) Approved, no exceptions taken;
- (2) Approved-as-Noted; or
- (3) Revise and Resubmit within 10 days.

The Contractor shall not assume that approval of the Project Schedule relieves the Contractor of its obligation to complete all work within the Contract Time.

- (c) *Schedule Submittals.* The Contractor shall include a time-scaled logic diagram with all schedule submittals that:
- (1) Is plotted on a horizontal time-scale in accordance with the project calendar.
  - (2) Uses color to clearly identify the critical path.
  - (3) Is based on early start and early finish dates of activities.
  - (4) For Schedule Updates and Schedule Revisions, shows actual completion dates up to but not including the data date.
  - (5) Clearly shows the sequence and relationships of all activities necessary to complete the contract work.
  - (6) Includes an activity block for each activity with the following information:

<b>Activity ID</b>	<b>Activity Description</b>
<b>Original Duration</b>	<b>Total Float</b>
<b>Early start date</b>	<b>Early finish date</b>
<b>Late start date*</b>	<b>Late finish date*</b>
<b>Actual Start date^</b>	<b>Actual Finish date^</b>
<b>Calendar used on the activity</b>	<b>Activity Responsibility</b>
<b>Remaining Duration^</b>	<b>Duration Percent Complete^</b>
<b>Gantt chart (time-scaled logic diagram)</b>	
<b>*Required with the Preliminary and Baseline Schedule.</b>	
<b>^Required with the Project Schedule Update and Schedule Revision.</b>	

The Contractor shall include the following with all schedule submittals:

- (1) A Job Progress Narrative Report that includes the following:
  - (i) A description of the work performed since the previous month's schedule update.
  - (ii) A description of problems encountered or anticipated since the previous month's schedule submission.
  - (iii) A description of unusual labor, shift, equipment, or material conditions or restrictions encountered or anticipated.
  - (iv) The status of all pending items that could affect the schedule.
  - (v) Explanations for milestones forecasted to occur late.
  - (vi) Scheduled completion date status and any change from the previous month's submission.
  - (vii) An explanation for a scheduled completion date forecasted to occur before or after the contract completion date or contract time.
  - (viii) Schedule Delays:
    - 1. A description of current and anticipated delays including: Identification of the delayed activity or activities by Activity ID(s) and description(s).
    - 2. Delay type with reference to the relevant specification subsection.
    - 3. Delay cause or causes.
    - 4. Effect of the delay on other activities, milestones, and completion dates.
    - 5. Identification of the actions needed to avoid a potential or mitigate an actual delay.
    - 6. A description of the critical path impact and effect on the scheduled completion date in the previous month's schedule update.
  - (ix) A list of all added and deleted activities along with an explanation for the change.

- (x) All logic and duration changes along with an explanation for the change.
- (2) A Predecessor Activity and Successor Activity report that defines all schedule logic and clearly indicates all logical relationships and constraints.
- (3) An Early Start report listing all activities, sorted by actual start/early start date.
- (4) A Float report listing all activities sorted in ascending order of available float.
- (5) A Critical Path report listing all activities not yet complete with the percent complete, sorted by float and then by early start.
- (6) A listing of all non-work days.

For all required schedule submittals, the Contractor shall submit two electronic copies on two compact disk, USB flash drive, or other media as directed by the Engineer. Electronic copies of CPM schedules shall be submitted both in the native schedule format and in "PDF" format. The Contractor shall also provide two printed copies of the CPM Schedule and all reports.

Each schedule submittal shall be appropriately labeled as a Preliminary Schedule, Baseline Schedule, Project Schedule Update, or Schedule Revision. The title bar shall include the CDOT project number, subaccount, project name, contractor name, schedule data date. If an originally submitted schedule is revised during review, the title bar shall also include a revision number (REV1, REV2, etc.) and revision date.

- (d) *Preliminary Schedule.* Within 14 days of award of the Contract, the Contractor may submit a Preliminary Schedule showing all planned activities from the Notice to Proceed through the first 60 days of the project. If the Contractor elects not to submit a Preliminary Schedule, then the Contractor shall submit a complete Baseline Schedule within 14 days of award of the Contract, which will be subject to all requirements of a Baseline submittal. The Preliminary Schedule shall not show any progress and it will be approved by the Engineer before work can commence. The Preliminary Schedule shall be used as the basis for the Baseline Schedule.
- (e) *Baseline Schedule.* If the Contractor elects to submit a Preliminary Schedule, within 45 days of the award of Contract, the Contractor shall submit a Baseline Schedule that includes all work activities completed within Contract Time. The Contractor shall not show progress in the Baseline Schedule. Further partial payments will not be made beyond 60 days after the start of Contract Time unless the Baseline Schedule is approved. When approved, the Baseline Schedule shall become the Project Schedule.

The Contractor shall use all information known by the Contractor at the time of bid submittal to develop the Baseline Schedule.

If the Contractor elects to submit a Baseline Schedule in lieu of a Preliminary Schedule, the Baseline Schedule shall be approved before work can commence.

- (f) *Methods Statements.* The Contractor shall submit a Methods Statement for each salient feature or as directed by the Engineer that describes all work necessary to complete the feature. The Contractor shall include the following information in the Methods Statement:
  - (1) Salient feature name;
  - (2) Responsibility for the salient feature work;
  - (3) Planned work procedures;
  - (4) The planned quantity of work per day for each salient feature using the same units of measure as the applicable pay item;
  - (5) The anticipated labor force by labor type;
  - (6) The number, types, and capacities of equipment planned for the work;
  - (7) The planned time for the work including the number of work days per week, number of shifts per day, and the number of hours per shift.
- (g) *Project Schedule Update.* The Contractor shall submit a monthly update of the Project Schedule updated through the cut-off date for the monthly progress pay estimate, and a projection for completing all remaining activities. A schedule update may show a completion date that is different than the Contract completion date, after the baseline schedule is approved. Approval of this schedule shall not relieve the Contractor of its obligation to complete the

work within the Contract Time. In this case, the Contractor shall provide an explanation for a late scheduled completion date in the Job Progress Narrative Report included with the schedule submittal.

When approved, the Project Schedule Update will become the Project Schedule. The Engineer will not issue a monthly progress payment if the Engineer has not received the Project Schedule Update. The Engineer will not make monthly progress payments for the months following the Project Schedule Update submission until the Engineer approves the Project Schedule Update.

When the project has a maintenance or landscape establishment period, the Engineer may waive the monthly update requirement. The Contractor shall submit a final Project Schedule Update that shows all work through the final acceptance date.

- (h) *Weekly Planning Schedule.* The Contractor shall submit, in writing, a Weekly Planning Schedule that shows the Contractor's and all Subcontractor's planned activities for a minimum of two weeks immediately following the date of submittal and actual days worked versus planned for the week prior to the date of submittal. This schedule shall include the description, duration and sequence of work activities and anticipated lane closures for the upcoming two weeks. The Weekly Planning Schedule may be a time-scaled logic diagram or other standard format as approved by the Engineer. subsection 108.03(c) Schedule Submittal requirements for reports do not apply to the Weekly Planning Schedule.
- (i) *Schedule Revision.* A Schedule Revision is required in the event of any major change to the work. Examples of major changes are:
- (1) Significant changes in logic or methods of construction or changes to the critical path;
  - (2) Addition, deletion, or revision of activities required by contract modification order;
  - (3) Approval of a Contractor submitted Value Engineering Change Proposal;
  - (4) Delays in milestones or project completion;
  - (5) Phasing revisions, or;
  - (6) If the Engineer determines that the schedule does not reflect the actual work.

This revision shall include a description of the measures necessary to achieve completion of the work within the Contract Time. The Contractor may also need to submit revised Methods Statements. The Contractor shall provide a Schedule Revision within 10 days of written notification and shall include the diagrams and reports as described in subsection 108.03 (b) Schedule - General and (c) Schedule Submittals. In this case, the Contractor shall provide an explanation for a late scheduled completion date in the Job Progress Narrative Report included with the schedule.

Once approved, the Schedule Revision becomes the Project Schedule.

- (j) *Payment.* All costs relating to the requirements of this subsection will not be paid for separately, but shall be included in the work.

April 30, 2015

### **REVISION OF SECTION 108 DELAY AND EXTENSION OF CONTRACT TIME**

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

In subsection 108.08, delete (c) and (d) and replace with the following:

(c) *Delay.* Any event, action or factor that extends the performance period of the Contract.

1. *Excusable Delay:* A delay that was beyond the Contractor's control and was not due to the Contractor's fault or negligence. The Department may grant a contract time extension for an excusable delay.
  - A. *Compensable Delay:* A delay that the Department, not the Contractor, is responsible for entitling the Contractor to a time extension and monetary compensation. Monetary compensation for compensable delays will be made in accordance with Subsection 109.10.
  - B. *Noncompensable Delay:* An excusable delay that neither the Contractor nor the Department is responsible for that may entitle the Contractor to a contract time extension but no additional monetary compensation. Contract

time allowed for the performance of the work may be extended for delays due to force majeure (i.e. acts of God, acts of the public enemy, terrorist acts, fires, floods, area wide strikes, embargoes, or unusually severe weather).

2. *Nonexcusable Delay*: A delay that was reasonably foreseeable or within the control of the Contractor for which the Department will not grant monetary compensation or a contract time extension.

3. *Concurrent Delay*. Independent delays to critical activities occurring at the same time.

A. The *Department* will not grant a time extension or additional compensation for the period of time that a non-excusable delay is concurrent with an excusable delay.

B. The Department may grant time but no compensation for the period of time that a non-compensable delay is concurrent with a compensable delay.

Delays in delivery of materials or fabrication scheduling resulting from late ordering, financial considerations, or other causes that could have been foreseen or prevented will be considered nonexcusable delays. However, delays caused by fuel shortage or delay in delivery of materials to the Contractor due to some unusual market condition caused by industry-wide strike, national disaster, area-wide shortage, or other reasons beyond the control of the Contractor which prevent procurement of materials or fuel within the allowable contract time limits will be considered excusable delays.

(d) *Extension of Contract Time*. The Contractor's assertion that insufficient contract time was specified is not a valid reason for an extension of contract time. For time extension requests, the Contractor shall provide a two-part submittal: part one shall consist of a written notice of the delay and part two shall consist of the Contractor's delay documentation and supporting analysis.

Part 1: The Contractor shall provide the written notice of delay within seven days of the delay occurrence. The notice shall describe the delay and include documentation substantiating the nature and cause of the delay. Failure to submit the written notice constitutes a waiver of entitlement to additional time or compensation.

Part 2: This shall be submitted within 30 days of the written notice. The Contractor shall include all documentation needed to support the time extension request. In order to request additional contract time for an unexpected delay, the Contractor shall provide a contemporaneous schedule analysis in accordance with subsection 108.03. The schedule analysis shall show that the delayed activity or activities were on the critical path or became critical due to the delay.

The Engineer will base a determination of an allowable contract time extension on:

- (1) The current Schedule in effect at the time of the alleged delay;
- (2) The supporting documentation submitted by the Contractor;
- (3) The contemporaneous schedule analysis; and
- (4) Any other relevant information available to the Engineer.

For a time extension request resulting from a change order, the Contractor shall demonstrate the delay to the project completion date by:

- (1) Inserting a fragnet containing the change order activities into an unprogressed copy of the schedule that is current at the time of the change order;
- (2) tying the fragnet into the schedule logic; and
- (3) Recalculating the schedule.

The Department will not consider delays to activities which do not affect the performance period of the Contract as a basis for a Contract time extension. If the Engineer grants a contract time extension, the revised Contract Completion date will be in effect as though it were the original contract date.

A Contractor's failure to have an approved, or approved with comments, current project schedule in place will preclude the Department from considering a Contractor's a time extension request.

**REVISION OF SECTION 109  
SCALES**

Section 109 of the Standard Specifications is hereby revised for this project as follows:

In subsection 109.01, delete the 11<sup>th</sup> paragraph and replace with the following:

Materials measured or proportioned by weight shall be weighed on accurate scales. Scales shall be accurate within the allowable tolerances as prescribed by State law. The scales shall be tested for accuracy by the Colorado Department of Agriculture or an approved Colorado Department of Agriculture vendor (<https://www.colorado.gov/pacific/aginspection/scale-companies>) as least once each year, each time the scales are relocated, and as often as the Engineer may deem necessary. Scales shall be furnished by the Contractor or the Contractor may utilize commercial scales.

February 3, 2011

**REVISION OF SECTION 109  
MEASUREMENT OF QUANTITIES**

Section 109 of the Standard Specifications is hereby revised for this project as follows:

In subsection 109.01, delete the 17<sup>th</sup> paragraph and replace it with the following:

Vehicles used to haul material being paid for by weight shall bear a plainly legible identification mark. Each of these vehicles shall be weighed empty daily at times directed by the Engineer. The Contractor shall furnish to the Engineer, in writing, a vehicle identification sheet that lists the following for each delivery vehicle to be used on the project:

- (1) identification mark
- (2) vehicle length
- (3) tare weight
- (4) number of axles
- (5) the distance between extreme axles
- (6) information related to legal weight, including the Permit No. and permitted weight of each vehicle for which the State has issued an overweight permit.

This information shall be furnished prior to time of delivery of the material and at any subsequent time the Contractor changes vehicles, combination vehicles, axle length relationships, or overweight permitting of vehicles.

May 5, 2011

**REVISION OF SECTION 109  
COMPENSATION FOR COMPENSABLE DELAYS**

In subsection 109.10, delete the first two paragraphs and replace with the following:

**109.10 Compensation for Compensable Delays.** If the Engineer determines that a delay is compensable in accordance with either subsection 105.22, 105.23, 105.24, or 108.08, monetary compensation will be determined in accordance with this subsection.

- (a) These categories represent the only costs that are recoverable by the Contractor. All other costs or categories of costs are not recoverable:
  - (1) Actual wages and benefits, including FICA, paid for additional labor not otherwise included in (5) below;
  - (2) Costs for additional bond, insurance and tax;
  - (3) Increased costs for materials;
  - (4) Equipment costs calculated in accordance with subsection 109.04(c) for Contractor owned equipment and based on invoice costs for rented equipment;
  - (5) Costs of extended job site overhead;
  - (6) Costs of salaried employees not otherwise included in (1) or (5) above incurred as a direct result of the delay;

- (7) Claims from subcontractors and suppliers at any level (the same level of detail as specified herein is required for all such claims);
- (8) An additional 16 percent will be added to the total of items (1) through (7) as compensation for items for which no specific allowance is provided, including profit and home office overhead.

May 12, 2016

**REVISION OF SECTIONS 202, 627 AND 708  
PAVEMENT MARKING PAINT**

Sections 202, 627 and 708 of the Standard Specifications are hereby revised for this project as follows:

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

- (a) *Removal of temporary pavement marking on final alignment.* Temporary pavement marking paint on the approved final alignment shall be removed completely from the roadway surface at locations of permanent pavement markings as shown on the plans. The ground location shall be clean, dry and free of laitance, oil, dirt, grease, paint or other foreign contaminants prior to application of final pavement marking. The Contractor shall not remove more pavement marking paint than what can be replaced with permanent pavement marking during the same working day or working period. If an event occurs that precludes the contractor from completing the work during the placement of permanent marking, the Contractor shall halt the removal operation and raised flexible pavement markers shall be placed at locations that have been removed but not marked while the pavement is drying prior to the marking application. Marking application shall resume when pavement is dry and has had no moisture for a minimum of 24 hours. Raised flexible pavement markers shall be installed with one marker at 40-foot centers.
- (b) *Removal of temporary pavement marking on transitions.* Removal of pavement marking paint on temporary transitional alignments shall be performed by grinding or water-blasting. The removal shall result in 100 percent removal of the paint and a wide swath of ground pavement surrounding the former location of the temporary paint. The width of the swath shall be as follows; the center of the swath shall be the location of the paint line:

Width of Pavement Marking to be removed	Width of Swath
≤ 8 inches	12 inches
> 8 inches	15 inches

Subsection 202.11 shall include the following:

Removal of temporary pavement marking on transitions will be measured as the actual square feet of the swath constructed for the required width. Removal of pavement marking for the permanent alignment will be measured as the actual number of square feet removed.

Subsection 202.12 shall include the following:

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Removal of Pavement Marking	Square Foot
Removal of Pavement Marking (12 Inch)	Square Foot
Removal of Pavement Marking (15 Inch)	Square Foot

Raised pavement markings shall be at the Contractor's expense.

In subsection 627.04, delete the first paragraph and replace with the following:

**627.04 Pavement Marking with Low Temperature Acrylic Paint and High Build Acrylic Paint.** Striping shall be applied when the air and pavement temperatures are no less than 45 °F for waterborne and high-build paint, and 35°F for low temperature waterborne paint on asphalt or portland cement concrete pavements. The pavement surface shall be dry and clean, and free of all latent materials, in accordance with manufacturer recommendations. Weather conditions shall be conducive to satisfactory results.

Glass beads shall be applied into the paint by means of a low pressure, gravity drop bead applicator. In subsection 627.04 delete the table and replace it with the following:

Description		Pavement Marking Paint	
		Low Temp	High Build
Alignment	Lateral Deviation	2.0 inch per 200 foot Max	
Coverage Rate	Sq. Ft. per Gallon	89-93	67-70
Thickness	Mil	□□□□□	23-24
Width	Inches	Per Plans +/- 0.25	Per Plans +/- 0.25
Dry Time	Minutes	5-10	7-12
Beads	Application Rate, lbs./gal	7-8	9-10

Subsection 627.13 shall include the following:

Pay Item	Pay Unit
Pavement Marking Paint (High Build)	Gallon
Pavement Marking Paint (Low Temperature)	Gallon

Delete subsection 708.05 and replace with the following:

**708.05 Pavement Marking Materials.** All pavement marking materials shall be selected from the Department’s Approved Products List (APL). Prior to start of work, a Certificate of Compliance (COC) for all pavement marking materials shall be submitted in accordance with subsection 106.13.

(a) *Color.* The pavement marking paint, without drop-on beads, shall correspond following requirements:

White – Federal Standard No. 595B-17925. The Yellowness Index (YI) of white shall not exceed 8.0 per ASTM E-313-10 initially. The color after drying shall be a flat-white, free from tint, and shall provide the maximum amount of opacity and visibility under both daylight and artificial light.

Yellow – Materials for pavement markings shall meet the initial daytime chromaticity that fall within the box created by the following corner points:

Initial Daytime Chromaticity Coordinates (Corner Points)

	1	2	3	4
x	0.530	0.510	0.455	0.472
y	0.456	0.485	0.444	0.400

(b) *Low Temperature Acrylic Waterborne Paint.* Low Temperature Acrylic Waterborne Paint binder (nonvolatile portion of vehicle) shall be 100 percent XSR acrylic polymer, by weight, as determined by infrared analysis or other chemical analysis available to the Department.

(c) *High Build Acrylic Waterborne Paint.* High build acrylic waterborne paint binder (nonvolatile portion of vehicle) shall be 100 percent HD 21 acrylic cross linking polymer, by weight, as determined by infrared analysis or other chemical analysis available to the Department.

Low Temperature Acrylic Waterborne Paint, and High Build Acrylic Waterborne paint shall meet the following requirements:

**Performance Requirements:** The paint shall be water resistant and shall show no softening or blistering.

**Table 708-1  
LOW TEMPERATURE WATERBORNE AND HIGH BUILD ACRYLIC WATERBORNE PAINT**

<b>Property</b>	<b>White</b>	<b>Yellow</b>	<b>Test Method</b>
Nonvolatile portion of vehicle (white and yellow), %	43.0 (min)	43.0 (min)	ASTM D 2205
<b>Pigment Composition</b>			
Percent by weight♦	60.0	60.0	ASTM D 4451 ASTM D 3723
<b>Paint</b>			
Titanium Dioxide Content, lb./gal	1.0 (min)		ASTM D 5381
<b>Properties of the Finished Paint</b>			
Total Non-volatiles, (solids) % by weight	77.0 (min)	77.0 (min)	FTMS 141C - Method 4053.1, ASTM D 2369, or ASTM D 4758
Density, lbs./gal	14.0-14.6	13.7-14.3	ASTM D 2205
Consistency (Viscosity) White and Yellow, Krebs-Stormer Units	85-95	85-95	ASTM D 562
Freeze Thaw Stability	Shall complete 5 or more test cycles successfully		ASTM D 2243
Fineness of Grind, Cleanliness Rating B, minimum	3	3	ASTM D 1210
Scrub Resistance	800	800	ASTM D2486
Directional Reflectance: [15 mil Wet Film]	88 (min)	50 (min)	ASTM E 1347
Dry Opacity (Contrast Ratio): [5 mil Wet Film]	0.95 (min)	0.95 (min)	ASTM D 2805
♦Percent by weight shall include percent of organic yellow pigment.			

July 19, 2012

**REVISION OF SECTIONS 203, 206, 304 AND 613  
COMPACTION**

Sections 203, 206, 304 and 613 of Standard Specifications are hereby revised for this project as follows:

In subsection 203.03 (a), delete the fifth paragraph and replace with the following:

1. *Soil Embankment.* Soil embankment consists of materials with 50 percent or more of the material passing the 4.75 mm (No. 4) sieve.

A soil embankment may also have more than 50 percent of the material retained on the 4.75 mm (No. 4) sieve, but no more than 30 percent of the material retained on the 19 mm (3/4 inch) sieve.

Soil embankment shall be constructed with moisture density control in accordance with the requirements of subsection 203.07.

2. *Rock Embankment.* Rock embankment consist of materials with 50 percent or more of the material retained on the 4.75 mm (No. 4) sieve and with more than 30 percent of the material retained on the 19 mm (3/4 inch) sieve. All material shall be smaller than 6 inches. Rock embankments shall be constructed without moisture density control in accordance with the requirements of subsection 203.08.

Delete Subsection 203.07 and replace with the following:

**203.07 Construction of Embankment and Treatment of Cut Areas with Moisture and Density Control.** Soil embankments shall be constructed with moisture and density control and the soil upon which the embankments are to be constructed shall be scarified to a depth of 6 inches and compacted with moisture and density control. The moisture content of the soil at the time of compaction shall be as specified or directed.

The material shall be removed from the full width of roadbed in all cut sections to the designated depth. The soil below the designated depth shall be thoroughly scarified to a depth of 6 inches and the moisture content increased or

reduced, as necessary, to obtain the moisture content specified. This scarified layer shall then be compacted to the relative compaction specified.

All embankment material shall be compacted to not less than 95 percent relative compaction. Maximum dry density of all soil types encountered or used will be determined in accordance with AASHTO T 99 as modified by CP 23.

Soils shall be compacted at  $\pm 2$  percent of Optimum Moisture Content (OMC) as determined by AASTHO T 99. Soils having greater than 35 percent passing the 75  $\mu\text{m}$  (No. 200) sieve shall be compacted to 0 to 3 percent above OMC. Soils which are unstable at the above moisture content shall be compacted at lower moisture content to the specified density.

Additional work involved in drying embankment material to the required moisture content shall be included in the contract price paid for excavating or furnishing the material with no additional compensation.

Density requirements will not apply to materials which cannot be tested in accordance with the above procedures for determining maximum dry density. Compaction for materials which cannot be tested shall be in accordance with subsection 203.08.

Claystone or soil-like non-durable shale shall be pulverized and compacted to the specified moisture and percent of relative compaction and shall be compacted with a heavy tamping foot roller, weighing at least 30 tons. Each tamping foot roller shall protrude from the drum a minimum of 4 inches. Each embankment layer shall receive a minimum of three or more coverages with the tamping foot roller to obtain density. One coverage consists of one pass over the entire surface designated. One pass consists of the passing of an acceptable tamping foot roller over a given spot. The roller shall be operated at a uniform speed not exceeding 3 miles per hour. No additional compensation will be made for additional roller coverages to achieve specified density requirements.

In subsection 206.03, delete the fourth and fifth paragraphs and replace with the following:

Backfill shall consist of approved materials uniformly distributed in layers brought up equally on all sides of the structure. Each layer of backfill shall not exceed 6 inches before compacting to the required density and before successive layers are placed. Structure backfill (Class 1) shall be compacted to a density of not less than 95 percent of maximum dry density determined in accordance with AASHTO T 180 as modified by CP 23. Backfill shall be compacted at  $\pm 2$  percent of Optimum Moisture Content (OMC).

Structure backfill (Class 2) shall be compacted to a density of not less than 95 percent of maximum dry density. The maximum dry density and OMC for A-1, A-2-4, A-2-5 and A-3 materials will be determined in accordance with AASHTO T 180 as modified by CP 23. The maximum dry density and OMC for all other materials will be determined in accordance with AASHTO T 99 as modified by CP 23. Materials shall be compacted at  $\pm 2$  percent of Optimum Moisture Content (OMC). Materials having greater than 35 percent passing the 75  $\mu\text{m}$  (No. 200) sieve shall be compacted at 0 to 3 percent above OMC.

In subsection 304.06, delete the first paragraph and replace with the following:

**304.06 Shaping and Compaction.** Compaction of each layer shall continue until a density of not less than 95 percent of the maximum density determined in accordance with AASHTO T 180 as modified by CP 23 has been achieved. The moisture content shall be at  $\pm 2$  percent of optimum moisture content. The surface of each layer shall be maintained during the compaction operations so that a uniform texture is produced and the aggregates are firmly keyed. Moisture conditioning shall be performed uniformly during compaction.

In subsection 613.07, delete the 15<sup>th</sup> paragraph and replace with the following:

Trenching shall be backfilled and compacted as follows: Backfill shall be deposited in uniform layers. The thickness of each layer shall be 6 inches or less thick prior to compaction. The space under the conduit shall be completely filled. The remainder of the trench and excavation shall be backfilled to the finished grade. The backfill material shall be compacted to the density of not less than 95 percent of maximum dry density. The maximum dry density and optimum moisture content (OMC) for A-1, A-2-4, A-2-5 and A-3 materials will determined in accordance with AASHTO T 180 as modified by CP 23. The maximum dry density and OMC for all other materials will determined in accordance with AASHTO T 99 as modified by CP 23. Materials shall be compacted at  $\pm 2$  percent of Optimum Moisture Content (OMC). Materials having greater than 35 percent passing the 75  $\mu\text{m}$  (No. 200) sieve shall be compacted at 0 to 3 percent above OMC. Each layer shall be mechanically compacted by tamping with power tools approved by the Engineer. Compaction methods or equipment that damage the conduit shall not be used.

**REVISION OF SECTIONS 206 AND 601  
MATURITY METER AND CONCRETE  
FORM AND FALSEWORK REMOVAL**

Sections 206 and 601 of the Standard Specifications are hereby revised for this project as follows:

In subsection 206.03, delete the ninth paragraph and replace with the following:

Backfill material shall not be deposited against newly constructed masonry or concrete structures, until the concrete has developed a compressive strength of  $0.8 f'_c$ , except in cases where the structures support lateral earth pressure. Concrete compressive strength for structures supporting lateral earth pressure shall conform to subsection 601.12 (o).  Concrete compressive strength shall be determined by maturity meters.

In subsection 601.09, delete (h) and replace with the following:

(h) *Removal of Forms.* The forms for any portion of the structure shall not be removed until the concrete is strong enough to withstand damage when the forms are removed.

Unless specified in the plans, forms shall remain in place for members that resist dead load bending until concrete has reached a compressive strength of at least 80 percent of the required 28 day strength,  $0.80f'_c$ . Forms for columns shall remain in place until concrete has reached a compressive strength of at least 1,000 psi. Forms for sides of beams, walls or other members that do not resist dead load bending shall remain in place until concrete has reached a compressive strength of at least 500 psi.

Forms and supports for cast-in-place concrete box culverts (CBCs) shall not be removed until the concrete compressive strength exceeds  $0.6 f'_c$  for CBCs with spans up to and including 12 feet, and  $0.67 f'_c$  for CBCs with spans exceeding 12 feet but not larger than 20 feet. Forms for CBCs with spans larger than 20 feet shall not be removed until after all concrete has been placed in all spans and has attained a compressive strength of at least  $0.80f'_c$ .

Concrete compressive strength shall be determined by maturity meters. At the pre-pour conference, the Contractor shall submit the location where maturity meters will be placed.

The Contractor shall provide maturity meters and all necessary wires and connectors. The Contractor shall be responsible for the placement and maintenance of the maturity meter and wire. . At a minimum a maturity meter will be placed at the mid-span of beams and at support locations. Placement shall be as directed by the Engineer.

For structures with multiple maturity meters, the lowest compressive strength shall determine when the forms can be removed.

Acceptance cylinders shall not be used for determining compressive strength to remove forms.

When field operations are controlled by maturity meters, the removal of forms, supports and housing, and the discontinuance of heating and curing may begin when the concrete is found to have the required compressive strength.

Forms for median barrier, railing or curbs, may be removed at the convenience of the Contractor after the concrete has hardened.

All forms shall be removed except permanent steel bridge deck forms and forms used to support hollow abutments or hollow piers when no permanent access is available into the cells. When permanent access is provided into box girders, all interior forms and loose material shall be removed, and the inside of box girders shall be cleaned.

In subsection 601.11, delete (e) and replace with the following:

(e) *Falsework Removal.* Unless specified in the plans or specifications, falsework shall remain in place until concrete has attained a minimum compressive strength of  $0.80f'_c$ .

Falsework supporting any span of a simple span bridge shall not be released until after all concrete, excluding concrete above the bridge deck, has attained a compressive strength of at least  $0.80f'_c$ .

Falsework supporting any span of a continuous or rigid frame bridge shall not be released until after all concrete, excluding concrete above the bridge deck, has been placed in all spans and has attained the compressive strength of at least 0.80f'c.

Falsework for arch bridges shall be removed uniformly and gradually, beginning at the crown, to permit the arch to take its load slowly and evenly.

Falsework supporting overhangs and deck slabs between girders shall not be released until the deck concrete has attained a compressive strength of at least 0.80f'c.

Falsework for pier caps which will support steel or precast concrete girders shall not be released until the concrete has attained a compressive strength of at least 0.80f'c. Girders shall not be erected onto such pier caps until the concrete in the cap has attained the compressive strength of at least 0.80f'c.

Falsework for cast-in-place prestressed portions of structures shall not be released until after the pre-stressing steel has been tensioned.

Concrete compressive strength shall be determined by maturity meters. At the pre-pour conference, the Contractor shall submit the location that maturity meters will be placed.

The Contractor shall provide maturity meters and all necessary wires and connectors. The Contractor shall be responsible for the placement and maintenance of the maturity meters and wires. At a minimum a maturity meter will be placed at the mid-span of beams and at support locations. Placement shall be as directed by the Engineer.

For structures with multiple maturity meters, the lowest compressive strength shall determine when the falsework can be removed.

Acceptance cylinders shall not be used for determining compressive strength to remove falsework.

Subsection 601.12 (l) shall include the following after the first paragraph:

Concrete compressive strength shall be determined by maturity meters.

Subsection 601.12 shall include the following:

- (o) *Backfilling Structures that Support Lateral Earth Pressure.* Concrete compressive strengths shall reach f'c before backfilling operations can begin with heavy equipment, such as skid-steers or self-powered riding compactors. Concrete compressive strengths shall reach 0.8 f'c before backfilling operations can begin with hand operated equipment. Concrete compressive strength shall be determined by maturity meters.

Delete subsections 601.13 (2) and 601.13 (3) and replace with the following:

- (2) The minimum curing period shall be from the time the concrete has been placed until the concrete has met a compressive strength of 80 percent of the required field compressive strength. The Contractor shall develop a maturity relationship for the concrete mix design in accordance with CP 69. The Contractor shall provide the maturity meter and all necessary thermocouples, thermometers, wires and connectors. The Contractor shall place, protect and maintain the maturity meters and associated equipment. Locations where the maturity meters are placed shall be protected in the same manner as the rest of the structure.

Subsection 601.17 shall include the following:

- (f) *Maturity Meter Strength.* When maturity meters are specified for determining strength for removing forms, removing false work, backfilling against structures or loading the structure, the Contractor shall provide the Engineer a report of maturity relationships in accordance with CP 69 prior to placement of concrete.

If a maturity meter fails, is tampered with, is destroyed or was not placed, the following shall apply:

The minimum curing time or waiting time for removing forms, removing false work, backfilling against structures or loading the structure shall be 28 days.

The Contractor may choose at his own expense to core the structure represented by the maturity meter. Cores will be obtained and tested according to CP 65. Cores will be a minimum of 4 inches in diameter. A minimum of three cores in a two square foot area will be obtained. If the compressive strength of any one core differs from the average by more than 10 percent that compressive strength will be deleted and the average strength will be determined using the compressive strength of the remaining two cores. If the compressive strength of more than one core differs from the average by more than 10 percent the average strength will be determined using all three compressive strengths of the cores. The average compressive strength of the cores shall be achieve the specified compressive strength of the structure. A structure may only be cored once.

March 29, 2016

**REVISION OF SECTION 208  
EROSION CONTROL**

Section 208 is hereby deleted from the Standard Specifications for this project and replaced with the following:

**DESCRIPTION**

208.01 This work consists of constructing, installing, maintaining, and removing when required, Best Management Practices (BMPs) during the life of the Contract to prevent or minimize erosion, sedimentation, and pollution of any State waters as defined in subsection 107.25, including wetlands.

The Contractor shall coordinate the construction of temporary BMPs with the construction of permanent BMPs to assure economical, effective, and continuous erosion and sediment control throughout the construction period.

When a provision of Section 208 or an order by the Engineer requires that an action be immediate or taken immediately, it shall be understood that the Contractor shall at once begin effecting completion of the action and pursue it to completion in a manner acceptable to the Engineer, and in accordance with the Colorado Discharge Permit System Stormwater Construction Permit (CDPS-SCP) requirements.

**MATERIALS**

208.02 Erosion control materials are subject to acceptance in accordance with subsection 106.01. Erosion control materials shall be subject to the following approval process:

Material	Approval Process	Notes:
Erosion Bales (Weed Free)	COC	The Contractor shall provide a transit certificate number or a copy of the transit certificate as supplied from the producer.
Silt Fence	COC	
Silt Berm	APL	
Erosion Log (Type 1 and 2)	COC	
Silt Dikes	COC	
Pre-fabricated Concrete Washout Structures (above ground)	APL	
Pre-fabricated Vehicle Tracking Pad	APL	
Aggregate Bag	COC	
Storm Drain Inlet Protection (Type I, II and III)	APL	

The material for BMPs shall conform to the following:

- (a) *Erosion Bales.* Material for erosion bales shall consist of Certified Weed Free hay or straw. The hay or straw shall be certified under the Colorado Department of Agriculture Weed Free Forage Certification Program and inspected as regulated by the Weed Free Forage Act, Title 35, Article 27.5, CRS. Each certified weed free erosion bale shall be identified by blue and orange twine binding the bales.

The Contractor shall not place certified weed free erosion bales or remove their identifying twine until the Engineer has inspected and accepted them.

The Contractor may obtain a current list of Colorado Weed Free Forage Crop Producers who have completed certification by contacting the Colorado Department of Agriculture, Weed Free Forage Program,

305 Interlocken Pkwy, Broomfield, CO 80021, Contact: Weed Free Forage Coordinator at (303) 869-9038. Also available at [www.colorado.gov/ag/csd](http://www.colorado.gov/ag/csd).

Bales shall be approximately 5 cubic feet of material and weigh at least 35 pounds. Stakes shall be wood and shall be 2 inch by 2 inch nominal.

- (b) *Silt Fence*. Silt fence posts shall be wood with a minimum length of 42 inches. Wood posts shall be 1.5 inch by 1.5 inch nominal. Geotextile shall be attached to wood posts with three or more staples per post.

Silt fence geotextile shall conform to the following requirements:

**Physical Requirements for Silt Fence Geotextiles**

Property	Wire Fence Supported Requirements	Self-Supported Requirements Geotextile Elongation <50%	Test Method
Grab Strength, lbs	90 minimum	124 minimum	ASTM D 4632
Permittivity sec-1	0.05	0.05	ASTM D 4491
Ultraviolet Stability	Minimum 70% Strength Retained	Minimum 70% Strength Retained	ASTM D 4355

Silt Fence (Reinforced). Silt fence posts shall be metal T-post with a minimum length of 66 inches. Metal posts shall be “studded tee” with .095 inch minimum wall thickness. Wire fabric reinforcement for the silt fence geotextile shall be a minimum of 10 gauge, with a maximum mesh spacing of 6 inches. Geotextile shall be attached to welded wire fabric with ties or nylon cable ties 12 inch O.C. at top, mid and bottom wire. Welded wire fabric shall be attached to the post with a minimum three 12 gauge wire ties per post. Vinyl or rubber safety caps shall be installed on all T-post.

- (c) *Temporary Berms*. Temporary berms shall be constructed of compacted soil.
- (d) *Temporary Slope Drains*. Temporary slope drains shall consist of fiber mats, plastic sheets, stone, concrete or asphalt gutters, half round pipe, metal or plastic pipe, wood flume, flexible rubber or other materials suitable to carry accumulated water down the slopes. Outlet protection riprap shall conform to section 506. Erosion control geotextile shall be a minimum Class 2, conforming to subsection 712.08.
- (e) *Silt Berm*. Silt berm shall consist of an ultraviolet (UV) stabilized high-density polyethylene, shall be triangular in shape, and shall have the following dimensions:

Width	6 - 11 inches
Height	6 - 10 inches
Weight	0.3 - 1.4 lbs./sq. ft.
Percent Open Area	30 – 50%

Securing spikes shall be 10 to 12 inch x 0.375 inch diameter (minimum).

- (f) *Rock Check Dam*. Rock Check dams shall be constructed of stone. Stone shall meet the requirements of Section 506.
- (g) *Sediment Trap*. In constructing an excavated Sediment Trap, excavated soil may be used to construct the dam embankment, provided the soil meets the requirements of subsection 203.03. Outlet protection riprap shall be the size specified in the Contract and shall conform to Section 506. Erosion control geotextile shall be a minimum Class 1, conforming to subsection 712.08.
- (h) *Erosion log*. Shall be one of the following types unless otherwise shown on the plans:
- (1) Erosion Log (Type 1) shall be curled aspen wood excelsior with a consistent width of fibers evenly distributed throughout the log. The casing shall be seamless, photo-degradable tube netting and shall have minimum dimensions as shown in Table 208-1, based on the diameter of the log called for on the plans. The curled aspen wood excelsior shall be fungus free, resin free, and free of growth or germination inhibiting substances.

- (2) Erosion Log (Type 2) shall consist of a blend of 30-40 percent weed free compost and 60-70 percent wood chips. The compost/wood blend material shall pass a 50 mm (2 inch) sieve with a minimum of 70 percent retained on the 9.5 mm (3/8 inch) sieve and comply to subsection 212.02 for the remaining compost physical properties. The compost/wood chip blend may be pneumatically shot into a geotextile cylindrical bag or be pre-manufactured. The geotextile bag shall consist of material with openings of 1/8 to 3/8 inches of HDPE or polypropylene mesh (knitted, not extruded), and contain the compost/wood chip material while not limiting water infiltration.

Erosion log (Type 1 and Type 2) shall have minimum dimensions as shown in Table 208-1, based on the diameter of the log.

**Table 208-1  
NOMINAL DIMENSIONS OF EROSION LOGS**

Diameter Type 1 (Inches)	Diameter Type 2 (Inches)	Length (feet)		Weight (minimum) (pounds/foot)	Stake Dimensions (Inches)
		Min.	Max.		
9	8	10	180	1.6	1.5 by 1.5 (nominal) by 18
12	12	10	180	2.5	1.5 by 1.5 (nominal) by 24
20	18	10	100	4.0	2 by 2 (nominal) by 30

Stakes to secure erosion logs shall consist of pinewood or hardwood.

- (i) *Silt Dikes*. Silt dikes shall be pre-manufactured triangular shaped urethane foam covered with a woven geotextile fabric. The fabric aprons shall extend a minimum of two feet beyond each side of the triangle.

Each silt dike shall have the following dimensions:

Dimension	Length
Center height	8 to 10 inches
Base	16 to 21 inches
Section length	3 to 7 feet
Section width including fabric extensions	5.6 feet

Staples shall be 6 gauge and at least 8 inches long.

- (j) *Concrete Washout Structure*. The Contractor shall construct a washout structure that will contain washout from concrete placement and construction equipment cleaning operations. Embankment required for the concrete washout structure may be excavated material, provided that this material meets the requirements of Section 203 for embankment.

A pre-fabricated concrete washout structure shall only be used when specified in the Contract. It shall consist of a watertight container designed to contain liquid and solid waste from concrete washout.

- (k) *Vehicle Tracking Pad*. Aggregate for the vehicle tracking pad shall be crushed natural aggregate with at least two fractured faces that meets the following gradation requirements:

Sieve size	Percent by weight Passing Square Mesh Sieves
75 mm (3 inch)	100
50 mm (2 inch)	0-25
19.0 mm (¾ inch)	0-15

Recycled crushed concrete or asphalt shall not be used for vehicle tracking pads.

Erosion Control Geotextile shall be Class 2 and conform to the requirements of subsection 712.08.

Pre-fabricated vehicle tracking pads if specified in the Contract shall have the following properties.

Minimum overall dimensions of the modular systems shall be:

Width of pad along edge of roadway	14 feet
Length of pad	30 feet

Weight (min.) (lbs./sq. ft.)	8
Crush strength (min.) (psi)	400

(l) *Aggregate Bag.* Aggregate bags shall consist of crushed stone or recycled rubber filled fabric with the following properties:

Diameter (inches)	Weight (minimum) (pounds per foot)
6-8	6
10	10
12	15

Rubber used in bags shall be clean, 95 percent free of metal and particulates.

Crushed stone contained in the aggregate bags shall conform to subsection 703.09, Table 703-7 for Class C.

The aggregate bag shall consist of a woven geotextile fabric with the following properties:

Property	Requirement	Test Method
Grab Tensile Strength	90 lbs. min.	ASTM D 4632
Trapezoid Tear Strength	25 lbs. min.	ASTM D 4533
Mullen Burst	300 psi	ASTM D 3786
Ultraviolet Resistance	70%	ASTM D 4355

(m) *Storm Drain Inlet Protection.* Storm drain inlet protection shall consist of aggregate filled fabric with the following dimensions:

Storm Drain Inlet Protection Properties	Protection Types		
	<sup>1</sup> Type I	Type II	<sup>3</sup> Type III
Diameter	4 in.	4 in.	N/A
Minimum Section Length	7 ft.	5 ft.	5 ft.
Apron Insert	---	30 in. or sized to grate	30 in or sized to grate
<sup>1</sup> Type I protection shall be used with Inlet Type R. <sup>2</sup> Type II protection shall be used with Combination Inlet. Option A or B <sup>3</sup> Type III protection Inlet Vane Grate only. Option A or B			

The storm drain inlet protection (Type I, II and III) shall consist of a woven geotextile fabric with the following properties:

Property	Test Method	Unit	Requirement
Grab tensile strength	ASTM D 4632	lbs.	minimum 350X280
Mullen Burst Strength	ASTM D 3786	lbs.	600
Trapezoid Tear Strength	ASTM D 4533	lbs.	minimum 110X95
Percent Open Area	COE-22125-86	%	28
Water Flow Rate	ASTM D 4491	gal./min./sq. ft.	250
Ultraviolet Resistance	ASTM D 4355	%	70

Curb roll for storm drain inlet protection (Type I and II) shall have an approximate weight of 7 to 10 pounds per linear foot of device. The device shall be capable of conforming to the shape of the curb. Aggregate contained in the storm drain inlet device shall consist of gravel or crushed stone conforming to Table 703-7 for Class C.

Storm drain inlet protection (Type III) shall have insert containment (option A) or insert without storage capacity (option B).

### CONSTRUCTION REQUIREMENTS

**208.03 Project Review, Schedule, and Transportation Erosion Control Supervisor.** Prior to construction, an on-site Environmental Pre-construction Conference shall be held. The conference shall be attended by:

- (1) The Engineer,
- (2) The Superintendent,
- (3) The Contractor's SWMP Administrator
- (4) Supervisors or Foremen of subcontractors working on the project,
- (5) The Region Water Pollution Control Manager (RWPCM), and
- (6) CDOT personnel (e.g., CDOT Landscape Architect) who prepared or reviewed the Stormwater Management Plan (SWMP).

At this conference, the attendees shall discuss the SWMP, CDPS-SCP, sensitive habitats on site, wetlands, other vegetation to be protected, and the enforcement mechanisms for not meeting the requirements of this specification.

Prior to beginning construction the Contractor shall evaluate the project site for storm water draining into or through the site. When such drainage is identified, BMPs (i.e., Control Measures) shall be used if possible to divert stormwater from running on-site and becoming contaminated with sediment or other pollutants. The diversion may be accomplished with a temporary pipe or other conveyance to prevent water contamination or contact with pollutants. Run-on water that cannot be diverted shall be treated as construction runoff and adequate BMPs shall be employed.

The SWMP Administrator shall evaluate all non-stormwater coming onto the site, such as springs, seeps, and landscape irrigation return flow. If such flow is identified, BMPs shall be used to protect off-site water from becoming contaminated with sediment or other pollutants.

The SWMP Administrator shall review existing inlets and culverts to determine if inlet protection is needed due to water flow patterns. Prior to beginning construction, inlets and culverts needing protection shall be protected and the location of the implemented BMP added to the SWMP site map.

Prior to construction, the Contractor shall implement appropriate BMPs for protection of wetlands, sensitive habitat and existing vegetation from ground disturbance and other pollutant sources, in accordance with the approved project schedule as described in subsection 208.03(b).

When additional BMPs are required and approved by the Engineer, the Contractor shall implement the additional BMPs and the SWMP Administrator shall record and describe them on the SWMP site map. The approved BMPs will be measured and paid for in accordance with subsections 208.11 and 208.12.

(e) *Project Review.* The Contractor may submit modifications to the Contract's BMPs in a written proposal to the Engineer. The written proposal shall include the following information:

- (1) Reasons for changing the BMPs.
- (2) Diagrams showing details and locations of all proposed changes.
- (3) List of appropriate pay items indicating new and revised quantities.
- (4) Schedules for accomplishing all erosion and sediment control work.
- (5) Effects on permits or certifications caused by the proposed changes.

The Engineer will approve or reject the written proposal in writing within 5 working days after the submittal. The Engineer may require additional control measures prior to approving the proposed modifications. Additional modifications and additional BMPs will be paid for at the Contract Unit Price for the specific items involved. If no items exist, they will be paid for as extra work in accordance with subsection 109.04.

(f) *Erosion and Sediment Control Activities.* The erosion and sediment control activities shall be included in the weekly meeting update. The project schedule shall specifically indicate the sequence of clearing and grubbing, earthwork operations, and construction of temporary and permanent erosion control features and stabilization. Project schedule shall include erosion and sediment control work for haul roads, borrow pits, storage and asphalt or concrete batch sites, and all areas within the project limits. If during construction the Contractor proposes changes which would affect the Contract's BMPs, the Contractor shall propose revised BMPs to the Engineer for approval in writing. If necessary, the SWMP Administrator shall update proposed sequencing of major activities in the SWMP. Revisions shall not be implemented until the proposed measures have been approved in writing by the Engineer.

(g) *Erosion Control Management (ECM).* Erosion Control Management for this project shall consist of Erosion Control Inspection and the Administration of the Stormwater Management Plan (SWMP). All ECM staff shall have working knowledge and experience in construction, and shall have successfully completed the Transportation Erosion Control Supervisory Certificate Training (TECS) as provided by the Department. The Superintendent will not be permitted to serve in an ECM role. The Erosion Control Inspector and the Stormwater Administrator may be the same person in projects involving less than 40 acres of disturbed area.

1. Stormwater Management Plan (SWMP) Administration. The SWMP Plan shall be maintained by a SWMP Administrator. The SWMP Administrator shall have completed the TECS certification training as provided by the Department. In the case of a project requiring only one TECS, the SWMP Administrator may also be the Erosion Control Inspector for the project. The name of the SWMP Administrator shall be recorded on SWMP Plan Section 3. B. The SWMP Administrator shall have full responsibility to maintain and update the SWMP Plan and identify to the Superintendent critical action items needed to conform to the CDPS-SCP as follows:

- (1) Complete the SWMP Notebook as described in subsection 208.03 (d).
- (2) Participate in the Environmental Pre-construction Conference
- (3) Attend weekly meetings
- (4) Attend all Headquarter and Region water quality control inspections. The Contractor and the Contractor's SWMP Administrator will be notified a minimum of five days in advance of each inspection by the CDOT region or headquarter water quality staff.
- (5) Coordinate with the Superintendent to implement necessary actions to reduce anticipated or presently existing water quality or erosion problems resulting from construction activities.
- (6) Coordinate with the Superintendent to ensure that all labor, material, and equipment needed to install, maintain, and remove BMPs are available as needed.
- (7) During construction, update and record the following items on the SWMP site map as changes occur:
  - (i) Limits of Construction (LOC).
  - (ii) Areas of disturbance (AD) are limits of disturbance (LDA).
  - (iii) Limits of cut and fill.
  - (iv) Areas used for storage of construction materials, equipment, soils, or wastes.

- (v) Location of any dedicated asphalt or concrete batch plants.
  - (vi) Location of construction offices and staging areas.
  - (vii) Location of work access routes during construction.
  - (viii) Location of borrow and waste.
  - (ix) Location of temporary, interim and permanent stabilization.
  - (x) Location of outfall(s)
  - (xi) Arrows showing direction of surface flow
  - (xii) Structural and non-structural BMPs
  - (xiii) LDA and LOC lines as defined in subsection 107.25
- (8) Amend the SWMP whenever there are: additions, deletions, or changes to BMPs. SWMP revisions shall be recorded immediately. Items shall be dated and initialed by the SWMP Administrator. Specifically, amendments shall include the following:
- (i) A change in design, construction, operation, or maintenance of the site which would require the implementation of new or revised BMPs; or
  - (ii) Changes when the SWMP proves to be ineffective in achieving the general objectives of controlling pollutants in stormwater discharges associated with construction activity.
  - (iii) Changes when BMPs are no longer necessary and are removed.
- (9) Complete vegetative survey transects when required in accordance with CDOT Erosion Control and Stormwater Quality Guide.
- (10) Start a new site map before the current one becomes illegible. All site maps shall remain in the SWMP notebook.
- (11) Document all inspection and maintenance activities. The SWMP and documentation shall be kept on the project site.
- (12) When adding or revising BMPs on the SWMP, add a narrative explaining what, when, where, why, and how the BMP is being used, and add a detail to the SWMP notebook.
- (i) How to install and inspect the BMP
  - (ii) Where to install the BMP
  - (iii) When to maintain the BMP
- (13) If using existing topography, vegetation, etc. as a BMP, label it as such on the SWMP site map; add a narrative as to when, where, why, and how the BMP is being used.
- (14) Indicate BMPs in use or not in use by recording on Standard Plans M-208-1, M-216-1, and M-615-1 in the SWMP notebook
- (15) Record on the SWMP, the approved Method Statement for Containing Pollutant Byproducts.
- (16) Update the potential pollutants list in the SWMP notebook and Spill Response Plan throughout construction.

## 2. Erosion Control Inspection.

Erosion control inspection shall be performed by TECS certified staff assigned as Erosion Control Inspector (ECI) to the project. One ECI is required for every 40 acres of total disturbed area which is currently receiving temporary and interim stabilization measures as defined in subsection 208.04 (e). An ECI shall not be responsible for more than 40 acres in the project. Accepted permanent stabilization methods as defined in subsection 208.04 (e) will not be included in the 40 acres.

ECI duties shall be as follows:

- (1) Coordinate with the SWMP Administrator on reporting the results of inspections
- (2) Review the construction site for compliance with the Stormwater Construction Permit.
- (3) Inspect with the Superintendent and the Engineer (or their designated representatives) the stormwater management system at least every seven calendar days. Post storm event inspections shall be conducted within 24 hours after the end of any precipitation or snow melt event that may cause surface erosion. If no construction activities will occur following a storm event, post-storm event inspections shall be conducted prior to commencing construction activities, but no later than 72 hours following the storm event. The occurrence of delay in inspections shall be documented in the inspection report. Form 1176 shall be used for all 7 day inspections and inspections following storm events. The Contractor shall notify the Erosion control inspector when a storm event occurs. Failure to perform inspections on time will result in liquidated damages in accordance with subsection 208.09.

Inspections are not required at sites when construction activities are temporarily halted, when snow cover exists over the entire site and melting conditions do not pose a risk of surface erosion. This exception shall be applicable only during the period where melting conditions do not exist, and applies to the routine 7 day, Headquarters and Region inspections, as well as the post-storm event inspections. The following information shall be documented on Form 1176 for use of this exclusion: dates when snow cover occurred, date when construction activities ceased, and date melting conditions began.

The order of precedence for required inspections shall be as follows:

- (i) Headquarter water quality inspections
- (ii) Region water quality inspections
- (iii) Post-storm event inspections
- (iv) 7 day inspections

When one of the listed inspections is performed, the inspections listed below it need not be performed on that day if the required CDOT and Contractor personnel participated in the inspection.

For example: A 7 day inspection is not required on the same day a headquarters or Region inspection is conducted. A sheet shall be placed in the inspections area of the SWMP Notebook to refer to the date inspection performed.

- (4) Follow all other agency Stormwater requirements and inspections unless a waiver or other agreement has been made.
- (5) The ECI shall immediately report to the Contractor's Superintendent and the SWMP Administrator the following instances of noncompliance:
  - (i) Noncompliance which may endanger health or the environment.
  - (ii) Spills or discharge of hazardous substance or oil which may cause pollution of waters of the State.
  - (iii) Discharge of stormwater which may cause an exceedance of a water quality standard.
  - (iv) Upset conditions that occur on site.
- (6) Spills, leaks, or overflows that result in the discharge of pollutants shall be documented on the Form 1176 by the ECI. The ECI shall record the time and date, weather conditions, reasons for spill, and how it was remediated.

(d) *Documentation Available on the Project.* The following Contract documents and references will be made available for reference at the CDOT field office during construction:

1. SWMP Notebook. The Engineer will provide a SWMP Notebook at the Preconstruction Conference, which is and shall remain the property of CDOT. CDOT will initially provide the documentation for the first four items when available. The Contractor shall provide the contents required for items (5) through (18). The notebook shall be stored in the CDOT field office or at another on-site location approved by the Engineer. The SWMP Administrator shall modify and update the notebook as needed to reflect actual site conditions, prior to or as soon as practicable but in no case more than 72 hours after the change. The following Contract documents and reports shall be kept, maintained, and updated in the notebook under the appropriate items by the SWMP Administrator:
  - (1) SWMP Plan Sheets - Notes, tabulation, sequence of major activities, area of disturbance, existing soil data, existing vegetation percent cover, potential pollutant sources, receiving water, non-stormwater discharges and environmental impacts.
  - (2) Site Map and Plan Title Sheet - Construction site boundaries, ground surface disturbance, limits of cut and fill, flow arrows, structural BMPs, non-structural BMPs, Springs, Streams, Wetlands and surface water. Also included on the sheets is the protection of trees, shrubs and cultural resources.
  - (3) Specifications - Standard and Project special provisions related to Stormwater and Erosion Control.
  - (4) Standard Plans M-208-1, M-216-1 and M-615-1
  - (5) BMP Details not in Standard Plan M-208-1 - Non-standard details.
  - (6) Weekly meeting sign in sheet.
  - (7) Calendar of Inspections -Calendar of inspections marking when all inspections take place.
  - (8) Form 1176 – Weekly meeting notes and inspection report
  - (9) Region and Headquarter Water Quality Reports and Form 105(s) relating to Water Quality.
  - (10) Description of Inspection and Maintenance Methods - Description of inspection and maintenance methods implemented at the site to maintain all BMPs identified in the SWMP and Items not addressed in the design
  - (11) Spill Response Plan - Reports of reportable spills submitted to CDPHE
  - (12) List and Evaluation of Potential Pollutants - List of potential pollutants as described in subsection 107.25 and approved Method Statement for Containing Pollutant Byproducts.
  - (13) Other Correspondence e.g., agreements with other MS4s, approved deferral request, CDPHE audit documentation, Water Quality Permit Transfer to Maintenance Punch List and other miscellaneous documentation.
  - (14) TECS Certifications of the SWMP Administrator and all ECIs, keep current through the life of the project.
  - (15) Environmental Pre-construction Conference – Conference agenda with a certification of understanding of the terms and conditions of the CDPS-SCP and SWMP. The certification shall be signed by all attendees. A certification shall also be signed by all attendees of meetings held for new subcontractors beginning work on the project that could adversely affect water quality after the Environmental Pre-construction Conference has been held.
  - (16) All Project Environmental Permits - All project environmental permits and associated applications and certifications, including, CDPS-SCP, Senate Bill 40, USACE 404,temporary stream crossings, dewatering, biological opinions and all other permits applicable to the project, including any separate CDPS-SCP obtained by the Contractor for staging area on private property, asphalt or concrete plant, etc.
  - (17) Photographs Documenting Existing Vegetation – Project photographs shall be time stamped on paper with a maximum of four colored images per 8 ½ inch by 11 inch sheet and/or a digital copy of all photographs on CD-ROM/Flash Drive in (JPG format), documenting existing vegetation prior to construction commencing. On the bottom of each photograph shall be a description using Station Number or Mile Post of where the photograph was taken.

- (18) Permanent Water Quality Plan Sheets - Plan sheets and specifications for permanent water quality structures, riprap.

The Engineer will incorporate the documents and reports available at the time of award. The Contractor shall provide and insert all other documents and reports as they become available during construction.

The SWMP Administrator shall finalize the SWMP for CDOT Maintenance use upon completion of the project. SWMP completeness shall be approved by the Engineer, corrections to the SWMP shall be at the Contractor's expense. The following Reference materials shall be used:

- (1) CDOT Erosion Control and Stormwater Quality Guide.
- (2) CDOT Erosion Control and Stormwater Quality Field Guide.

- (e) *Weekly Meetings.* The Engineer, Superintendent and the SWMP Administrator shall conduct a weekly meeting with supervisors involved in construction activities that could adversely affect water quality. The meeting shall follow an agenda prepared by the Engineer or a designated representative, and have a sign in sheet on which the names of all attendees shall be recorded. The SWMP Administrator shall take notes of water quality comments and action items at each weekly meeting, and place the agenda and sign in sheet in the SWMP notebook. At this meeting the following shall be discussed and documented on Form 1176:

- (1) Requirements of the SWMP.
- (2) Problems that may have arisen in implementing the site specific SWMP or maintaining BMPs.
- (3) Unresolved issues from inspections and concerns from last inspection
- (4) BMPs that are to be installed, removed, modified, or maintained.
- (5) Planned activities that will effect stormwater in order to proactively phase BMPs.
- (6) Recalcitrant inspection findings

All subcontractors who were not in attendance at the Environment Pre-construction conference shall be briefed on the project by the Engineer, Superintendent, and the SWMP Administrator prior to start of work. The SWMP Administrator shall record the names of these subcontractors as an addendum to the list of attendees, and added the SWMP Notebook.

#### **208.04 Best Management Practices (BMPs) for Stormwater.**

The SWMP Administrator shall modify the SWMP to clearly describe and locate all BMPs implemented at the site to control potential sediment discharges.

Vehicle tracking control shall be used at all vehicle and equipment exit points from the site to prevent sediment exiting the Limits of Construction (LOC) of the project site. Access shall be provided only at locations approved by the Engineer. The SWMP Administrator shall record vehicle tracking control pad locations on the SWMP site map.

New inlets and culverts shall be protected during their construction. Appropriate protection of each culvert and inlet shall be installed immediately. When riprap is called for at the outlet of a culvert, it shall be installed within 24 hours of completion of each pipe. The Contractor shall remove sediment, millings, debris, and other pollutants from within the newly constructed drainage system in accordance with the CDPS-SCP, prior to use, at the Contractor's expense. All removed sediment shall be disposed of outside the project limits in accordance with all applicable regulations.

Concrete products wasted on the ground during construction shall include, but shall not be limited to: excess concrete removed from forms, spills, slop, and all other unused concrete are potential pollutants that shall be contained or protected by an approved BMP at a pre-approved containment area. The concrete shall be picked up and recycled in accordance with 6 CCR 1007-2 (CDPHE Regulations Pertaining to Solid Waste Sites and Facilities) at regular intervals, as directed. The uses of recycled concrete from approved recycling facilities shall be in accordance with Section 203.

- (a) *Unforeseen Conditions.* The Contractor shall design and implement erosion and sediment BMPs for correcting conditions unforeseen during the design of the project, or for emergency situations, that develop during construction. The Department's "Erosion Control and Stormwater Quality Guide" shall be used as a reference document for the purpose of designing erosion and sediment BMPs. Measures and methods proposed by the Contractor shall be reviewed and approved in writing by the Engineer prior to installation.
- (b) *Other Agencies.* If CDPHE, US Army Corps of Engineers (USACE), or the Environmental Protection Agency (EPA) reviews the project site and requires additional measures to prevent and control erosion, sediment, or pollutants, the Contractor shall cease and desist activities resulting in pollutant discharge and immediately implement these measures. If the work may negatively affect another MS4, the Contractor shall cease and desist activities resulting in the discharge and shall implement appropriate measures to protect the neighboring MS4, including installing additional measures. . Implementation of these additional measures will be paid for at contract unit price.

- (c) *Work Outside the Right of Way.* Disturbed areas, including staging areas, which are outside CDOT ROW and outside easements acquired by CDOT for construction, are the responsibility of the Contractor. These areas may be subject to a separate CDPS-SCP or other permits. The Contractor shall acquire these permits and submit copies to the Engineer prior to any disturbance. These permits, shall be acquired and all erosion and sediment control work performed at the Contractor's expense. These areas are subject to inspections by CDOT or any other agency, as agreed upon in writing.
- (d) *Construction Implementation.* The Contractor shall incorporate BMPs into the project as outlined in the accepted schedule.
- (e) *Stabilization.* Once earthwork has started, the Contractor shall continue erosion BMPs until permanent stabilization of the area has been completed and accepted. Clearing, grubbing and slope stabilization measures shall be performed regularly to ensure final stabilization. Failure to properly maintain erosion control and stabilization methods, either through improper phasing or sequencing will require the Contractor to repair or replace sections of earthwork at his expense. The Contractor shall schedule and implement the following stabilization measures during the course of the project:
- (1) *Temporary Stabilization.* At the end of each day, the Contractor shall stabilize disturbed areas by surface roughening, vertical tracking, or a combination thereof. Disturbed areas are locations where actions have been taken to alter the existing vegetation and/or underlying soil of a site, such as clearing, grading, road bed preparation, soil compaction, and movement and stockpiling of top soils. Other stabilization measures may be implemented, as approved. The maximum area of temporary stabilization shall not exceed 20 acres.
  - (2) *Interim Stabilization.* Stockpiles and disturbed areas as soon as known with reasonable certainty that work will be temporarily halted for 14 days or more shall be stabilized using one or more of the specified following methods:
    - (i) Application of 1.5 tons of mechanically crimped certified weed free hay or straw in combination with an approved organic mulch tackifier.
    - (ii) Placement of bonded fiber matrix in accordance with Section 213.
    - (iii) Placement of mulching (hydraulic) wood cellulose fiber mulch with tackifier, in accordance with Section 213.
    - (iv) Application of spray-on mulch blanket in accordance with Section 213. Magnesium Chloride, Potassium Chloride and Sodium Chloride, or other salt products, will not be permitted as a stabilization method.Protection of the interim stabilization method is required. Reapplication may be required as approved.
  - (3) *Summer and Winter Stabilization.* Summer and winter stabilization is defined as months when seeding will not be permitted. As soon as the Contractor knows shutdown is to occur, interim stabilization shall be applied to the disturbed area. Protection of the interim stabilization method is required. Reapplication of interim stabilization may be required as directed.
  - (4) *Permanent Stabilization.* Permanent stabilization is defined as the covering of disturbed areas with seeding, mulching with tackifier, soil retention coverings, and such non-erodible methods such riprap, road shouldering, etc., or a combination thereof as required by the Contract. Other permanent stabilization techniques may be proposed by the Contractor, in writing, and shall be used when approved in writing by the Engineer. Permanent stabilization shall begin within 48 hours after topsoil placement, soil conditioning, or combination thereof starts and shall be pursued to completion.
  - (5) *Final Stabilization.* Final stabilization is defined as when all ground disturbing activities at the site have been completed, and uniform vegetative cover has been established with an individual plant density of at least 70 percent of pre-disturbance levels, or equivalent permanent physical erosion reduction methods have been employed.
- (f) *Maintenance.* Erosion and sediment control practices and other protective measures identified in the SWMP as BMPs for stormwater pollution prevention shall be maintained in effective operating condition until the CDPS-SCP has been transferred to CDOT. BMPs shall be continuously maintained in accordance with good engineering, hydrologic and pollution control practices, including removal of collected sediment when silt depth is 50 percent or more of the height of the erosion control device. When possible, the Contractor shall use equipment with an operator rather than labor alone to remove the sediment.

Maintenance of erosion and sediment control devices shall include replacement of such devices upon the end of their useful service life as recommended by the Contractor and approved by the Engineer. Maintenance of rock

check dams and vehicle tracking pads shall be limited to removal and disposal of sediment or addition of aggregate. Damages resulting from failure to maintain BMPs shall be paid at the contractor's expense.

Complete site assessment shall be performed as part of comprehensive inspection and maintenance procedures, to assess the adequacy of BMPs at the site and the necessity of changes to those BMPs to ensure continued effective performance. Where site assessment results in the determination that new or replacement BMPs are necessary, the BMPs shall be installed to ensure continuous effectiveness. When identified, BMPs shall be maintained, added, modified or replaced as soon as possible, immediately in most cases.

Approved new or replaced BMPs will be measured and paid for in accordance with subsections 208.11 and 208.12. Devices damaged due to the Contractor's negligence shall be replaced at Contractor's expense.

From the time seeding and mulching work begins until the date the Contract work is accepted, the Contractor shall maintain all seeded areas. Damage to seeded areas or to mulch materials shall be immediately restored. Damage to seeded areas or to mulch materials due to Contractor negligence shall be immediately restored at the Contractor's expense. Restoration of other damaged areas will be measured and paid for under the appropriate bid item.

Temporary BMPs may be removed upon completion of the project, as determined by the Water Quality Partial Acceptance walk-through. If removed, the area in which these BMPs were constructed shall be returned to a condition similar to that which existed prior to its disturbance. Removed BMPs shall become the property of the Contractor.

If a project delay occurs, the Contractor shall be responsible to continue erosion and sediment control operations beyond the original contract time.

Sediment removed during maintenance of BMPs and material from street sweeping may be used in or on embankment, provided it meets conditions of Section 203 and is distributed evenly across the embankment.

Whenever sediment collects on the paved surface, the surface shall be cleaned. Street washing will not be allowed. Storm drain inlet protection shall be in place prior to shoveling, sweeping, or vacuuming. Sweeping shall be completed with a pickup broom or equipment capable of collecting sediment. Sweeping with a kick broom will not be allowed.

Material from pavement saw cutting operations shall be cleaned from the roadway surface during operations using a vacuum. A BMP, such as a berm, shall be placed to contain slurry from joint flushing operations until the residue can be removed from the soil surface. Aggregate bags, erosion logs or other permeable BMPs shall not be used. Residue shall not flow into driving lanes. It shall be removed and disposed of in accordance with subsection 107.25(b) 13. Material containment and removal will not be paid for separately, but shall be included in the work.

**208.05 Construction of BMPs.** BMPs shall be constructed in accordance with Standard Plans M-208-1, M-216-1 and with the following.

- (a) *Seeding, Mulching, Sodding, Soil Retention Blanket.* Seeding, mulching, sodding, and soil retention blanket shall be performed in accordance with Sections 212, 213, and 216.
- (b) *Erosion Bales.* The bales shall be anchored securely to the ground with wood stakes.
- (c) *Silt Fence.* Silt fence shall be installed in locations specified in the Contract prior to any grubbing or grading activity.
- (d) *Temporary Berms.* Berms shall be constructed to the dimensions shown in the Contract, and sufficiently compacted to prevent erosion or failure. If the berm erodes or fails, it shall be immediately repaired or replaced at the Contractor's expense.
- (e) *Temporary Diversion.* Diversions shall be constructed to the dimensions shown in the Contract, and graded to drain to a designated outlet. The berm shall be sufficiently compacted to prevent erosion or failure. If the diversion erodes or fails, it shall be immediately repaired or replaced at the Contractor's expense.
- (f) *Temporary Slope Drains.* Temporary slope drains shall be installed prior to installation of permanent facilities or growth of adequate ground cover on the slopes. All temporary slope drains shall be securely anchored to the slope. The inlets and outlets of temporary slope drains shall be protected to prevent erosion.
- (g) *Silt Berm.* Prior to installation of silt berms, the Contractor shall prepare the surface of the areas in which the berms are to be installed such that they are free of materials greater than 2 inches in diameter and are suitably smooth for the installation of the silt berms, as approved. Silt berms shall be secured with spikes. The Contractor shall install

the silt berm in a manner that will prevent water from going around or under the silt berm. Silt berms shall be installed on top of soil retention blanket.

- (h) *Rock Check Dam.* Rock shall be installed at locations shown on the plans. Rock check dams shall conform to the dimensions shown on the plans.
- (i) *Riprap Outlet Protection.* Geotextile used shall be protected from cutting or tearing. Overlaps between two pieces of geotextile shall be 1 foot minimum. Riprap size shall be as shown on the plans.
- (j) *Storm Drain Inlet Protection.* Prior to installation, the Contractor shall sweep the surface of the area in which the storm drain inlet protection devices are to be installed such that the pavement is free of sediment and debris. The ends of the inlet protection Type 1 and Type 2 shall extend a minimum of 1 foot past each end of the inlet.

The Contractor shall remove all accumulated sediment and debris from the surface surrounding all storm drain inlet protection devices after each rain event or as directed. The Contractor shall remove accumulated sediment from Type II and III containment area when it is more than a maximum one third full of sediment, or as directed.

The Contractor shall protect storm drain facilities adjacent to locations where pavement cutting operations involving wheel cutting, saw cutting, sand blasting, or abrasive water jet blasting are to take place.

- (k) *Sediment Trap.* Sediment traps shall be installed to collect sediment laden water and to minimize the potential of pollutants leaving the project site. Locations shall be as shown on the plans or as directed.

Sediment traps shall be constructed prior to disturbance of upslope areas and shall be placed in locations where runoff from disturbed area can be diverted into the trap.

The area under the embankment shall be cleared, grubbed and stripped of any vegetation and roots.

Fill material for the embankment shall be free of roots or other vegetation, organic material, large stones, and other objectionable material.

Sediment shall be removed from the trap when it has accumulated to one half of the wet storage depth of the trap and shall be disposed of in accordance with subsection 208.04(f).

- (l) *Erosion Logs.* Erosion logs shall be embedded 2 inches into the soil. Stakes shall be embedded to a minimum depth of 12 inches. At the discretion of the Engineer, a shallower depth may be permitted if rock is encountered.  
The Contractor shall maintain the erosion logs during construction to prevent sediment from passing over or under the logs.
- (m) *Silt Dikes.* Prior to installation of silt dikes, the Contractor shall prepare the surface of the areas in which the silt dikes are to be installed such that they are free of materials greater than two inches in diameter and are suitably smooth for the installation of the silt dikes, as approved by the Engineer.
- (n) *Concrete Washout Structure.* The concrete washout structure shall meet or exceed the dimensions shown on the plans or be used in accordance with manufacturer's recommendations. Work on this structure shall not begin until written acceptance is provided by the Engineer.

Concrete washout structure shall conform to standard plan M-208-1 and shall meet the following requirements:

- (1) Structure shall contain all washout water.
- (2) Stormwater shall not carry wastes from washout and disposal locations.
- (3) The site shall be located a minimum of 50 horizontal feet from State waters and shall meet all requirements for containment and disposal as defined in subsection 107.25.
- (4) The site shall be signed as "Concrete Washout".
- (5) The site shall be accessible to appropriate vehicles.

- (6) Freeboard capacity shall be included into structure design to reasonably ensure the structure will not overtop during or because of a precipitation events.
- (7) The Contractor shall prevent tracking of washout material out of the washout structure.
- (8) Solvents, flocculents, and acid shall not be added to wash water.
- (9) The structure shall be surrounded on three sides by a compacted berm.
- (10) The structure shall be fenced with orange plastic construction fencing to provide a barrier to construction equipment and to aid in identification of the concrete washout area.
- (11) Concrete waste, liquid and solid, shall not exceed 2/3 the storage capacity of the washout structure.

Pre-fabricated concrete washout structures shall meet the following requirements:

- (1) Structure shall contain all washout water.
- (2) Structure shall be located 50 horizontal feet away from State waters, and shall be confined so that no potential pollutants will enter State waters and other sensitive areas as defined in the Contract. Locations shall be as approved by the Engineer. The site shall be delineated with orange plastic fence or other means and signed as "Concrete Washout".
- (3) The site shall be accessible to appropriate vehicles.
- (4) Freeboard capacity shall be included into structure design to reasonably ensure the structure will not overtop during or because of a precipitation event.
- (5) Solvents, flocculants, and acid shall not be added to wash water.
- (6) Concrete waste, liquid and solid, shall not exceed 2/3 the storage capacity of the washout structure.
- (7) Prefabricated structures cannot be moved when they contain liquid, unless otherwise approved.
- (8) The concrete washout structure shall be completed and ready for use prior to concrete placement operations.
- (9) Washout areas shall be checked and maintained as required. On site permanent disposal of concrete washout waste is not allowed.

All liquid and solid wastes, including contaminated sediment and soils generated from concrete washout shall be hauled away from the site and disposed of properly at the Contractor's expense.

- (o) *Vehicle Tracking Pad (VTP)*. Vehicle tracking pads shall be constructed to the minimum dimensions shown in the Contract, unless otherwise directed by the Engineer. Construction of approved vehicle tracking pads shall be completed before any disturbance of the area.

The Contractor shall maintain each vehicle tracking pad during the entire time that it is in use for the project. The vehicle tracking pad shall be removed at the completion of the project unless otherwise directed by the Engineer. Additional aggregate may be required for maintenance and will be paid for under Pay Item, Maintenance Aggregate (Vehicle Tracking Pad).

- (p) *Detention Pond*. Permanent detention ponds shown on the construction plans may be used as temporary BMPs if all the following conditions are met:
  - (1) The pond is designated as a construction BMP in the SWMP.
  - (2) The pond outfall and outlet are designed and implemented for use as a BMP during construction in accordance with good engineering, hydrologic, and pollution control practices. The stormwater discharges from the outfall shall not cause degradation or pollution of State waters, and shall have BMPs, as appropriate.

- (3) All silt shall be removed and the pond returned to the design grade and contour prior to project acceptance
- (q) *Aggregate Bag.* Aggregate bags shall be placed on a stable surface, consisting of pavement, grass or gravel. Aggregate bags shall be placed to conform to the surface without gaps. Discharge water shall not cause erosion.
- (r) *Surface Roughening.* Surface roughening creates horizontal grooves along the contour of the slope. Roughening may be accomplished by furrowing, scarifying, ripping or disking the soil surface to create a 2 to 4 inch minimum variation in soil surface. Surface roughening will not be paid for separately, but shall be included in the work.
- (s) *Vertical Tracking.* Vertical tracking involves driving a tracked vehicle up and down the soil surface and creating horizontal grooves and ridges along the contour of the slope. Sandy soils or soils that are primarily rock need not be tracked. Vertical tracking will not be paid for separately, but shall be included in the work.

**208.06 Materials Handling and Spill Prevention.** The SWMP Administrator shall clearly describe and record on the SWMP, all practices implemented at the site to minimize impacts from procedures or significant material that could contribute pollutants to runoff. Areas or procedures where potential spills can occur shall have a Spill Response Plan in place as specified in subsections 107.25(b) 6 or 208.06(c). Construction equipment, fuels, lubricants, and other petroleum distillates shall not be stored or stockpiled within 50 horizontal feet of any State waters or more if the Contractor determines necessary. Equipment fueling and servicing shall occur only within approved designated areas.

- (a) *Bulk Storage Structures.* Bulk storage structures for petroleum products and other chemicals shall have impervious secondary containment or equivalent adequate protection so as to contain all spills and prevent any spilled material from entering State waters. Secondary containment shall be capable of containing the combined volume of all the storage containers plus at least 10 percent freeboard. For secondary containment that is used and may result in accumulation of stormwater within the containment, a plan shall be implemented to properly manage and dispose of all accumulated stormwater which is deemed to be contaminated (e.g., has an unusual odor or sheen).
- (b) *Lubricant Leaks.* The Contractor shall inspect equipment, vehicles, and repair areas daily to ensure petroleum, oils, and lubricants (POL) are not leaking onto the soil or pavement. Absorbent material or containers approved by the Engineer shall be used to prevent leaking POL from reaching the soil or pavement. The Contractor shall have onsite approved absorbent material or containers of sufficient capacity to contain any POL leak that can reasonably be foreseen. The Contractor shall inform all Spill Response Coordinators in accordance with the Spill Response Plan if unforeseen leakage is encountered. All materials resulting from POL leakage control and cleanup shall become the property of the Contractor and shall be removed from the site. Control, cleanup, and removal of by-products resulting from POL leaks shall be performed at the Contractor's expense.
- (c) *Spill Response Plan.* A spill Response Plan shall be developed and implemented to establish operating procedures for handling potential pollutants and preventing spills.

The Response Plan shall contain the following information:

- (1) Identification and contact information of each Spill Response Coordinator
- (2) Locations of areas on project site where equipment fueling and servicing operations are permitted.
- (3) Location of cleanup kits.
- (4) Quantities of chemicals and locations stored on site.
- (5) Label system for chemicals and Safety Data Sheets (SDS) for products.
- (6) Clean up procedures to be implemented in the event of a spill that does not enter State waters or ground water.
- (7) Procedures for spills of any size that enter surface waters or ground water, or have the potential to do so. CDOT's Erosion Control and Stormwater Quality Guide contains Spill notification contacts and phone numbers required in the Spill Response Plan.
- (8) A summary of the employee training provided.

Information in items (1) through (8) shall be updated in the SWMP Notebook when they change.

**208.07 Stockpile Management.** Material stockpiles shall be located 50 horizontal feet away from State waters, and shall be confined so that no potential pollutants will enter State waters and other sensitive areas as defined in the Contract. Locations shall be approved by the Engineer.

Erodible stockpiles (including topsoil) shall be contained with acceptable BMPs at the toe (or within 20 feet of the toe) throughout construction. BMPs shall be approved by the Engineer. The SWMP Administrator shall describe, detail, and record the sediment control devices on the SWMP.

**208.08 Limits of Disturbance.** The Contractor shall limit construction activities to those areas within the limits of disturbance shown on the plans and cross-sections. Construction activities, in addition to the Contract work, shall include the on-site parking of vehicles or equipment, on-site staging, on-site batch plants, haul roads or work access, and all other action which would disturb existing soil conditions. Staging areas within the LDA shall be as approved by the Engineer. Construction activities beyond the limits of disturbance due to Contractor negligence shall be restored to the original condition by the Contractor at the Contractor's expense. The SWMP Administrator shall tabulate additional disturbances not identified in the CDPS\_SCP application and indicate changes to locations and quantities on the SWMP. The Contractor shall report the changes and additional disturbances to the Engineer, Water Quality Control Division of CDPHE and all other involved agencies.

The Contractor shall pursue and stabilize all disturbances to completion.

**208.09 Failure to Perform Erosion Control.** Failure to implement the Stormwater Management Plan is a violation of the CDPS – SCP and CDOT specifications. CDOT is obligated to implement enforcement mechanisms in accordance with CDOT's MS4 Permit COS000005 for Stormwater Management and erosion control Best Management Practices. Penalties may be assessed to the Contractor by the appropriate agencies. Penalties will be assessed by the Department as liquidated damages for failure to meet the Permit. All fines assessed to the Department for the Contractor's failure to implement the SWMP will be deducted from moneys due the Contractor in accordance with subsection 107.25(c) 2.

The Contractor will be subject to liquidated damages for incidents of failure to perform erosion control as required by the Contract. Liquidated damages will be applied for failure to comply with the CDPS-SCP and these specifications, including the following:

- (1) Failure to include erosion control in the project schedule or failure to include erosion control in each schedule update as specified in subsection 208.03(b).
- (2) Failure of the Contractor to perform the inspections required by subsection 208.03(c) 2.
- (3) Failure of the Contractor to implement necessary actions required by the Engineer as required by subsection 208.03(c).
- (4) Failure to amend the SWMP and implement BMPs as required by subsection 208.04.
- (5) Failure to keep documentation and records current.
- (6) Failure to construct or implement erosion control or spill containment measures required by the Contract, or failure to construct or implement them in accordance with the Contractor's approved schedule as required by subsection 208.06(c).
- (7) Failure to limit temporary stabilization to 20 or fewer acres as required by subsection 208.04 (e).
- (8) Failure to replace or perform maintenance on an erosion control feature after notice from the Engineer or from a water quality inspection as required by subsection 208.04(f).
- (9) Failure to remove and dispose of sediment from BMPs as required.
- (10) Failure to install and properly utilize a concrete washout structure for containing washout from concrete placement operations.
- (11) Failure to perform stabilization as required by subsection 208.04 (e).
- (12) Failure of the Superintendent or designated representative to attend inspections as required by subsection 208.03(c) and record findings in the appropriate form.

(13) Failure to prevent discharges not composed entirely of stormwater from leaving the Construction Site.

(14) Failure to provide the survey of Permanent Water Quality BMPs when required on the project in accordance with 208.10.

The Engineer will immediately notify the Contractor of each incident of failure to perform erosion control in accordance with the CDPS-SCP and these specifications, including items (1) through (14) above by issuing the Form 105. Correction shall be made as soon as possible but no later than 48 hours from the date of notification to correct the failure. The Contractor will be charged liquidated damages in the amount of \$970 for each day after the 48 hour period has expired, that one or more of the incidents of failure to perform the requirements for each Form 105 remains uncorrected. Liquidated damages will begin at Midnight of the date the 48 hours has expired.

This deduction will not be considered a penalty, but will be considered liquidated damages based on estimated additional construction engineering costs. The liquidated damages will accumulate, for each cumulative day that one or more of the incidents remain uncorrected. The number of days for which liquidated damages are assessed will be cumulative for the duration of the project; that is: the damages for a particular day will be added to the total number of days for which liquidated damages are accumulated on the project. The liquidated damages will be deducted from any monies due the Contractor.

If all other failures are not corrected within 48 hours after liquidated damages have begun to be assessed, the Engineer will issue a Stop Work Order in accordance with subsection 105.01. Work shall not resume until the Engineer has approved a written corrective action plan submitted by the Contractor that includes measures to prevent future violations and a schedule for implementation.

If the Contractor requires more than 96 hours to perform the corrective work from the date on the Form 105, the Contractor shall submit a request for deferment. The deferment request shall be in writing and shall include the specific failure, temporary measures until final correction is made, the methodology which will be employed to make the correction and interim milestones to completing the work. The Region Water Pollution Control Manager (RWPCM), Engineer, the SWMP Administrator and the Contractor shall concur on this deferral and set a proposed date of completion. If approved, the Contractor shall complete the corrective measures by Midnight of the proposed completion date. If corrective work is not corrected by the completion date the Engineer will issue a Stop Work Order. Liquidated Damages will apply retroactively back to the 48 hours after the 105 date of notification. Liquidated Damages will be assessed until the corrective work has been completed and accepted.

Deferment of work to correct failures to perform erosion control will not affect the Contractor's other contractual responsibilities, notifications for other non-compliance, nor the final completion date of the project. Liquidated Damages for other non-compliance notifications will continue to apply during the deferment period in addition to liquidated damages associated with the deferment.

Based on the submittal date of the approved deferment Liquidated Damages and a Stop Work Order may not be mandated to the Contractor.

Disagreements regarding the suggested corrective action for a BMP compliance issue between the Project Engineer, SWMP Administrator, and Superintendent, shall be discussed with the Resident Engineer and Region Water Pollution Control Manager. If after the discussions, the Project Engineer and the Contractor are still in disagreement and feel that additional compensation is owed, the Contractor will follow the decision of the Project Engineer, keep track of the costs and negotiate further with the Project Engineer. If after pursuing the issue, the Contractor is unable to reach agreement with the Project Engineer, then the Contractor can follow the dispute process outlined in subsection 105.22.

If the Contractor's corrective action plan and schedule are not submitted and approved within 96 hours of the initial notice, the Engineer will issue a Stop Work Order and have an on-site meeting with the Superintendent, SWMP Administrator, and the Superintendent's supervisor. This meeting will also be attended by the Resident Engineer, the Region Water Pollution Control Manager, and the Region Program Engineer. This meeting will identify and document needed corrective actions and a schedule for completion. If after the meeting, the unacceptable work is not remedied within the schedule as agreed to in the meeting, the Engineer will take action to effect compliance with the CDPS-SCP and these specifications by utilizing CDOT Maintenance personnel or other non-Contractor forces and deduct the cost from any moneys due or to become due to the Contractor pursuant to subsection 105.17. Delays due to these Stop Work Orders shall be considered non-excusable. The Stop Work Order shall be in place until the project is in CDPS-SCP compliance.

If the Contractor remains non-responsive to requirements of the on-site meeting, the Engineer will start default or Contract termination procedures in accordance with subsections 108.09 and 108.10. CDOT will proceed with corrective or disciplinary action in accordance with the Rules for Prequalification, Debarment, Bidding and Work on Transportation, Road, Highway and Bridge Public Projects.

When a failure meets any one of the following conditions, the Engineer will immediately issue a Stop Work Order in accordance with subsection 105.01 irrespective of any other available remedy:

- (1) It may endanger health or the environment.
- (2) It consists of a spill or discharge of hazardous substances or oil which may cause pollution of the waters of the state.
- (3) It consists of a discharge which may cause a violation of a water quality standards.

**208.10 Items to Be Completed Prior to Requesting Partial Acceptance of Water Quality Work.**

- (d) *Reclamation of Washout Areas.* After concrete operations are complete, washout areas shall be reclaimed in accordance with subsection 208.05(n) at the Contractor's expense.
- (e) *Survey.* When Permanent Water Quality BMPs (Permanent BMP) are required on the project, the Contractor shall survey the BMPs to confirm that they conform to the configuration and grade shown on the Plans. The survey shall conform to Section 625. The results of the survey shall be submitted as Microstation or AutoCad drawing files and PDF files, showing both designed and final elevations and configurations. Paper versions of the drawings shall be submitted with the stamp and seal of the Contractor's Surveyor.

The Engineer and the CDOT Hydraulics Engineer for the region will perform a walkthrough of the Permanent BMPs to confirm conformance to material requirements, locations and dimensions of the Permanent BMPs. Permanent BMPs not meeting the Contract requirements will be identified in writing by the Engineer, and shall be repaired or replaced at the Contractor's expense. Correction surveys shall be performed at the Contractor's expense to confirm the locations and dimensions of each Permanent BMP. Final as-built plans of the Permanent BMPs shall be provided to the Engineer and the CDOT Region and Headquarter Permanent Water Quality Control Specialist for their records.

- (f) *Locations of Temporary BMPs.* The Engineer will identify locations where modification, cleaning or removal of temporary BMPs are required, and will provide these in writing to the Contractor. Upon completion of work required, the SWMP Administrator shall modify the SWMP to provide an accurate depiction of BMPS to remain on the project site.

**METHOD OF MEASUREMENT**

**208.11** Erosion Control Management will be measured as the actual number of days of ECM work performed onsite, regardless of the number of ECIs required, including erosion control inspections, documentation, meeting participation, SWMP Administration, and the preparation of the SWMP notebook.

Erosion bales will be measured by the actual number installed and accepted.

Silt fence, silt berms, erosion logs, aggregate bags, silt dikes, temporary berms, rock check dams, temporary diversions, and temporary slope drains, will be measured by the actual number of linear feet that are installed and accepted. Measured length will not include required overlap.

Concrete washout structure will be measured by the actual number of structures that are installed and accepted.

Storm drain inlet protection will be measured by linear foot or actual number of devices that are installed and accepted.

Sediment trap quantities will be measured by the actual number installed and accepted.

Removal of trash that is not generated by construction activities will be measured by the actual number of hours that Contractor workers actively remove trash from the project. Each week the Contractor shall submit to the Engineer a list of workers and the hours spent collecting such trash.

Removal of accumulated sediment from traps, basins, areas adjacent to silt fences and erosion bales, and other clean out excavation of accumulated sediment, and the disposal of such sediment, will be measured by the number of hours that equipment, labor, or both are used for sediment removal.

Vehicle tracking pads will be measured by the actual number constructed and accepted.

Additional aggregate required for maintaining vehicle tracking pads will be measured as the actual number of cubic yards installed and accepted.

**BASIS OF PAYMENT**

**208.12** ECM and BMPs will be paid for at the Contract unit price for each of the items listed below that appear in the bid schedule.

Payment will be made under:

Pay Item	Pay Unit
Aggregate Bag	Linear Foot
Concrete Washout Structure	Each
Erosion Bales (Weed Free)	Each
Erosion Control Management	Day
Erosion Log (Type 1) (____ Inch)	Linear Foot
Erosion Log (Type 2) (____Inch)	Linear Foot
Pre-Fabricated Concrete Washout Structure	Each
Pre-Fabricated Vehicle Tracking Pad	Each
Maintenance Aggregate (Vehicle Tracking Pad)	Cubic Yard
Removal and Disposal of Sediment (Equipment)	Hour
Removal and Disposal of Sediment (Labor)	Hour
Removal of Trash	Hour
Rock Check Dam	Each
Sediment Basin	Each
Sediment Trap	Each
Silt Berm	Linear Foot
Silt Dike	Linear Foot
Silt Fence	Linear Foot
Silt Fence (Reinforced)	Linear Foot
Storm Drain Inlet Protection (Type__)	Linear Foot
Storm Drain Inlet Protection (Type__)	Each
Sweeping (Sediment Removal)	Hour
Temporary Berm	Linear Foot
Temporary Diversion	Linear Foot
Temporary Slope Drains	Linear Foot
Vehicle Tracking Pad	Each

Payment for Erosion Control Management (ECM) will be full compensation for all labor, materials and equipment necessary for the SWMP Administrator and Erosion Control Inspectors to perform all the work described in this specification. This includes assembling items 5-19 and required updates to the SWMP Notebook on site.

The SWMP Administrator and ECI's commute times will not be measured and paid for separately, but shall be included in the work.

Modifications to the SWMP Notebook due to construction errors or survey errors by the contractor shall be at the Contractor's expense.

Temporary erosion control will be measured and paid for by the BMPs used. Surface roughening and vertical tracking will not be measured and paid for separately but shall be included in the work. Payment for each BMP item will be full compensation for all work and materials required to furnish, install, maintain and remove the BMP when directed.

Payment for Removal and Disposal of Sediment (Equipment) will be full compensation for use of the equipment, including the operator. Payment for Removal and Disposal of Sediment (Labor) will be full compensation for use of the labor.

Payment for concrete washout structure, whether constructed or prefabricated, will be full compensation for all work and materials required to install, maintain, and remove the item. Maintenance and relocation, as required, of these structures throughout the duration of the project will not be measured and paid for separately, but shall be included in the work.

Silt berm spikes will not be measured and paid for separately, but shall be included in the work. When required, soil retention blankets will be measured and paid for in accordance with Section 216. Silt dike staples will not be measured and paid for separately, but shall be included in the work.

Spray-on mulch blankets required by the Contract, including those used in both interim and final stabilization, will be measured and paid for in accordance with Section 213.

Payment for storm drain inlet protection will be full compensation for all work, materials, and equipment required to complete the item, including surface preparation, maintenance throughout the project, and removal upon completion of the work. Aggregate will not be measured and paid for separately, but shall be included in the work.

Sweeping, when used as a BMP as shown in the Contract, will be measured by the number of hours that a pickup broom or equipment capable of collecting sediment, authorized by the Engineer, is used to remove sediment from the roadway or other paved surfaces. Each week the Contractor shall submit to the Engineer a statement detailing the type of sweeping equipment used and the number of hours it was used to pick up sediment. Operator will not be measured and paid for separately, but shall be included in the work.

Stakes, anchors, connections, geotextile, riprap and tie downs used for temporary slope drains will not be measured and paid for separately, but shall be included in the work.

Payment for vehicle tracking pad will be full compensation for all work, materials and equipment required to construct, maintain, and remove the entrance upon completion of the work. Aggregate and geotextile will not be measured and paid for separately, but shall be included in the work. If additional aggregate for maintenance of vehicle tracking pads is required, it will be measured by the cubic yard in accordance with Section 304 and will be paid for under this Section.

Seeding, sod, mulching, soil retention blanket, and riprap will be measured and paid for in accordance with Sections 212, 213, 216, and 506.

Geotextile (Erosion Control) (Class 2) will be measured and paid for in accordance with Section 420.

All work and materials required to perform the permanent BMP survey and furnish the electronic files shall be included in the original unit price bid for surveying. Surveying will be measured and paid for in accordance with Section 625.

Payment will be made for BMPs replaced as approved by the Engineer. Temporary erosion and sediment BMPs required due to the Contractor's negligence, carelessness, or failure to install permanent controls as a part of the work as scheduled or ordered by the Engineer or for the Contractor's convenience, shall be performed at the Contractor's expense. If the Contractor fails to complete construction within the contract time, payment will not be made for Section 208 pay items for the period of time after expiration of the contract time. These items shall be provided at the Contractor's expense.

January 15, 2015

## **SECTION 250 ENVIRONMENTAL, HEALTH AND SAFETY MANAGEMENT**

Section 250 of the Standard Specifications is hereby deleted for this project and replaced with the following:

### **DESCRIPTION**

**250.01** This work consists of protection of the environment, persons, and property from contaminants that may be encountered on the Project. This includes monitoring the work for encounters with contaminants or suspected soil and groundwater contaminants; the management of solid, special, and hazardous waste; and management of visual emissions associated with hazardous waste, when encountered on the project.

**250.02** The Contractor shall furnish all personnel, materials, equipment, laboratory services and traffic control necessary to perform the contamination monitoring, testing, and site remediation when required. Traffic control shall be in accordance with the requirements of Section 630.

Monitoring equipment used to detect flammable gas, oxygen level, and toxic gas shall be capable of detection to meet the following standards:

## CONSTRUCTION REQUIREMENTS

**250.03 General.** Prospective bidders, including subcontractors, are required to review the environmental documents available for this project. These documents are listed in subsection 102.05 as revised for this project.

This project may be in the vicinity of property associated with petroleum products, heavy metal based paint, landfill, buried foundations, abandoned utility lines, industrial area or other sites which can yield hazardous substances or produce dangerous gases. These hazardous substances or gases can migrate within or into the construction area and could create hazardous conditions. The Contractor shall use appropriate methods to reduce and control known landfill, industrial gases, and visible emissions from asbestos encounters and hazardous substances which exist or migrate into the construction area. The Contractor shall follow CDOT's *Asbestos-Contaminated Soil Management Standard Operating Procedure, dated August 22, 2011* for proper handling of asbestos-contaminated soil, and follow all applicable Solid and Hazardous Waste Regulations for proper handling of soils encountered that contain any other substance mentioned above.

Encountering suspected contaminated material, including groundwater, old foundations, building materials, demolition debris, or utility lines that may contain asbestos or be contaminated by asbestos, is possible at some point during the construction of this project. When suspected contaminated material, including groundwater, is encountered or brought to the surface, the procedures under subsection 250.03(d) and 250.05 shall be followed.

Transportation of waste materials on public highways, streets and roadways shall be done in accordance with Title 49, Code of Federal Regulations (CFR). All labeling, manifesting, transportation, etc. of waste materials generated on this project shall be coordinated with the Engineer. All hazardous waste manifests for waste materials generated on this project shall list the Colorado Department of Transportation as the generator of the waste materials except as otherwise noted. If the Contractor contaminates the site, the Contractor shall be listed as the generator on the hazardous waste manifests, permits, and other documents for such material. If the project is not on a State Highway or frontage road, then the appropriate local governmental entity having jurisdiction over the transportation system facility shall be listed as the hazardous waste generator.

If waste materials must be handled in a permitted treatment, storage and disposal (TSD) facility, the facility shall be designated in writing by the Engineer. If the waste materials are the result of the Contractor's actions, the Contractor shall designate the facility.

The hazardous waste transportation phase of the work involves insurance required by law and regulations. If the waste materials are determined to be hazardous, the Contractor must submit proof that the transportation company is covered by the appropriate type and amount of insurance required by laws and regulations governing the transportation of hazardous waste.

The Contractor alone bears the responsibility for determining that the work is accomplished in strict accordance with all applicable federal, state and local laws, regulations, standards, and codes governing special waste, petroleum and hazardous substance encounters and releases.

The Contract will list known or suspected areas of contamination. Health and Safety Officer, Monitoring Technician, and Health and Safety Plan shall be required when so stated in the Contract.

(a) *Health and Safety Officer (HSO).* The Contractor shall designate a HSO, not the project superintendent, who shall have at least two years field experience in chemical related health and safety. The HSO shall be either a certified industrial hygienist (CIH), certified hazardous materials manager (CHMM), professional engineer (PE) licensed in the State of Colorado, certified safety professional (CSP), or registered environmental manager (REM) meeting the criteria set forth in 29 CFR 1926. When asbestos is present or is suspected to be present, the HSO shall have additional training and certification in accordance with the Air Quality Control Commission Regulation No. 8 Part B. The HSO shall meet the minimum training and medical surveillance requirements established by the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA) for a supervisory Site Safety Official per 29 CFR 1962.65. The Contractor shall furnish documentation to the Engineer, at the preconstruction conference, that the above requirements have been met. 250.03.

The HSO shall *be* equipped with the following:

- (1) Communication equipment as required in subsection 250.03(d)2.A. and a vehicle.
- (2) Monitoring and detection equipment for flammable gas, oxygen sufficiency, toxic gas, radiological screening and other hazards. This includes, as required, a combustible gas indicator, flame ionization or photo ionization detector, oxygen meter, radiation monitor with Geiger Mueller detector and other foreseeable equipment.
- (3) Depth gauging equipment, sampling equipment and sampling containers.

(4) Personal protective equipment (levels C and D) when required.

The HSO shall recommend and supervise those actions which will minimize the risk of hazardous substance related injury to the workers, Department personnel, the general public, property and the environment. Hazardous substance is defined in 29 CFR 1926.32. The HSO shall prepare written procedures for the monitoring of confined space entry and working in or near excavations, including but not limited to trenches and drill holes associated with this project. The HSO shall conduct or supervise all hazardous substance and solid waste related testing, sampling, monitoring and handling for this project to ensure compliance with applicable statutes and regulations, and other applicable environmental requirements under subsections 107.01 and 107.02.

The HSO shall be available for consultation and assistance with contaminated materials related testing, sampling, and field monitoring as required by the Engineer.

The HSO shall prepare and submit a bound and indexed final site report to the Engineer at the end of the project. This site report shall include a detailed summary of all contaminated materials and contaminated water that were encountered and their final disposition.

During each week the HSO is utilized, the HSO shall prepare a daily diary which shall be submitted to the Contractor and the Engineer. This diary shall be submitted at the end of the week and shall become a part of the Department's records. The diary shall contain a chronological log of activities on the project including: dates and times on site, equipment used and calibrations, field monitoring results, visual observations, conversations, directives both given and received, and disposition of suspected hazardous substances. The Engineer will review this submittal and approve the actual number of hours to be paid.

- (b) *Monitoring Technician (MT)*. The Contractor shall designate a monitoring technician to be responsible for monitoring of hazardous substances during work on the project. The MT shall have a minimum of two years of actual field experience in assessment and remediation of hazardous substances that may be encountered during highway construction projects. The MT shall be experienced in the operation of monitoring devices, identifying substances based upon experience and observation, and field sampling (for testing) of all media that may be found on the site. Completion of the 40 hour hazardous waste and 8 hour supervisory training required by OSHA and U.S. EPA rules and regulations which complies with the accreditation criteria under the provisions of the proposed 29 CFR 1910.121 is required prior to beginning work. The Contractor shall furnish documentation at the Preconstruction Conference that demonstrates these requirements have been met.

The MT shall be equipped with the following:

- (1) Communication equipment as required in subsection 250.03(d)2.A. and a vehicle.
- (2) Monitoring and detection equipment for flammable gas, oxygen sufficiency, toxic gas, radiological screening and other hazards. This includes, as required, a combustible gas indicator, flame ionization or photo ionization detector, oxygen meter, radiation monitor with Geiger Mueller detector and other foreseeable equipment.
- (3) Personal protective equipment (levels C and D) when required.

The MT shall be present on site and perform monitoring as required by 250.03(d) when work is being performed in areas of suspected contamination and on a predetermined basis throughout other work on the project.

The MT shall monitor for compliance with regulations, the project Health and Safety Plan and the Materials Management Plan (if they exist for the project), the Contract, and the environmental documents for the project. The MT shall immediately notify the Contractor, the Engineer and the HSO of any hazardous condition.

During each week the MT is utilized, the MT shall prepare a daily monitoring diary which shall be submitted to the Contractor, HSO and the Engineer. This diary shall be submitted at the end of the week and shall become a part of the Department's records. The diary shall contain a chronological log of activities on the project including: dates and times on site, equipment used and calibrations, field monitoring results, visual observations, conversations, directives both given and received, and disposition of suspected hazardous substances. The Engineer will review this submittal and approve the actual number of hours to be paid.

- (c) *Health and Safety Plan (HASP)*. The HSO shall prepare a written HASP for the project, formatted as shown in Appendix B, *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities*, DHHS (NIOSH) Publication Number 85-115, available from the Superintendent of Documents, U.S. Government Printing Office. The Contractor and the HSO shall review the environmental documents listed prior to preparation of the HASP.

Four signed copies of the HASP shall be furnished to the Engineer for acceptance. The Engineer shall have seven calendar days to review and accept or reject the proposed HASP. Within five calendar days after acceptance, the HSO shall distribute signed and stamped (or sealed) copies of the accepted HASP to each emergency response agency servicing the project area, the HASP designated emergency hospital, and five copies to the Engineer. Earth or demolition work shall not occur until after the HASP is accepted and the HASP has been distributed. The HASP shall also be available to the Contractor's employees, their representatives, and officials of OSHA, EPA, Colorado Department of Public Health and Environment (CDPHE), local government health department, Federal Highway Administration, and other appropriate agencies and officials as may be designated by the Engineer. The Engineer will distribute the accepted HASP to appropriate Department personnel. The HASP shall be kept current and shall be revised by the HSO as warranted by changes in the field conditions.

All on-site workers (Contractor's, Department's, Utilities', and others) shall be briefed by the HSO on the contents of the HASP and any revisions thereof. The HSO shall conduct briefings (group or individual) to inform new employees, subcontractors, utility companies and other on-site workers of the HASP contents prior to their entry on site. All personnel involved in excavation or other soil disturbing activities shall receive the required two-hour Asbestos Awareness training by a Certified Asbestos Inspector, when asbestos discoveries are anticipated, or discoveries are made. A signature log of all briefing attendees shall be kept and furnished to the Engineer. The Contractor shall provide, as required, eye wash equipment and stations, emergency showers, hand and face washing facilities and first aid equipment.

The Contractor shall provide, as required, decontamination facilities for personnel and equipment employed in the work. The exact procedure for decontamination and frequency shall be included in the accepted HASP. Decontamination facilities shall meet the criteria set forth in the Code of Federal Regulations (29 CFR and 40 CFR).

(d) *Precautions and Procedures.* The following minimum precautions and procedures shall be followed during the construction of the project:

1. General construction precautions:
  - A. All monitoring and piezometer wells and test borings shall be established or abandoned by the Contractor as regulated by the State Engineer's Office. Copies of all required permits, notification, and abandonment documents shall be submitted to the Engineer prior to payment approval.
  - B. Hazardous substance related activities shall have a work plan for each work phase which shall be coordinated with the Engineer at least three working days prior to commencement of each phase of the work.
  - C. The Contractor shall properly handle all investigation derived waste generated by this project. Documentation shall be submitted to the Engineer of all tests performed for Treatment, Storage and Disposal (TSD) determination; classification of waste; hauling records; TSD acceptance; manifest (if required); etc. in accordance with applicable laws and regulations.
  - D. When the work may involve air emissions, the Contractor shall contact the Colorado Department of Public Health and Environment (CDPHE), Air Pollution Control Division to ascertain if an air pollution emission notice (APEN) or permit is required for this operation. The Contractor shall be responsible for filing the APEN and obtaining said permit, if required. The processing of air pollution permits, if required, in non-attainment areas or where public hearings are required, likely will take more than 90 days.
2. For construction on a known or potentially contaminated site, the following conditions shall apply, in addition to those listed in subsection 250.03(d)1:
  - A. The HSO shall be on site or readily available by radio, telephone or pager at all times during the work. When on site, the HSO shall have an operational portable or mobile cellular telephone available for immediate use in areas where such service is available. When on site in cellular telephone non-service areas, the HSO shall have available, for immediate use, radio access to a site with telephone service. The HSO shall be notified at least 24 hours prior to the start of confined space entry, storage tank removal, drilling, excavation, trenching, or dewatering operations.
  - B. The HSO shall designate the onsite monitoring equipment for flammable gases, oxygen deficient or enriched atmosphere, and toxic gases, such as but not limited to, a flame ionization detector, photoionization detector, combustible gas indicator, and oxygen meter. This designated equipment shall be

on site during all construction operations and be utilized during trenching, drilling, excavating, confined space entry, underground storage tank removal, and other appropriate construction operations. The exact equipment to fulfill this requirement shall be specified in the accepted HASP. The HSO shall conduct or supervise the monitoring. The monitoring equipment shall be calibrated as recommended by the manufacturer.

- C. When drilling, trenching, or excavating in the presence of detectable concentrations of explosive gases, the soil shall be wetted and the operating equipment shall be provided with spark proof exhausts.
  - D. The Contractor, through the HSO, is responsible for ensuring that 29 CFR 1926 is fully complied with during the construction of the project.
  - E. Affected excavation operations shall be discontinued and personnel shall be removed from the affected excavation sites where any of the following levels are detected:
    - (1) 20.0 percent or more LEL flammable gas, or 10.0 percent in an underground or confined space,
    - (2) Permissible Exposure Limit (PEL) of any toxic gas,
    - (3) 19.5 percent or less oxygen,
    - (4) 25.0 percent or more oxygen,
    - (5) Greater than 2 mrem/hr. (Beta particle & photon radioactivity),
    - (6) Greater than 15 pCi/L (Gross alpha particle activity), or
    - (7) Other action levels as determined by the HSO.
    - (8) Uncovering of suspect Asbestos Containing Material (ACM), including but not limited to, buried facility components, active or abandoned utility lines, buried foundations and demolition debris, or miscellaneous ACM dispersed in the soil. The Contractor shall follow the procedures outlined in the HASP and 29 CFR 1926 to address these conditions. Work shall resume in these areas when approved by the Engineer.
  - F. Personnel shall be issued and utilize appropriate Health and Safety equipment as determined by the HSO, who shall provide the Engineer with a written explanation of what personal protective equipment (PPE) shall be worn, when, and by which personnel. Except in emergency cases, the Engineer shall be advised by the HSO of changes in the degree of PPE prior to implementation.
  - G. Personnel shall avoid the area immediately downwind of any excavation unless the excavation is monitored and declared safe.
  - H. The operators of excavating, trenching, or drilling equipment shall wear appropriate PPE as required in the HASP.
  - I. Exhaust blowers shall be present at the location where required in the accepted HASP.
  - J. The Contractor shall accomplish the work with employees who have been trained and equipped as required by the HASP and applicable provisions of 29 CFR 1910 and 29 CFR 1926.
  - K. Fire extinguishers, electrical equipment and wiring shall conform to the applicable requirements of 29 CFR 1926 and 49 CFR.
  - L. Smoking shall not be permitted within 50 feet of any excavation.
3. For construction within 1000 feet of a known or potentially contaminated site, the following conditions, in addition to those listed in subsection 250.03(d) 1. shall apply:
- A. The areas under construction shall be checked with a combustible gas indicator before excavation begins to determine if flammable or combustible gas is in the area.
  - B. Excavations, trenches and drill holes shall be monitored by the HSO for flammable gas, toxic gas and oxygen deficiency or enrichment. This shall be carried out continuously unless the presence of flammable, combustible or toxic gas, or oxygen deficiency or enrichment in the area can be ruled out by the HSO. The recommendation to discontinue monitoring must be agreed to by the Engineer and the Contractor. Prior to implementation, this agreement shall be written, and shall contain specific conditions that will require re-evaluation of the area.
  - C. When flammable or toxic gas is found in the area, those precautions and procedures in subsection 250.03(d)2 shall apply.

4. The following procedures shall be followed if the level of contamination as documented in the environmental documents referenced in subsection 102.05 as revised for this project is exceeded, or if previously unidentified contaminated air, soil or water, is encountered during the construction of the project:
  - A. Work in the immediate area of the release or discovery of contamination shall cease. The Engineer shall be immediately notified.
  - B. If no HSO is required by the Contract, the Contractor shall designate an HSO as directed, in accordance with subsection 250.03(a).
  - C. The Engineer may direct the HSO to evaluate the material for potential hazardous substance or other contamination or unsafe conditions. This evaluation may include, but is not limited to, on site field monitoring, on site testing, and on or off site laboratory analysis. Removal of storage tanks and surrounding contaminated soils shall be in accordance with applicable laws, regulations and established procedures. If the contaminated material cannot be placed in the embankment or remediated on site, it must be removed to an appropriate TSD facility, as designated in writing by the Engineer. The HSO shall supervise the necessary testing required to make appropriate TSD determinations. Disposal of the unsuitable material shall be considered as remediation work as described in subsection 250.03(d)4.D and 250.03(d)4.E.
  - D. If this site is determined to be contaminated with petroleum products, hazardous substances or other solid waste in excess of that indicated in the above listed site investigation documents, a thorough Site Investigation and Waste Management Plan shall be accomplished under the supervision of the HSO. The Site Investigation and Waste Management Plan shall be submitted to the Engineer for approval and shall determine the extent of contamination and propose at least three types of remedial action for the contaminated area as required by applicable statutes and regulations. The HSO shall be available to assist the Engineer in explaining this study to the regulatory agencies. When requested by the Engineer, the Contractor shall prepare a Remediation Plan based on the selected remedial method, and shall submit this to the Engineer for approval. The time required for the Engineer's review of the Remediation Plan, including all necessary drawings, calculations, specifications, and other documentation will not exceed four weeks after a complete submittal is received. This work shall not be done unless authorized in writing by the Engineer.
  - E. If the site is determined to be contaminated with petroleum products; hazardous chemicals, materials, or wastes; or other solid wastes, and is required to be remediated, the HSO or other qualified individuals will supervise the Remediation Plan implementation as concurred to by the regulatory agencies, as directed. Hazardous Waste generated by remedial activities shall list the Colorado Department of Transportation as the hazardous waste generator on the required paperwork for projects on State Highways and their associated frontage roads. If this project is not on a State Highway or frontage road, then the appropriate local governmental entity having jurisdiction over the transportation system facility shall be listed as the hazardous waste generator. If the waste disturbed or produced was caused by Contractor negligence, the Contractor shall be listed as the hazardous waste generator. Remediation work shall be done only when authorized by the Engineer in writing.

**250.04 Heavy Metal Based Paint Management.** When the work includes the removal of paint or items covered with paint which may contain lead, chromium or other heavy metals, the requirements of this subsection shall apply in addition to the requirements of subsection 250.03.

The requirements of the HASP shall be in accordance with OSHA Publication Number 3142, *Working with Lead in the Construction Industry*.

Paint Removal and Waste Disposal work shall be performed in accordance with 29 CFR 1926.62, State and local air quality regulations, the Steel Structures Painting Council (SSPC) Guide for Containing Debris Generated During Paint Removal Operations, the *Industrial Lead Paint Removal Handbook* (SSPC 91-18), and the references contained therein.

The following minimum precautions and procedures shall be followed unless modified in the approved HASP or its updates:

- (a) The Contractor shall contact the CDPHE, Air Pollution Control Division to ascertain if an air pollution permit is required for the cleaning or demolition work. If an air pollution permit is required, the Contractor shall obtain the permit. The Contractor shall furnish the Engineer with a copy of the permit application and the permit issued prior to starting cleaning or demolition activities. A copy of the Air Pollution Emission Notice [APEN] shall be provided to the Engineer, if such notice is required under the Colorado Air Quality Control Commission's regulations. The

processing of air pollution permits in non-attainment areas, or where public hearings are required, likely will take more than 90 days.

- (b) The Contractor shall contain paint chips, corrosion residues, and spent abrasives, herein referred to as waste materials, resulting from the cleaning or demolition operations. The Contractor shall not deposit or release waste material into the water, air or onto the ground below or adjacent to the structure. The Contractor shall conduct cleaning operations to minimize the waste materials produced. Prior to beginning the work, the Contractor shall submit to the Engineer for acceptance, a detailed methods statement for capturing, testing, and disposing of the removed materials. The Engineer will have seven calendar days to review, and accept or reject this methods statement.
- (c) Abrasives utilized for blast cleaning shall be low-dusting and low waste. Unless approved otherwise, vacuum blasting or wheel blasting shall be used.
- (d) The HSO shall sample and test the waste material for lead, chromium, and other paint associated heavy metals using the Toxicity Characteristic Leaching Procedure (TCLP) Test, Method 1311 of the EPA publication, Test Methods for Evaluating Solid Waste 846. Sample collection methodology and frequency shall be recommended by the HSO and accepted by the Engineer with an adequate number of samples taken to be representative of all waste material collected. If the waste material does not pass the TCLP test, it shall be disposed of in a permitted TSD facility as designated in writing by the Engineer. The waste materials handling decision shall be documented by a report (five copies) submitted to the Engineer. This documentation shall include a description of sample collection methodology, testing performed, test results and comparison of test results with hazardous waste requirements. The waste material shall not be held at an unpermitted TSD facility site in excess of Resource Conservation and Recovery Act (RCRA) temporary storage time limits.
- (e) When an item coated with paint is removed, all loose paint shall be removed and collected from the item within 24 hours of the time it is removed or placed onto the ground. All loose paint shall be removed and collected from a painted item before it is removed from the site. The Contractor shall contain loose paint until it is removed and collected. Loose paint is defined as that which can be removed by manual scraping methods. Over waterways, the Contractor shall capture all paint debris by the method specified in the methods statement. The paint debris shall be collected on a daily basis and shall be stored in a properly labeled, tightly sealed container and placed in a secured location at the end of each working day.
- (f) All painted steel components which are not designated to be salvaged shall be recycled. Contractor possession of the steel for future use shall be considered a form of recycling. Prior to transport of the components off-site, the Contractor shall obtain a letter from the recipients of the painted steel components stating that they have been fully informed of the contents of the paint and are capable of handling the paint. If the Contractor is to maintain future possession of the steel, the Contractor shall supply this letter. If there will be more than one recipient of the painted material, one letter shall be obtained from each recipient. The Contractor shall provide a copy of each letter to the Engineer. If the painted steel components will be recycled by melting, the letter from the recipient is not required. The Contractor shall submit a letter stating the destination of the painted steel components and that they will be melted.
- (g) When the work consists of the removal of a bridge or components of a bridge coated with paint which has been assumed to contain lead, chromium, other heavy metals, or a combination thereof the Contractor shall capture paint debris which is dislodged during removal operations. The Contractor may choose any method for dismantling the bridge, subject to the following required construction sequence limitations:
  - (1) The concrete deck shall be removed prior to removal of the steel superstructure.
  - (2) If the methods statement indicates that girders will be dropped to the ground during dismantling, all debris from the concrete deck removal operation shall be removed from the area below the bridge before any girders are dropped into this area.
  - (3) Girders may be cut and dropped only if the span is located entirely over land.

**250.05 Material Handling.** This work consists of the additional handling of groundwater and soils to be excavated for construction of the project which are suspected or known to be contaminated. This work also includes stockpiling or containerization, analytical sampling and testing, and final disposition of contaminated groundwater and soils requiring special handling.

The Contractor shall maintain vertical trench walls for the work in the specified areas of known or potential contamination, as shown on the plans. Shoring may be necessary to meet this requirement. The Contractor shall confine the removal of contaminated groundwater and soils encountered as a result of the excavation activities in the specified areas to the vertical and horizontal limits of structure excavation specified in the Contract. The Contractor shall be responsible for any contaminated materials generated beyond the limits of excavation. This shall include any sampling, analysis, and disposal required, and the costs thereof. The Contractor shall be listed as the generator of any such material. The limits of excavation shall be determined as 18 inches outside of structures, including sewers, water lines, inlets, manholes, and other underground structures to be constructed, or as directed.

Specific areas of known or potential contamination have been identified in the project plans. There is the potential of encountering contaminated groundwater and soil, which has not been summarized in the plans or specifications, at unknown locations on the site. Suspected contaminated soil and groundwater shall be handled by one of three methods as follows:

- (a) *Materials Handling (Stockpile & Containerization)*. When recommended by the HSO and authorized by the Engineer, material shall be stockpiled or containerized for analysis and characterization for proper handling and disposal, or both. Sampling and testing of materials shall be as described in the Contract. If analysis indicates that soil samples are designated as uncontaminated, as determined by the criteria shown in the Contract or as determined by the CDPHE, the associated soils will not require any special handling and will become the property of the Contractor and may be used on site, subject to other requirements of the Contract. Health and safety monitoring and strict fugitive dust control shall be conducted during the placement of these soils. If analysis indicates that groundwater samples are designated as uncontaminated, as determined by the criteria shown in the Contract or as determined by the CDPHE, the groundwater shall be handled in accordance with subsection 107.25.

Stockpiled and containerized materials shall be secured in compliance with the following provisions until they are determined to be uncontaminated:

1. The Contractor shall not store the material for more than 90 days.
  2. The Contractor shall prevent any runoff from infiltrating the ground or running out of the containment area.
  3. Soils and groundwater containing different contaminants shall be placed in separate containers or stockpiles.
  4. The Contractor shall prevent the dispersion of materials or the dilution or mixing of containers and stockpiles.
  5. The ground surface on which the contaminated soils will be placed shall be covered with plastic sheeting which will withstand the placement and removal of stockpiled materials without breaching.
  6. The ground surface shall be graded to drain toward the edge of the soil piles and the berm or trench around them shall be covered by plastic sheeting.
  7. Proper security shall be provided in accordance with 40 CFR.
- (b) *Solid Waste Disposal*. Soils determined to be contaminated, but not hazardous, as established by criteria in the Contract or as determined by CDPHE or other regulatory agencies having jurisdiction, shall be handled and disposed of, or both as recommended by the HSO and approved by the Engineer. The Contractor shall haul this material to a solid waste disposal facility.
- (c) *Contaminated Groundwater Disposal*. Groundwater determined to be contaminated, but not hazardous, as established by criteria in the Contract or as determined by CDPHE or other regulatory agencies having jurisdiction, shall be handled and disposed of, or both as recommended by the HSO and approved by the Engineer. *The Contractor shall prepare a dewatering plan proposing at least three types of treatment and/or disposal options of contaminated groundwater as required by applicable statutes and regulations. One of the treatment options shall include permitting and onsite treatment prior to discharge or disposal. The dewatering plan shall be submitted to the Engineer for approval four weeks before dewatering activities begin.*
- (d) *Hazardous Waste Disposal*. Soils and groundwater that are designated or suspected to be hazardous shall be containerized *immediately* upon excavation or upon discovery. Hazardous material shall be labeled and transported to a permitted treatment, storage and disposal (TSD) facility or to a hazardous waste disposal facility approved by the Engineer.
- (e) *Additional Requirements*. Stockpiled or containerized material characterized as uncontaminated, contaminated or hazardous shall be stored and disposed of in a manner consistent with current established federal, state, and local regulations for waste materials.

Materials with contaminants not specifically regulated shall be disposed of by the Contractor as directed, in consultation with CDPHE. All areas where wastes are generated shall be reviewed by the HSO to identify potential contaminant sources that may result in a contaminated waste stream.

Contaminated groundwater and soils, which have been identified as solid waste or hazardous waste, requiring disposal according to federal, state, and local regulations, shall be transported in accordance with 49 CFR by the Contractor to an appropriately permitted treatment facility, landfill, incinerator or asphalt plant or other facility approved to accept the waste. CDPHE and the landfill or other treatment or disposal facility shall be notified by the HSO of the material to be disposed of and the corresponding analytical test results prior to shipment. Potentially contaminated water collected from the lined trench of a stockpile shall be treated as required by Colorado Wastewater Discharge Permit System (CDPS) permits, 29 CFR and 40 CFR and reimbursed separately in accordance with Contract requirements.

**250.06 Sample delivery.** This work consists of the collection, containerization and delivery of material samples for analysis to the testing facility designated in the Contract.

Environmental Protection Agency (EPA) protocol and standards shall be followed in the collection, containerization and transport of samples to be analyzed, including the documentation of the proper chain of custody of all samples. The Contractor shall collect sufficient sample material to perform the required analysis and is responsible for ensuring that appropriate climate control has been provided for sample transport. Sample delivery shall be made within the maximum allowable holding time for each sample type, not to exceed 24 hours, excluding weekends. The time period required for sample collection and delivery to the testing facility will not be considered an excusable delay. The analysis to be completed and turnaround time shall be approved by the Engineer.

The Contractor shall provide the Engineer with a copy of documentation indicating that proper chain of custody requirements have been followed for all samples.

Quality control samples shall be provided by the Contractor in accordance with the quality control requirements of the testing facility designated in the Contract (quality control requirements are available from the Engineer). The Contractor shall prepare, label and transport these samples to the testing facility in conjunction with the delivery of other samples authorized for analysis by the Engineer, at no additional cost.

The Engineer may request splits of samples, in advance of collection, which shall be provided at no additional cost by the Contractor.

**250.07 Asbestos-Containing Material Management.** Environmental documents or plans listed in the special provisions should include known or suspected locations that could involve encounters with ACM during excavation and other soil disturbing construction activities. Unexpected discoveries of ACM may be made during excavation and soil disturbing construction activities. Asbestos contaminated soil, shall be properly managed or remediated, in accordance with subsection 250.07(a).

All asbestos related activities shall be performed by Colorado certified asbestos professionals, contractors, or consultants. Certifications are issued by the Colorado Department of Public Health and Environment (CDPHE), Indoor Air Quality Unit. A Colorado Certified Asbestos professional shall manage the management and disposal of asbestos contaminated soil and other ACM. The Indoor Air Quality Unit within CDPHE is the only unit that certifies such professionals. The Contractor shall furnish a copy of the license to the Engineer.

- (a) *Regulatory Compliance.* Asbestos contaminated soil management is governed by 6 CCR 1007-2, Section 5, which includes and references regulatory compliance with Asbestos Hazard Emergency Response Act (AHERA) Colorado *Regulation 8*; Inspection and reporting protocol and demolition standards are governed by AHERA; Demolition and notification standards are governed by National Emission Standards for Hazardous Air Pollutants (NESHAPS); Colorado Regulation 8 governs all asbestos activities, demolition, permitting, and certification of Certified Asbestos Professionals in the State of Colorado. Colorado Regulation 8 is more stringent than AHERA and NESHAPS and supersedes federal regulations. Conflicting regulatory requirements between AHERA and NESHAPS, if not specifically addressed in Colorado Regulation 8, shall be addressed and approved protocol negotiated with CDPHE. The Contractor shall conform to all current regulations, policy directives, or both, issued by the EPA, CDPHE, and the Department.
- (b) *Asbestos Management and Visual Inspections* Asbestos management must be performed by a certified asbestos professional. Final Inspections of the area of asbestos contaminated soil removal shall be performed by an Asbestos Consultant to determine what, if any, controls must be instituted to allow future activity in the excavation area. All final visual inspections shall be conducted only when soil is dry.

(c) *Permitting and Notification.* The CDPHE requires notification of any soil disturbing activity where asbestos is known, suspected, or discovered. A 24-hour notification to CDPHE is required prior to any soil disturbing activity of an unplanned asbestos discovery. A 10 working day notification to CDPHE is required prior to any soil disturbing activity in an area with known or potential material suspected of containing asbestos in or on the soil or asbestos-contaminated soil. Removal of asbestos-containing material on a facility component, that is located on or in soil that will be disturbed, with asbestos quantities above the following trigger levels must be permitted and abated in accordance with the requirements of Air Quality Control Commission Regulation No. 8 (5 CCR 1001-10, Part B):

- (1) 260 linear feet on pipes,
- (2) 160 square feet on other surfaces, or
- (3) The volume of a 55-gallon drum.

All permit applications shall be submitted to the Colorado Department of Public Health and Environment a minimum of 10 days prior to start of work for approval. The permit application and notification shall be submitted simultaneously. The Contractor shall obtain all required State and local permits and shall be responsible for all associated fees. Permit application, notification, and waiver request forms shall be submitted to:

Colorado Department of Public Health and Environment Permit Coordinator/APCD - SS - B1 4300 Cherry Creek Drive South Denver, CO 80246-1530 Phone: (303) 692-3100 Fax: (303) 782-0278

Application and waiver forms are available on the CDPHE website: [asbestos@state.co.us](mailto:asbestos@state.co.us)

(d) *CDOT's Asbestos-Contaminated Soil Management Standard Operating Procedure, dated August 22, 2011.* Asbestos contaminated soil shall be managed in accordance with 6 CCR 1007-2, Section 5, Asbestos Waste Management Regulations. Regulations apply only upon discovery of asbestos materials during excavation and soil disturbing activities on construction projects, or when asbestos encounters are expected during construction. The contractor shall comply with procedures detailed in the CDPHE's Asbestos-Contaminated Soil Guidance Document and CDOT's approved *Asbestos-Contaminated Soil Management Standard Operating Procedure, dated August 22, 2011*, including the following minimum requirements:

- (1) Immediate actions and implementation of interim controls to prevent visible emissions, exposure, and asbestos contamination in surrounding areas.
- (2) Soil Characterization.
- (3) Training required for all personnel involved in excavation and other soil disturbing activities, once asbestos is encountered during construction or on projects where asbestos encounters are expected. Asbestos Awareness Training shall be given by a qualified and certified Asbestos Building Inspector with a minimum of six months experience inspecting asbestos contaminated soil.
- (4) Assessment for the presence and extent, within the proposed area of disturbance, of asbestos discoveries, whether expected or unexpected, by a Certified Asbestos Inspector.
- (5) Investigation and sampling required for risk assessment and management. Investigation, if required, shall be conducted by a Certified Asbestos Inspector.
- (6) Risk assessment and determinations for further management or abatement.
  - (i) Risk assessment and determinations must be made by a Certified Asbestos Inspector, and coordinated with the Engineer.
  - (ii) Soil remediation is not necessarily required, depending on the circumstances.
- (7) Submit 24-hour Notification of Unplanned Asbestos Discovery.
- (8) Submit 10-day Notification of Planned Asbestos Management.
- (9) Submit 24-hour Notification of Unplanned Asbestos Discovery.
- (10) Submit 10-day Notification of Planned Asbestos Management.

(e) *Risk Assessment and Determinations for Further Management Or Remediation.* Risk assessment and determinations for further management or remediation must be closely coordinated with the Project Engineer and Project Manager of the Statewide Management Plan.

**250.08 Methamphetamine Lab Sites.** Demolition of former Methamphetamine (meth) labs is enforced by the Governing Authority, which varies from county to county. The Contractor shall demolish all buildings that are identified as former meth labs, as listed in public listings by the Governing Authority. The Contractor shall provide evidence of demolition to the Governing Authority, obtain receipt of such evidence by the Governing Authority, and shall submit these to Engineer immediately following demolition.

Septic tank removal at known meth lab sites shall undergo preliminary assessment by an Industrial Hygienist or Certified Industrial Hygienist to determine proper removal and disposal. Work shall proceed in accordance with the recommendations of the Hygienist.

#### **METHOD OF MEASUREMENT**

**250.09** Environmental Health and Safety Management will not be measured, but will be paid for on a lump sum basis. This will include all work, materials, and hourly time charges by the HSO and other personnel required to accomplish the following:

- (1) Preparation, submittal and briefing of the initial HASP
- (2) Preparation and submittal of the Waste Management Plan
  1. Preparation and Submittal of the Dewatering Plan
  2. Preparation and Submittal of the Remediation Plan
- (3) Procedures and equipment specified in subsections 250.03 - 250.07
- (4) PPE (levels C and D) for Contractor's personnel for any contamination identified in the preconstruction investigations
- (5) Preparation and submittal of the final site report

The quantity to be measured for Health and Safety Officer will be the total number of hours that the Health and Safety Officer is actually used, as authorized, for the following work:

- (1) Field monitoring necessary to ensure the safety of workers on the site;
- (2) Hours in excess of the items listed under Environmental Health and Safety Management;
- (3) Hours that are necessary due to unforeseen site conditions; and
- (4) Hours of additional consultation or field work that is requested by the Engineer.

Equipment specified in subsection 250.03(a), preparation and submittal of the daily HSO diary, travel to and from the project site, and PPE (Levels C and D) required for use by the HSO will not be measured and paid for separately, but shall be included in the hourly cost of the HSO.

The quantity to be measured for Monitoring Technician will be the total number of hours that Monitoring Technician is actually used as authorized. Equipment specified in subsection 250.03(b), supervision of the MT, preparation and submittal of the daily monitoring diary, travel to and from the project site, and PPE required for use by the MT (Levels C & D) will not be measured and paid for separately, but shall be included in the hourly cost of the MT.

Solid stockpiled materials will be measured by the cubic yard computed from cross sections by the average end area or other requirements acceptable method. Disposal of solid waste and solid hazardous waste materials will be measured by the cubic yard in the disposal container.

Materials Sampling and Delivery will be measured by the actual number of samples collected, containerized and transported to the testing facility indicated in the Contract.

Additional environmental health and safety management work required and authorized by the Engineer, but not included in the items listed above, will be considered extra work to be paid for in accordance with subsection 109.04, unless such work is caused by the Contractor's action.

#### **BASIS OF PAYMENT**

**250.10** Partial payment for Environmental Health and Safety Management, as determined by the Engineer, will be made as the work progresses. The Contractor shall submit a schedule of environmental related Health and Safety Management work before the first partial payment is made. The schedule shall indicate the environmental related Health and Safety Management time for each work item that requires Contractor environmental related Health and Safety Management effort and the total time for the project.

The accepted quantity for Health and Safety Officer will be the number of hours actually used and approved for payment by the Engineer and will be paid for at the contract unit bid price.

The accepted quantity for Monitoring Technician will be the number of hours of onsite monitoring as approved by the Engineer and will be paid at the Contract unit price.

Environmental Health and Safety Management, Health and Safety Officer and Monitoring Technician bid items shall include vehicles, phone charges, supplies, printing, postage, office support, and all other miscellaneous costs associated with the work.

Payment for Groundwater Handling (Containerization & Analysis) will be paid for in accordance with subsection 109.04. Payment for Soil Handling (Stockpile) will be made at the contract unit price for all excavated material required to be stockpiled for analysis. The contract unit price will be full compensation for furnishing all materials, labor, equipment and incidentals necessary to complete this work, and all handling of the material prior to disposal. This includes haul, stockpile, and security. Payment for this work will be in addition to any payment made under other bid items for excavation, embankment or backfill on the project, or waste disposal of this material.

Payment for Solid Waste Disposal and Solid Hazardous Waste Disposal will be made at the appropriate contract unit price for the disposal of material determined to be either solid waste or solid hazardous waste. The contract unit prices will be full compensation for furnishing all materials, labor, equipment, tools, storage containers for transport, containerization of material for up to 60 days, and incidentals necessary to complete this work. This includes all handling of the material, loading for disposal, unloading for disposal, and borrow material required for replacement of excavated material disposed of offsite. It does not include stockpiling or containerization required for analysis which is included in the item Materials Handling (Stockpile & Containerization) paid for as described above. Payment for waste disposal fees and transport of hazardous waste will be made as shown below. Payment for this work will be in addition to any payment made under other bid items for excavation, embankment, backfill or material handling (stockpile & containerization) on the project.

- (1) *Solid Waste*. Transport costs to the disposal facility and disposal fees will be included in the contract unit price for this work.
- (2) *Solid Hazardous Waste*. Transport, Disposal and /or Treatment costs will be paid for by planned force account in accordance with subsection 109.04.
- (3) *Liquid Hazardous Waste*. Transport, Disposal and /or Treatment costs will be paid for by planned force account in accordance with subsection 109.04.

The cost of shoring required to limit the removal of contaminated materials to the specified limits shall be included in the bid unit prices for any excavation to be performed. Such shoring ordered by the Engineer in areas other than the specified areas of known or potential contamination, as shown in the plans, will be paid for in accordance with subsection 109.04.

Payment for Materials Sampling and Delivery will be made at the contract unit price for each material sample collected, containerized and transported to the laboratory testing facility as designated in the Contract. The Contract unit price will be full compensation for furnishing all materials, labor, equipment, tools and incidentals necessary to complete this work including required sampling kits, containers, sample splits and quality control samples.

The Contractor shall be responsible for damage caused by Contractor negligence to the environment, persons, or property. Expenditures associated with actions of the Contractor shall be borne by the Contractor at no cost to the project.

Contaminated groundwater containerized, treated or disposed under the requirements of this specification will be paid for by planned force account in accordance with subsection 109.04.

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

<b>Pay Item</b>	<b>Pay Unit</b>
Environmental Health and Safety Management	Lump Sum
Health and Safety Officer	Hour
Monitoring Technician	Hour
Materials Sampling and Delivery	Each

Materials Handling (Stockpile)  
Solid Waste Disposal

Cubic Yard  
Cubic Yard

February 3, 2011

#### **REVISION OF SECTION 401 TEMPERATURE SEGREGATION**

Section 401 of the Standard Specifications is hereby revised for this project as follows:

In subsection 401.16 delete the twelfth (last) paragraph and replace it with the following:

The Engineer may evaluate the HMA for low density due to temperature segregation any time industry best practices, as detailed on Form 1346, are not being followed or the Engineer suspects temperature segregation is occurring. The Engineer will first meet with the Contractor to discuss the paving practices that are triggering the temperature investigation. Areas across the mat, excluding the outside 1 foot of both edges of the mat, that are more than 25 °F cooler than other material across the width may be marked for density testing. Material for temperature comparison will be evaluated in 3-foot intervals behind the paver across the width of the mat. The material shall be marked and tested in accordance with CP 58. If four or more areas within a lot of 500 tons have densities of less than 93 percent of the material's maximum specific gravity for SMA mixes or less than 92 percent of the material's maximum specific gravity for all other HMA mixes, a 5 percent price disincentive will be applied to the 500 ton lot. The 500 ton count begins when the Engineer starts looking for cold areas, not when the first cold area is detected. This price disincentive will be in addition to those described in Sections 105 and 106. Only one area per delivered truck will be counted toward the number of low density areas. Temperature segregation checks will be performed only in areas where continuous paving is possible.

April 26, 2012

#### **REVISION OF SECTION 401 COMPACTION OF HOT MIX ASPHALT**

Section 401 of the Standard Specifications is hereby revised for this project as follows:

In subsection 401.17, delete the first paragraph and replace with the following:

**401.17 Compaction.** The hot mix asphalt shall be compacted by rolling. Both steel wheel and pneumatic tire rollers will be required. The number, weight, and type of rollers furnished shall be sufficient to obtain the required density while the mixture is in a workable condition. Compaction shall begin immediately after the mixture is placed and be continuous until the required density is obtained. When the mixture contains unmodified asphalt cement (PG 58-28 or PG 64-22) or modified (PG 58-34), and the surface temperature falls below 185 °F, further compaction effort shall not be applied unless approved, provided the Contractor can demonstrate that there is no damage to the finished mat. If the mixture contains modified asphalt cement (PG 76-28, PG 70-28 or PG 64-28) and the surface temperature falls below 230 °F, further compaction effort shall not be applied unless approved, provided the Contractor can demonstrate that there is no damage to the finished mat.

Warm Mix Asphalt compaction requirements shall conform to CP 59.

In subsection 401.17, delete the third paragraph and replace with the following:

SMA shall be compacted to a density of 93 to 97 percent of the daily theoretical maximum specific gravity, determined according to CP 51. All other HMA shall be compacted to a density of 92 to 96 percent of the daily theoretical maximum specific gravity, determined according to CP 51. If more than one theoretical maximum specific gravity test is taken in a day, the average of the theoretical maximum specific gravity results will be used to determine the percent compaction. Field density determinations will be made in accordance with CP 44 or 81.

In subsection 401.17, second to last paragraph, delete the first sentence and replace with the following:

After production paving work has begun, a new Roller Pattern shall be demonstrated when a change in the compaction process is implemented.

May 5, 2011

**REVISION OF SECTIONS 412, 601 AND 711  
LIQUID MEMBRANE-FORMING COMPOUNDS  
FOR CURING CONCRETE**

Sections 412, 601 and 711 of the Standard Specifications are hereby revised for this project as follows:

In subsection 412.14, first paragraph, delete the second sentence and replace with the following:

The impervious membrane curing compound shall meet the requirements of ASTM C 309, Type 2 and shall be volatile organic content (VOC) compliant.

In subsection 601.13 (b), first paragraph, delete the second sentence and replace with the following:

A volatile organic content (VOC) compliant curing compound conforming to ASTM C 309, Type 2 shall be used on surfaces where curing compound is allowed, except that Type 1 curing compound shall be used on exposed aggregate or colored concrete, or when directed by the Engineer.

In subsection 601.16 (a) 1., delete the first sentence and replace with the following:

1. Membrane Forming Curing Compound Method. A volatile organic content (VOC) compliant curing compound conforming to ASTM C 309, Type 2 shall be uniformly applied to the surface of the deck, curbs and sidewalks at the rate of 1 gallon per 100 square feet.

Delete subsection 711.01 and replace with the following:

**711.01 Curing Materials.** Curing materials shall conform to the following requirements:

Burlap Cloth made from Jute or Kenaf	AASHTO M 182
Liquid Membrane-Forming Compounds for Curing Concrete	ASTM C 309
Sheet Materials for Curing Concrete	AASHTO M 171*
*Only the performance requirements of AASHTO M171 shall apply.	

Straw used for curing shall consist of threshed straw of oats, barley, wheat, or rye. Clean field or marsh hay may be substituted for straw when approved by the Engineer. Old dry straw or hay which breaks readily in the spreading process will not be accepted.

October 31, 2013

**REVISION OF SECTION 518  
BRIDGE EXPANSION DEVICE**

Section 518 of the Standard Specifications is hereby revised for this project as follows:

In subsection 518.04, delete the fifth paragraph and replace with the following:

All structural steel elements of the bridge expansion device, including cover plates, shall be galvanized after fabrication in accordance with Section 509, whether or not they are in contact with the elastomeric seals.

In subsection 518.05 (b), delete the third paragraph and replace with the following:

All structural steel elements of the bridge expansion device, including cover plates, shall be galvanized after fabrication in accordance with Section 509, whether or not they are in contact with the elastomeric seals.

**REVISION OF SECTION 601  
CLASS B, BZ, D, DT AND P CONCRETE**

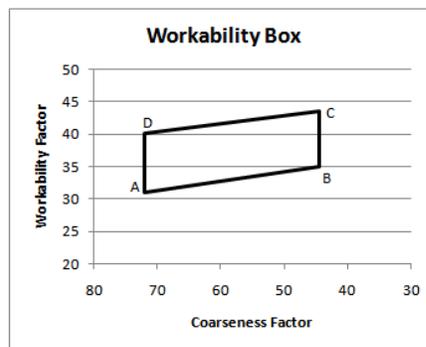
Section 601 of the Standard Specifications is hereby revised for this project as follows:

Subsection 601.02 shall include the following:

Deviations from the Standard Class B, Class BZ, Class D, DT and P concrete may be made under the following conditions:

- (1) The minimum cement content may be reduced from that specified in Table 601-1 if lab test results show that the permeability of the mix does not exceed 2,500 Coulombs at an age of not more than 56 days as determined by ASTM C1202.
- (2) The maximum cement content may be increased from that specified in Table 601-1 if lab test results show that the unrestrained shrinkage is less than 0.050 percent when tested by CP-L 4103.
- (3) The maximum amount of fly ash substituted for ASTM C150 cement or the maximum pozzolan content when ASTM C595 or C1157 cement is used may exceed the limits in subsection 601.05 if lab test results show that the permeability of the mix does not exceed 2,500 Coulombs at an age of not more than 56 days as determined by ASTM C1202 and the salt scaling resistance is less than 3 as determined by ASTM C672.
- (4) Except for Class DT, the concrete mix may use an Optimized Gradation (OG). When an OG is used aggregate proportions must be a result of an optimized combined aggregate gradation (CAG) developed by an approved mix design technique such as Shilstone or KU Mix. The amount of aggregate in the CAG passing the 19 mm (¾ inch) sieve and retained on the 12.5 mm (½ inch) sieve shall be a minimum of 8 percent for the trial mix design. The coarseness factor (CF) and workability factor (WF) must plot within the workability box (ABCD) depicted graphically by the following 4 coordinate points:
  - a. Point A > (CF,WF) 72, 31
  - b. Point B > (CF,WF) 44.5, 35
  - c. Point C > (CF,WF) 44.5, 43.5
  - d. Point D > (CF,WF) 72, 40

Figure 601-1



$$CF = (S / T) \times 100$$

Where:

S = Percent Cumulative Retained on 9.5 mm (3/8 inch) Sieve

T = Percent Cumulative retained on 2.36 mm (No. 8) Sieve

WF is the percent passing the 2.36 mm (No. 8) sieve. Increase workability factor by 2.5 percentage points for every 94 pounds per cubic yard of cementitious material used in excess of 564 pounds per cubic yard in the mix design. Decrease workability factor by 2.5 percentage points for every 94 pounds per cubic yard of cementitious material used below 564 pounds per cubic yard in the mix design. The Contractor shall not adjust the workability factor if the amount of cementitious material is 564 pounds per cubic yard.

- (5) Aggregate gradings not obtained through an OG may be used if lab test results show that the unrestrained shrinkage is less than 0.050 percent when tested by CP-L 4103.

Concrete with any of the above deviations shall be known as Class ( ) Non Standard concrete (Class \_-NS concrete). For example Class B-NS. Non Standard concrete may be substituted for the equivalent standard concrete. Non Standard concrete shall be tested, accepted, measured and paid for as standard concrete or the pay item specifying standard concrete.

Subsection 601.05 shall include the following in the second paragraph:

- (8) Concrete with an OG shall indicate the gradation proportions that results in a combined aggregate gradation corresponding to compliance within the specified CF and WF box and shall include the following charts used to perform aggregate gradation analysis:
- (i) Coarseness Factor
  - (ii) Workability Factor
  - (iii) 0.45 power
  - (iv) Combined gradation

Delete Subsection 601.06 (10) and (11) and replace with the following:

- (10) Weights of fine and coarse aggregates or combined weight when an OG is pre-blended  
(11) Moisture of fine and coarse aggregates or combined moisture when an OG is pre-blended

Subsection 601.17 shall include the following:

(g) *Water to cementitious material content (w/cm) ratio.* When a Non Standard concrete is used the maximum w/cm ratio is the w/cm ratio that was used in the in the laboratory trial mix for the Concrete Mix Design. The w/cm ratio shall be determined for each batch of Non Standard concrete by the Contractor and provided to the Engineer for approval prior to placement. If an adjustment to the mix is made after the Engineer's approval, the w/cm shall be determined and submitted to the Engineer prior to the continuation of placement. Any Non Standard concrete that is placed without the Engineer's approval shall be removed and replaced at the Contractor's expense.

October 29, 2015

### **REVISION OF SECTION 601 CONCRETE SLUMP ACCEPTANCE**

Section 601 of the Standard Specifications is hereby revised for this project as follows:

Delete the fifth paragraph of Subsection 601.05 and replace with the following:

Except for Class BZ concrete, the slump of the delivered concrete shall be the slump of the approved concrete mix design plus or minus 2.0 inch. The laboratory trial mix must produce an average compressive strength at least 115 percent of the required field compressive strength specified in Table 601-1. When entrained air is specified in the Contract for Class BZ concrete, the trial mix shall be run with the required air content.

Delete Subsection 601.17 (b), 601.17 (d) and Table 601-3 and replace with the following:

- (b) *Slump.* Slump acceptance, but not rejection, may be visually determined by the Engineer. Any batch that exceeds the slump of the approved concrete mix design by 2.0 inches will be retested. If the slump is exceeded a second time, that load is rejected. If the slump is greater than 2 inches lower than the approved concrete mix design, the load can be adjusted with a water reducer, or by adding water (if the w/cm allows) and retested.

Portions of loads incorporated into structures prior to determining test results which indicate rejection as the correct course of action shall be subject to reduced payment or removal as determined by the Engineer.

- (d) *Pay Factors.* The pay factor for concrete which is allowed to remain in place at a reduced price shall be according to Table 601-3 and shall be applied to the unit price bid for Item 601, Structural Concrete.

If deviations occur in air content and strength within the same batch, the pay factor for the batch shall be the product of the individual pay factors.

**Table 601-3 – PAY FACTORS**

Percent Total Air		Strength		
Deviations From Specified Air (Percent)	Pay Factor (Percent)	Below Specified Strength (psi) [ < 4500 psi Concrete]	Pay Factor (Percent)	Below Specified Strength (psi) [ ≥ 4500 psi Concrete]
0.0-0.2	98	1-100	98	1-100
0.3-0.4	96	101-200	96	101-200
0.5-0.6	92	201-300	92	201-300
0.7-0.8	84	301-400	84	301-400
0.9-1.0	75	401-500	75	401-500
Over 1.0	Reject	Over 500	Reject	
			65	501-600
			54	601-700
			42	701-800
			29	801-900
			15	901-1000
			Reject	Over 1000

February 3, 2011

**REVISION OF SECTION 601  
CONCRETE BATCHING**

Section 601 of the Standard Specifications is hereby revised for this project as follows:

In subsection 601.06, delete (13) and (17) and replace with the following:

- (13) Gallons of water added by truck operator, the time the water was added and the quantity of concrete in the truck each time water is added.
- (17) Water to cementitious material ratio.

February 3, 2011

**REVISION OF SECTIONS 601  
CONCRETE FINISHING**

Section 601 of the Standard Specifications are hereby revised for this project as follows:

In subsection 601.12 (a) delete the fifth paragraph and replace it with the following:

Water shall not be added to the surface of the concrete to assist in finishing operations.

Hand finishing should be minimized wherever possible. The hand finishing methods shall be addressed in the Quality Control Plan for concrete finishing. Hand finished concrete shall be struck off and screeded with a portable screed that is at least 2 feet longer than the maximum width of the surface to be struck off. It shall be sufficiently rigid to retain its shape. Concrete shall be thoroughly consolidated by hand vibrators. Hand finishing shall not be allowed after concrete has been in-place for more than 30 minutes or when initial set has begun. Finishing tools made of aluminum shall not be used.

The Contractor shall provide a Quality Control Plan (QCP) to ensure that proper hand finishing is accomplished in accordance with current Industry standards. It shall identify the Contractor's method for ensuring that the provisions of the QCP are met. The QCP shall be submitted to the Engineer at the Preconstruction Conference. Concrete placement shall not begin until the Engineer has approved the QCP. The QCP shall identify and address issues affecting the quality finished concrete including but not limited to:

- (1) Timing of hand finishing operations
- (2) Methodology to place and transport concrete
- (3) Equipment and tools to be utilized
- (4) Qualifications and training of finishers and supervisors

When the Engineer determines that any element of the approved QCP is not being implemented or that hand finished concrete is unacceptable, work shall be suspended. The Contractor shall supply a written plan to address improperly placed material and how to remedy future hand finishing failures and bring the work into compliance with the QCP. The Engineer will review the plan for acceptability prior to authorizing the resumption of operations.

In subsection 601.14(a) delete the fourth paragraph.

May 8, 2014

### **REVISION OF SECTION 601 QC TESTING REQUIREMENTS FOR STRUCTURAL CONCRETE**

Section 601 of the Standard Specifications is hereby revised for this project as follows:

Delete the first paragraph of subsection 601.17 and subsection 601.17(a) and replace with the following:

**601.17 Acceptance and Pay Factors.** These provisions apply to all concrete. The Contractor shall sample 601 pay items for both QC and QA in accordance with CP 61. The Engineer will witness the sampling and take possession of the QA samples at a mutually agreed upon location. The Contractor shall be responsible for Quality Control (QC) testing for 601 pay items. QC testing shall be performed at least once per day and then once per 50 cubic yards for concrete slump, unit weight and concrete temperature for each 601 pay item.

- (a) *Air Content.* The first three batches at the beginning of each day's production for each 601 pay item shall be tested by the Contractor's QC and CDOT's QA for air content. When the QC and QA air content measurements differ by more than 0.5 percent, both the QC and QA air meters shall be checked in accordance with ASTM C 231. When air content is below the specified limit, it may be adjusted in accordance with subsection 601.08. Successive batches shall be tested by the Contractor's QC and witnessed by the Engineer until three consecutive batches are within specified limits. After the first three batches, CDOT will follow the random minimum testing schedule. After the first three batches the Contractor shall perform QC testing at a frequency of one random sample per 50 cubic yards. Air content shall not be adjusted after a CDOT QA test.

Subsection 601.19 shall include the following:

The Contractor's QC testing will not be measured and paid separately, but shall be included in the work.

April 30, 2015

### **REVISION OF SECTION 601 STRUCTURAL CONCRETE STRENGTH ACCEPTANCE**

Section 601 of the Standard Specifications is hereby revised for this project as follows:

In subsection 601.17 (c), delete the first paragraph and replace with the following:

- (c) *Strength (When Specified).* The concrete will be considered acceptable when the running average of three consecutive strength tests per mix design for an individual structure is equal to or greater than the specified strength and no single test falls below the specified strength by more than 500 psi. A test is defined as the average strength of three test cylinders cast in plastic molds from a single sample of concrete and cured under standard laboratory conditions prior to testing. If the compressive strength of any one test cylinder differs from the average by more than 10 percent that compressive strength will be deleted and the average strength will be determined using the compressive strength of the remaining two test cylinders.

May 8, 2014

### **REVISION OF SECTION 630 RETROREFLECTIVE SIGN SHEETING**

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

In subsection 630.02, delete the sixth and seventh paragraphs, including Table 630-1, and replace them with the following:

Retroreflective sheeting for all signs requiring an orange background shall be Type VI or Type Fluorescent.

Retroreflective sheeting for all signs requiring a yellow background shall be Type Fluorescent.

**Table 630-1  
RETROREFLECTIVE SHEETING TYPES**

<b>Sheeting</b>	<b>Type IV</b>	<b>Type VI (Roll-up sign material)</b>	<b>Type Fluorescent<sup>1</sup></b>
Application	Work Zone	Work Zone	Work Zone
All Orange Construction Signs			X
Orange Construction Signs that are used only during daytime hours for short term or mobile operations		X <sup>4</sup>	X
Barricades (Temporary)	X		X
Vertical Panels	X		X
Flaggers Stop/Slow Paddle	X		X
Drums <sup>2</sup>	X		X
Non-orange Fixed Support signs with prefix "W"	X		
Special Warning Signs			X
STOP sign (R1-1) YIELD sign (R1-2) WRONG WAY sign (R5-1a) DO NOT ENTER sign (R5-1) EXIT sign (E5-1a)	X		
DETOUR sign (M4-9) or (M4-10)			X
All other fixed support signs <sup>3</sup>	X		X
All other signs used only during working hours	X		X
All other signs that are used only during daytime hours for short term or mobile operations	X	X <sup>5</sup>	X
<p><b>1</b> Fluorescent Sheeting shall be of a brand that is on the CDOT Approved Products List.</p> <p><b>2</b> Drum Sheeting shall be manufactured for flexible devices.</p> <p><b>3</b> Fixed support signs are defined as all signs that must remain in use outside of working hours. They shall be mounted in accordance with Standard Plan S-630-1.</p> <p><b>4</b> RS 24 only.</p> <p><b>5</b> White only.</p>			

March 29, 2016

**REVISION OF SECTION 702  
BITUMINOUS MATERIALS**

Section 702 of the Standard Specifications is hereby deleted for this project and replaced with the following:

**702.01 Asphalt Cements.**

(a) *Superpave Performance Graded Binders.* Superpave Performance Graded Binders shall conform to the requirements listed in Table 702-1. (Taken from AASHTO M 320)

Asphalt cement shall not be acid modified or alkaline modified.

Asphalt cement shall not contain any used oils that have not been re-refined. Modifiers that do not comply with environmental rules and regulations including 40 CFR Part 261.6(a) (3) (IV), and part 266/Subpart C shall not be added. Modifiers shall not be carcinogenic.

The supplier of the PG binder shall be certified in accordance with CP 11.

July 28, 2011

### REVISION OF SECTION 703 CONCRETE AGGREGATES

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

Delete the second paragraph of subsection 703.00 and Table 703-1.

Delete subsections 703.01 and 703.02 and replace with the following:

**703.01 Fine Aggregate for Concrete.** Fine aggregate for concrete shall conform to the requirements of AASHTO M 6, Class A. The minimum sand equivalent, as tested in accordance with Colorado Procedure 37 shall be 80 unless otherwise specified. The fineness modulus, as determined by AASHTO T 27, shall not be less than 2.50 or greater than 3.50 unless otherwise approved.

**703.02 Coarse Aggregate for Concrete.** Coarse aggregate for concrete shall conform to the requirements of AASHTO M 80, Class A aggregates, except that the percentage of wear shall not exceed 45 when tested in accordance with AASHTO T 96.

November 1, 2012

### REVISION OF SECTION 703 AGGREGATES FOR HOT MIX ASPHALT

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

Delete subsection 703.04 and replace with the following:

**703.04 Aggregates for Hot Mix Asphalt.** Aggregates for hot mix asphalt (HMA) shall be of uniform quality, composed of clean, hard, durable particles of crushed stone, crushed gravel, natural gravel, or crushed slag. Excess of fine material shall be wasted before crushing. A percentage of the aggregate retained on the 4.75 mm (No. 4) sieve for Gradings S, SX and SG— and on the 2.36 mm (No. 8) sieve for Gradings SF and ST—shall have at least two mechanically induced fractured faces when tested in accordance with Colorado Procedure 45. This percentage will be specified in Table 403-1, as revised for the project in Section 403. The angularity of the fine aggregate shall be a minimum of 45.0 percent when determined according to AASHTO T 304. Grading SF mixes, when determined by RME, may not require fine aggregate angularity of 45.0 percent. Aggregate samples representing each aggregate stockpile shall be non-plastic if the percent of aggregate passing the 2.36 mm (No. 8) sieve is greater than or equal to 10 percent by weight of the individual aggregate sample. Plasticity will be determined in accordance with AASHTO T 90. The material shall not contain clay balls, vegetable matter, or other deleterious substances.

The aggregate for Gradings ST, S, SX and SG shall have a percentage of wear of 45 or less when tested in accordance with AASHTO T 96.

**Table 703-4  
MASTER RANGE TABLE FOR HOT MIX ASPHALT**

Sieve Size	Percent by Weight Passing Square Mesh Sieves				
	Grading SF**	Grading ST	Grading SX	Grading S	Grading SG
37.5 mm (1½")					100
25.0 mm (1")				100	90 – 100
19.0 mm (¾")			100	90 – 100	
12.5 mm (½")		100	90 – 100	*	*
9.5 mm (⅜")	100	90 – 100	*	*	*
4.75 mm (#4)	90 – 100	*	*	*	*
2.36 mm (#8)	*	28 – 58	28 – 58	23 – 49	19 – 45
1.18 mm (#16)	30 – 54				
600 µm (#30)	*	*	*	*	*
300 µm (#50)					
150 µm (#100)					
75 µm (#200)	2 – 12	2 – 10	2 – 10	2 – 8	1 – 7

\* These additional Form 43 Specification Screens will initially be established using values from the As Used Gradation shown on the Design Mix.

\*\*SF applications are limited and the CDOT Pavement Design Manual should be referenced, prior to use.

Aggregates for stone matrix asphalt (SMA) shall be of uniform quality, composed of clean, hard, durable particles of crushed stone, crushed gravel, or crushed slag. A minimum of 90 percent of the particles retained on the 4.75 mm (No. 4) sieve shall have at least two mechanically induced fractured faces when tested in accordance with Colorado Procedure 45. The particles passing the 4.75 mm (No. 4) sieve shall be the product of crushing rock larger than 12.5 mm (½ inch) and shall be non-plastic when tested in accordance with AASHTO T 90.

Additionally, each source of aggregate for SMA shall meet the following requirements:

- (1) No more than 30 percent when tested in accordance with AASHTO T 96 Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
- (2) No more than 12 percent when tested in accordance with AASHTO T 104 Soundness of Aggregate by Use of Sodium Sulfate.

The aggregate for Hot Mix Asphalt (HMA) shall meet the requirements of Table 703-4A when tested in accordance with CP-L 4211 Resistance of Coarse Aggregate to Degradation by Abrasion in the Micro-Deval Apparatus. The Contractor shall be assessed a price reduction of \$1000 for each production sample of the combined aggregate with a value greater than 20 according to CP-L 4211.

**Table 703-4A  
AGGREGATE DEGRADATION BY ABRASION  
IN THE MICRO-DEVAL CP-L 4211**

Combined Aggregate (Mix Design)	18
Combined Aggregate (1/10,000 tons, or fraction thereof during production)	20

**REVISION OF SECTION 709  
EPOXY COATED REINFORCING BARS**

Section 709 of the Standard Specifications is hereby revised for this project as follows:

In subsection 709.01, delete the last row of the table and replace with the following

Epoxy Coated Reinforcing Bars	AASHTO A 775
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Delete the first sentence of subsection 709.03 and replace with the following:

Tie bars for longitudinal and transverse joints shall conform to AASHTO A 775 and shall be grade 40, epoxy-coated, and deformed.

February 3, 2011

**REVISION OF SECTION 712  
WATER FOR MIXING OR CURING CONCRETE**

Section 712 of the Standard Specifications is hereby revised for this project as follows:

Delete subsection 712.01 and replace it with the following:

**712.01 Water.** Water used in mixing or curing concrete shall be reasonably clean and free of oil, salt, acid, alkali, sugar, vegetation, or other substance injurious to the finished product. Concrete mixing water shall meet the requirements of ASTM C1602. The Contractor shall perform and submit tests to the Engineer at the frequencies listed in ASTM C1602. Potable water may be used without testing. Where the source of water is relatively shallow, the intake shall be so enclosed as to exclude silt, mud, grass, and other foreign materials.

**CITY SPECIAL PROVISIONS**

The CDOT Standard Specifications, Standard Special Provisions, Project Special Provisions are modified with the following City Special Provisions.

Revised 03/2011

**REVISION OF SECTION 101  
DEFINITIONS AND TERMS**

Section 101 of the CDOT Standard Specifications is hereby revised for this project as follows:

Delete subsection 101.10 and replace with the following:

**101.10 Director of Public Works.** The Director of Public Works for the City, or his duly authorized representative, who is responsible for public works activities within the City. The Director of Public Works is responsible for final decisions relating to Contractor claims for change orders, additional compensation, or extensions of contract time. All references to "CDOT Resident Engineer" shall be replaced by "Director of Public Works".

In subsection 101.17 delete the first paragraph and replace with the following:

The written agreement between the City and the Contractor setting forth the obligations of the parties for the performance of the work and the basis of payment.

Delete subsection 101.23 Contractor.

Delete subsection 101.28 and replace with the following:

**101.28 Department.** Department of Public Works. A department with the City.

Delete subsection 101.29 and replace with the following:

**101.29 Engineer.** The Engineering Manager of the Department acting directly or through an authorized representative, who is responsible for engineering and administrative supervision of the project. For the purpose of these specifications, the Engineer is responsible for initial decisions relating to Contractor claims for additional compensation or additional time. The Engineer is the sole City representative who may approve modifications to Contract documents or drawings.

Delete subsection 101.36 and replace with the following:

**101.36 Holidays.** Holidays recognized by the City are:

- New Years Day
- Martin Luther King, Jr. Day
- Presidents' Day
- Memorial Day
- Independence Day
- Labor Day
- Veterans' Day
- Thanksgiving Day
- Day after Thanksgiving Day
- Christmas Day

When New Year's Day, Independence Day, or Christmas Day fall on Sunday, the following Monday shall be considered a holiday.

When New Year's Day, Independence Day, or Christmas Day fall on Saturday, the previous Friday shall be considered a holiday.

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

Delete subsection 101.37 and replace with the following:

**101.37 Inspector.** The Project Engineer's authorized representative assigned to make detailed inspections of contract performance and is responsible for coordinating administration and satisfactory completion of the project with the Project Engineer.

Delete subsection 101.48 and replace with the following:

**101.48 Preconstruction Conference.** A meeting of City project personnel, Contractor project personnel, and other stake holders held prior to the beginning of construction at which topics pertinent to the successful prosecution of the work are discussed.

Delete subsection 101.51 and replace with the following:

**101.51 Project Engineer.** The Engineer's duly authorized representative who may be a City employee or an employee of a consulting engineer (consultant) under contract to the City as defined below:

- (a) *City Project Engineer.* The City employee who is the Engineer's duly authorized representative. The City Project Engineer is in direct charge of the work and is responsible for the administration and satisfactory completion of the project under contract.
- (b) *Consultant Project Engineer.* The consultant employee under the responsible charge of the consultant's Professional Engineer who is in direct charge of the work and is responsible for the administration and satisfactory completion of the project. The Consultant Project Engineer's duties are delegated by the Engineer in accordance with the scope of work in the consultant's contract with the City. The Consultant Project Engineer is not authorized to sign or approve Contract Modification Orders.

Delete subsection 101.58 and replace with the following:

**101.58 Region Transportation Director.** All references to "Region Transportation Director" shall be replaced by "Director of Public Works".

Delete subsection 101.59 and replace with the following:

**101.59 Right of Way.** A general term denoting land, property, or interest therein, usually in a strip, acquired for or devoted to a highway, street, alley, or other access.

Delete subsection 101.81 Subcontractor.

Add subsections 101.96 – 101.105 as follows:

**101.96 Approved Equal.** A product, component or process whose use in or on a particular project is specified as a standard for comparison purposes only. The "equal" product, component or process shall be the same or better than that named in function, performance, reliability, quality, and general configuration. Determination of equality in reference to the project design requirements will be made by the Engineer. It is the responsibility of the supplier to provide all necessary information for determining equality.

**101.97 Bid Bond.** The security required to be submitted with each proposal as described in Section 101.52 as a Proposal Guaranty.

**101.98 Contract Change Order.** Same as Contract Modification Order, subsection 101.19.

**101.99 Easement.** The right to use a defined area of property for a specific purpose or purposes as set forth in a document which has been made a part of the Contract Documents.

**101.100 Lump Sum.** A method of payment providing for one all-inclusive cost for the work or for a particular portion of the work; including any incidental costs necessary to perform that item of work.

**101.101 Notice of Award.** A written notice of acceptance of the bid from the City to the successful bidder.

**101.102 Owner.** The legal entity or contracting agency for which the work is being performed, herein defined as the City. The words City and Owner are used interchangeably within this document.

**101.103 Payment Bond.** Same as Contract Payment Bond, subsection 101.20.

**101.104 Performance Bond.** Same as Contract Performance Bond, subsection 101.21

**101.105 Utility.** Tracks, overhead or underground wires, pipelines, conduits, pipes, ducts or structures, owned, operated or maintained in or across a public right-of-way or easement.

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

Subsection 102 of the CDOT Standard Specifications is hereby revised for this project as follows:

Delete subsection 102.01 and replace with the following:

**102.01 Prequalification of Bidders.** The City does not prequalify bidders. Each Contractor is required to complete the Contractors Qualification Form included in the Bid Package.

Delete subsection 102.04 and replace with the following:

**102.04 Interpretation of Plans and Specifications.** If it should appear to a Bidder that the work to be done or matters relative thereto are not sufficiently described or explained in the Contract Documents or that the Contract Documents are not definite and clear, the Bidder may make written inquiry regarding same to the City Purchasing Agent at least five (5) days before the scheduled closing time for filing bids.

Then, if in the judgment of the City, additional information or interpretation is necessary, such information will be supplied in the form of an addendum. Each addendum will be delivered where possible by FACSIMILE MACHINE (FAX) or ELECTRONIC MAIL (EMAIL) to all individuals, firms and corporations who have acknowledged receipt of Bid Document Sets. Such addendum shall have the same binding effect as though contained in the main body of the Contract Documents. **ORAL INSTRUCTIONS OR INFORMATION CONCERNING THE CONTRACT DOCUMENTS OR THE PROJECT GIVEN OUT BY OFFICERS, EMPLOYEES OR AGENTS OF THE OWNER TO PROSPECTIVE BIDDERS SHALL NOT BIND THE OWNER.** If no request is made in the five days, Bidder waives right to any conflict in the Contract Documents.

Subsection 102.05 shall include the following:

Final determination of underground or other conditions is left to the Bidder without recourse to the City.

Delete subsection 102.06 and replace with the following:

**102.06 Preparation of Proposal.** The bidder shall submit his proposal upon the forms supplied by the Owner. The bidder shall specify a unit price in words or figures, or both if required, for each pay item for which a quantity is given and shall also show the products to the respective unit prices and quantities written in figures in the column provided for that purpose and the total amount of the proposal obtained by adding the amounts of the separate items. All the words and figures shall be in ink or type. In case of a mathematical error, the unit price shall govern.

When an item in the proposal contains a choice to be made by the bidder, the bidder shall indicate his choice in accordance with the specifications for that particular item, and thereafter no further choice will be permitted.

The bidder's proposal must be signed in ink by the individual, by one or more members of the partnership, by two officers of a corporation or by an agent of the contractor legally qualified and acceptable to the City.

If the proposal is made by an individual, his name and post office address must be shown, by a partnership, the name and address of each partner must be shown, by a corporation, the name of the corporation and the business address of its corporate officials must be shown.

In subsection 102.07 delete paragraphs (7) and (9)

Delete subsection 102.09 and replace with the following:

**102.09 Anti-Collusion Affidavit.** Every Proposal (bid) submitted to the City shall contain a statement certifying that the Bidder has not participated in any collusion or taken any action in restraint of free competitive bidding. This statement shall be in the form of an affidavit provided by the City and included in the Bid Form. **The Bidder's Proposal will be rejected if it does not contain the completed Noncollusion Affidavit.**

Add subsections 102.11 – 102.14 as follows:

**102.11 Disqualification of Bidders.** Any of the following reasons may be considered as being sufficient for the disqualification of a bidder and the rejection of his proposal or proposals:

- (1) More than one proposal for the same work from an individual, firm, or corporation under the same or different name.
- (2) Evidence of collusion among Bidders. Participants in such collusion will not receive recognition as Bidders for any future work of the City until any such participant shall have been reinstated as a qualified Bidder.
- (3) If, during a Contract with the City, a Contractor or Subcontractor incurs liquidated damages as described in subsection 108.09, he shall be disqualified for a period of one (1) year from the date of final acceptance of that Contract.

**102.12 Bid Prices.** Bidders must include, in their bid prices, the entire cost of each item of the work set forth in the proposal, and it is understood and agreed that there is included, in each lump sum or unit price bid, the entire cost of materials and labor incidental or necessary to the completion of that portion of the work covered, unless such work is expressly included in other lump sum or unit price bids in the proposal. Since the bid information cannot be guaranteed, the Contractor shall have assumed the risks attendant to successful performance of the work at the amount of the bid.

**102.13 Rejection of Bids.** The Owner reserves the right to reject any or all bids and waive irregularities not affecting substantial rights.

**102.14 City Contract Laws.** Section 2-3 of the City's Code of Laws is presented below:

- (a) **FISCAL YEAR.** Fiscal year for the City shall commence on January 1 and end on December 31.
- (b) **BUDGET CONTAINS APPROPRIATIONS.** The City Council shall annually adopt a budget in a manner consistent with the provisions of Chapter X of the Home Rule Charter of the City of Wheat Ridge. Upon the annual adoption by City Council of each year's budget, levels of authorized expenditures from the funds indicated within the annual budget itself and/or the adopting resolution shall constitute the appropriation of the amounts specified therein for the purposes specified therein. During the course of each fiscal year, approval by the City Council of contracts for goods or services, and/or approval of bids for the provision of specified goods or services, shall likewise constitute appropriations of the amounts specified therein for the purposes specified therein.
- (c) **NO CONTRACT TO EXCEED APPROPRIATION.** During each and any fiscal year, no contract entered into by or on behalf of the City shall expend or contract to expend any money, or incur any liability, nor shall any contract be entered into nor any bid be awarded by on behalf of the City which, by its terms, involves the expenditure of money for any of the purposes for which provision is made either in the adopted budget or adopting resolution is made either in the adopted budget or adopting resolution, including any legally authorized amendments thereto, in excess of the amount appropriated in the budget or the approved contract or bid amount. Any contract or bid award, either verbal or written, made in violation of the provisions of this Section shall be void as to the City and no City monies from any source whatsoever shall be paid thereon.
- (d) **AMENDMENTS AND AUTHORIZED EXPENDITURES.** Nothing contained herein shall preclude the City Council from adopting supplemental appropriation in a manner consistent with the provisions of Section 10.12 of the Home Rule Charter of the City of Wheat Ridge. Further, nothing contained in this Section shall prevent the making of contracts for governmental services or for capital outlay for a period exceeding one year if such contracts are otherwise allowed by the Home Rule Charter of the City; provided, however, any contract so made SHALL be executory only for the amounts agreed to be paid for such services to be rendered in succeeding fiscal years.
- (e) **NOTICE TO PARTIES CONTRACTING WITH THE CITY.** All persons contracting with, or selling goods or services to, the City are hereby placed on notice of the provisions of this Section. The provisions of this Section shall become a part of the Merit System Personnel Rules and Regulations of the City of Wheat Ridge; shall be referred to specifically in all public works bid documents and contracts; and shall be incorporated into, or specifically noted within, all other contracts entered into by or on behalf of the City wherein City funds are used to pay for said contract.

Section 2-4 of the City Code of Laws is presented below:

- (a) The City may, by contract, require the contractor awarded a public works contract to waive, release or extinguish its rights to recover costs or damages, or obtain an equitable adjustment, for delays in performing such contract, if such delay is caused, in whole or part, by acts or omissions of the City or its agents, if the contract provides that an extension of time for completion of the work is the Contractor's remedy for such delay. Such a clause is valid and enforceable, any provision of State Law to the contrary notwithstanding.
- (b) The City Council, by this ordinance, declares its local contracting powers to be a matter of purely local concern, and further specifically intends to supersede, pursuant to its powers under Article XX of the Colorado Constitution, the provisions of Sections 24-91-101 and 103.5, C.R.S., insofar as they conflict with the provisions of this Section of the Code of Laws of the City of Wheat Ridge, Colorado.

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

Section 103 of the CDOT Standard Specifications is hereby revised for this project as follows:

Delete subsection 103.01 and replace with the following:

**103.01 Consideration of Proposals.** After the proposals are opened and read, they will be compared on the basis of the summation of the products of the approximate quantities shown in the bid schedule by the unit prices.

The Owner reserves the right to settle bid discrepancies that occur in the low Bidder's proposal at the time the Contract is awarded. Bid discrepancies will be settled with the understanding that the low Bidder waives any claims against the City because of Bidder's mistakes in the Bid Proposal.

In subsection 103.02 change the time of award from 30 calendar days to 60 calendar.

Subsection 103.04 shall include the following:

Failure to execute the Contract and file acceptable bonds within 14 days after the date of award shall be just cause for the cancellation of the award and the forfeiture of the proposal guaranty which shall become the property of the City.

The Director of Public Works may elect to waive forfeiture of the proposal guaranty only if it is determined that the bidder has made a good faith remedial error and that no damages were sustained by the City as a result of the failure by the successful bidder to execute the Contract and file acceptable bonds within the time prescribed. Award may then be made to the next lowest responsible bidder, or the work may be readvertised and constructed under Contract or otherwise as the City may decide.

Add subsections 103.05 – 103.06 as follows:

**103.05 Cancellation of Award.** The City reserves the right to cancel the award of any Contract at any time before the execution of said Contract by all parties without liability against the City.

**103.06 Return of Proposal Guaranty.** All proposal guaranties consisting of bid bonds will be retained by the City. All proposal guaranties in the form of certified checks or cashiers checks will be treated as follows:

For the three lowest Bidders, the proposal guarantee will be held until the Contract is awarded to the successful bidder. Proposal guaranty will then be returned to the other Bidders. The proposal guaranty of the successful Bidder will be returned upon receipt of executed Contract and approved payment and performance bonds.

In subsection 103.02 change all time period references from 15 days to 14 days in Sec. 103.04 Execution and Approval of Contract.

#### **REVISION OF SECTION 104 SCOPE OF WORK**

Section 104 of the CDOT Standard Specifications is hereby revised for this project as follows:

Subsection 104.04 shall include the following:

The Contractor shall be responsible for maintaining access to all residences and businesses along the Project areas during construction. Lane widths during construction shall not be less than 10 ft and a minimum clearance of two feet shall be maintained between traffic and the construction work zone.

The Contractor will not be permitted to have construction equipment or materials in the lane(s) open to traffic at any time unless permitted by the Engineer.

The Contractor is cautioned that all personal vehicle and construction equipment parking will be prohibited where it conflicts with safety, access, or the flow of traffic.

#### **REVISION OF SECTION 105 CONTROL OF WORK**

Section 105 of the CDOT Standard Specifications is hereby revised for this project as follows:

In subsection 105.02 (b) 4. change the base number of submission sets of shop drawings from six to four.

Subsection 105.02 (f) shall include the following:

1. All Contractors who construct public storm drainage systems, bike paths, sidewalks, streets, or other items within Public property to be maintained by the City must submit an "As Constructed" set of construction drawings for approval as a part of the City's acceptance process. The initial submittal shall be one set of "red-

lined” marked up prints, which should be delivered to the Department of Public Works counter at City Hall, attention “Engineering Manager”. Written City acceptance of the final As Constructed plan is a condition for final acceptance and release of retainage.

As Constructed plans for construction of irrigation systems within public property to be maintained by the City shall be submitted per subsection 623.25.

2. All As Constructed information shall be red-lined and shown on the original construction drawings. The As Constructed drawings shall clearly show any changes or variations from the approved design. Horizontal variations greater than 1.0 foot should be shown dimensionally or through plus stations. Horizontal variations greater than 10.0 feet should also show the graphic relocation of the object. For construction of public storm drainage systems, vertical elevation variations greater than 0.1 feet shall be provided for all shown design elevations. For construction of all remaining project features, vertical elevation variations greater than 0.25 feet shall be provided for all shown design elevations.
3. The As Constructed Certificate (shown below) shall be signed and sealed by a CO professional land surveyor and shall appear on the cover sheet of the As Constructed plan set. All sheets included in the Contract Drawings set must be submitted in the final As Constructed plan set.

AS CONSTRUCTED CERTIFICATE

I hereby certify that the information shown on this as constructed drawing is an accurate and complete representation of data established from field information obtained under the direction of a Professional Engineer or Professional Land Surveyor, and that the physical dimensions or elevations shown are as-built information and the facility was constructed according to the approved plans, except as otherwise noted hereon.

\_\_\_\_\_  
Name License #

\_\_\_\_\_  
Title Date

In subsection 105.03 change the first sentence of the seventh paragraph as follows:

Materials may be sampled and tested at the discretion of the City in accordance with the City Permit Testing and Inspection Requirements Document, available at the City Public Works counter, and CDOT’s Field Materials Manual.

In subsection 105.09 (a) change the order of precedence as follows:

1. City General Provisions
2. City Special Provisions
3. Project Special Provisions
4. Standard Special Provisions

Subsection 105.09 shall include the following:

Any discrepancy or error discovered in the Drawings, Specifications, or during field construction shall be immediately called to the attention of the Engineer through submission of a “Request for Information” (RFI) document. Only the Engineer may authorize a modification to the project drawings or specifications via written response to an RFI. Neither the Inspector or Project Engineer may authorize alterations, in-field changes, or modifications to the project, whether orally or written, unless said change is so minor in nature that grades, horizontal geometry, detail, or the original purpose and intent of the drawings are not altered. Concurrence by the Inspector, Project Engineer, or any other City representative in the field or on the daily inspection report does not constitute approval of any element of the project. The Contractor is solely responsible for constructing the project according to the project drawings and specifications.

Subsection 105.10 shall include the following:

Not furnishing a competent superintendence will be grounds for suspension of the Project until such superintendence is furnished by the Contractor. **CONTRACT TIME WILL CONTINUE IN THE EVENT OF A WORK SUSPENSION CAUSED BY LACK OF FURNISHING FULL TIME PROJECT SUPERINTENDENCE SATISFACTORY TO THE CITY.**

Subsection 105.11 shall include the following:

The locations of all utilities shown on the project plans should be considered approximate. It is therefore the responsibility of the Contractor to notify the appropriate utility and/or utility locating service to obtain more precise locations. No compensation will be made to the Contractor for any damage, delay or additional cost incurred as a result of failure to obtain utility locations.

Utilities which are adjusted, removed, or reset for the construction convenience of the Contractor and which would not conflict with the line or grade of the proposed project works, shall be done at the Contractor's expense. This shall include, but not be limited to, sewer service lines, water service lines, telephone, gas and electrical lines.

The Contractor shall coordinate with all affected utility owners for work to be performed on said utility as defined in the Contract documents. Coordination shall include application for permits, licensing, payment of fees, scheduling inspections with each owner, as required. All such costs and/ or time spent for coordination with utility owners shall be paid by the Contractor, and shall not be compensated with a Pay Item or Change Order.

Subsection 105.16 shall include the following:

The Engineering Division of the Public Works Department will provide all inspection during construction. The Inspector will oversee the materials testing.

The Contractor shall keep the Inspector informed of future construction operations to facilitate scheduling of required inspection. The Contractor shall notify the Inspector 24 hours in advance of starting any construction operation that will require inspection. Failure of the Contractor to provide such notice shall relieve the Owner from any responsibility for extra costs or delays caused by such failure.

Inspection of the work or materials by the Owner or conversations made between the Contractor and the Inspector shall not relieve the Contractor of the obligation to fulfill the requirements of the Contract. Work and materials not meeting such requirements shall be made good, and unsuitable work or materials may be rejected, notwithstanding that such work or materials have been previously inspected by the Owner or that payment thereof has been included in a progress estimate.

Inspection and acceptance of work pertaining to utilities not owned by the City shall be made by a representative of the owning utility. The Contractor shall obtain required permits and/ or licenses and notify & schedule an inspection by the owning utility prior to commencing any work so that a representative may be made available to approve the work to be performed.

Subsection 105.21 (a) shall include the following:

The one year guarantee period for the portion or unit of the project partially accepted will not begin until completion of the entire project unless otherwise agreed to by the Engineer.

In subsections 105.22 and 105.24 change all references to CDOT to the City and remove all references to subsection 105.23.

Subsection 105.22 shall include the following:

In accordance with Section 2-4 of the City Code, as provided in subsection 102.14 of the City Special Provisions, the Contractor shall waive, release or extinguish its rights to recover costs or damages, or equitable adjustment, for delays in performing this contract if such delay is caused, in whole or in part, by acts or omissions of the City or its agents unless the Department accepts responsibility. An extension of time for completion of the work shall be the Contractor's remedy for such delay.

The Contractor shall not be entitled to additional monetary compensation for delays caused by the failure of a utility company or special district to relocate its facilities in timely manner. An extension of time for completion of the work shall be the Contractor's remedy for such delay. Relief from failure of utility companies to fulfill their responsibilities is discussed in subsection 105.11 of the Standard Specifications.

In subsection 105.22 (d) delete the last paragraph and replace with the following:

If these meetings do not result in a resolution or the participants mutually agree that they have reached an impasse, the Contractor may file a claim in accordance with subsection 105.24.

Delete subsection 105.23.

In subsection 105.24 change the reference to City and County of Denver and replace with Jefferson County:

In subsection 105.24 (c) delete the reference and address to CDOT Audit Unit and replace with Department:

Add subsections 105.25 and 105.26 as follows:

**105.25 Protection of Survey Markers.** Survey markers shall be protected as follows:

(a) *Permanent Survey Markers.* Should the Contractor believe that a survey monument, control point, or benchmark will be disturbed by construction activities, the Contractor shall notify the Engineer not less than seven days prior to starting work in order that the Engineer may take necessary measures to insure the preservation of survey monuments, stakes and bench marks. The Contractor shall notify the Engineer and bear the expense of replacing any that may be disturbed without permission. Replacement shall be done by a Registered Land Surveyor at no expense to the Owner.

When a change is made in the finished elevation of the pavement of any roadway in which a permanent survey monument is located, the monument cover or box shall be adjusted to the new grade.

(b) *Lot Stakes.* Unless otherwise directed by the Engineer or shown in the plans, the Contractor shall preserve existing survey stakes that mark property lines and corners. Any stakes that become lost or disturbed by his operations shall be replaced at the Contractor's expense by a registered land surveyor. Any lot corners marked on sidewalks that are designated for removal by the Contract Documents or the Engineer are not the responsibility of the Contractor for replacement.

**105.26 Maintenance During Free Time.** Maintenance during free time, shall meet the requirements of Sec. 105.19 and shall be considered incidental to the work.

## **REVISION OF SECTION 106 CONTROL OF MATERIAL**

Section 106 of the CDOT Standard Specifications is hereby revised for this project as follows:

Delete subsection 106.03 and replace with the following:

**106.03 Samples, Test, Cited Specifications.** Materials sampling and testing shall be performed at the expense of the Contractor. The Contractor shall employ an independent materials testing company to sample and test the materials or the finished product in accordance with the City Materials Testing Requirements, and the Frequency Guide Schedule of the CDOT Field Services Manual, per Section 720 of the City Special Provisions. All materials sampling, testing and inspection shall be performed by certified field technicians who work under the supervision of a registered professional engineer in the State of Colorado practicing in this field.

Field technicians shall furnish copies of failed test results to the Engineer within two working days of completion and prior to the next phase of construction. On a weekly basis, the Contractor shall furnish the Engineer with copies of all test results taken that week and a cover letter, signed by the supervising registered professional engineer, which summarizes the results and addresses any failed tests or inconsistencies.

Unless otherwise designated, all specifications, standards or policies referenced in Section 720 shall be the latest edition as revised or updated by approved supplements published and issued prior to the date of the advertisement for bids.

Subsection 106.08 shall include the following:

The Contractor will not receive compensation for storage of topsoil or other materials generated on site that are stored either on site or offsite for later disposal or inclusion into the Work.

Add subsection 106.14 as follows:

**106.14 Trade Names, Approved Equals, or Substitutes.** In order to establish a basis of quality, certain processes, types of machinery and equipment, or kinds of materials may be specified either by description or process or by designating a manufacturer by name and referring to that brand or product designation, or by specifying a kind of material. It is not the intent of the specifications to exclude other processes, equipment or materials of equal value, utility or merit.

Whenever a process is designated, or a manufacturer's name, brand or item designation is given, or whenever a process or material covered by patent is designated or described, it shall be understood that the words "or approved equal" follow such name, designation, or description, whether in fact they do so or not.

If it is desirable to furnish items of equipment by manufacturers other than those specified, as a substitute after the contract is executed, the Contractor shall secure approval prior to placing a purchase order or furnishing the same.

If the proposal includes a list of equipment, materials, or articles for which the Contractor must name the manufacturer at the time of submission of the bid, no substitutions therefore will be permitted after a proposal has been accepted without the express consent of the Owner.

#### **REVISION OF SECTION 107 LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC**

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

Subsection 107.12 shall include the following:

Property pins, right-of-way markers and other survey corners shall remain undisturbed until a method of preserving or perpetuating such markers is approved by Owner. Should any such markers be disturbed, destroyed or removed without obtaining said approval, the Contractor shall be assessed for any costs incurred in resurveying, resetting, and registering said markers.

In subsection 107.15 change all references to CDOT to the City.

Subsection 107.15 shall include the following:

Certificates of Insurance shall be attached to the executed Contract Documents and shall become a part of the contract. These certificates shall include a provision that thirty days prior to insurance cancellation, written notice shall be given to the City.

Indemnification of Owner - Contractor hereby indemnifies and agrees to hold the Owner harmless for and on account of any act or omission in the completion and execution of the project specified herein, which indemnification shall extend to and include any damage of whatever sort or description, suffered by any person or entity, and shall include compensatory, punitive or special damages; and Contractor agrees to defend Owner hereunder, at Contractor's sole expense and if he fails to do so, to thereafter indemnify Owner, in addition to the above indemnification, for all court costs and attorneys fees incurred in any defense required to be undertaken by the Owner.

Add subsection 107.18 as follows:

**107.18 Contractor's Responsibility During Warranty.** The Contractor shall, at his sole expense and cost, remedy any defects in the work, and pay for any damage to other work resulting therefrom, which shall appear within a period of one year from the date of final acceptance of work unless a longer period is specified. The Owner will give notice of defects with reasonable promptness upon their discovery.

In subsection 107.25 change all references to Region Environmental to the City.

**REVISION OF SECTION 108  
PROSECUTION AND PROGRESS**

Section 108 of the CDOT Standard Specifications is hereby revised for this project as follows:

In subsection 108.02 delete the last sentence and replace with the following:

The Contractor shall commence work under the Contract within 14 calendar days of the date of the Notice to Proceed.

Subsection 108.05 shall include the following:

Working hours under this Contract shall be between 7:00 am and 5:00 pm. The Contractor shall not operate equipment before 7:00 am and shall schedule all work operations to be completed before 5:00 pm. Work after 5:00 pm will not be allowed except when required for circumstances beyond the Contractor's control and when approved by the Engineer. Work between 5:00 pm and 6:00 pm on more than two consecutive working days will be charged as one-half working day. Work after 6:00 pm on any day will be charged as one-half working day.

Contractor operations in lanes open to traffic are not allowed between the hours of 6:30 am to 8:30 am and 3:30 pm to 6:30 pm, unless otherwise approved by the Engineer. These restrictions apply to temporary delays including ingress and egress of materials, etc.

Subsection 108.08 shall include the following:

An extension of time for completion of the work shall be the Contractor's sole remedy for delays in performing this contract if such delay is caused, in whole or in part, by acts or omissions of the City or its agents unless the Department accepts responsibility.

An extension of time for completion of the work shall be the Contractor's remedy for delays in performing this contract caused by the failure of a utility company or special district to relocate its facilities in timely manner. Relief from failure of utility companies to fulfill their responsibilities is discussed in subsection 105.11 of the Standard Specifications and the City Special Provisions.

Delete subsection 108.09 and replace with the following:

**108.09 Failure to Complete Work on Time.** A daily charge will be made against the Contractor for each working day, including free time, that any Work shall remain uncompleted after elapse of Contract Time. This daily charge, determined by the original Contract amount for the Project from the table below, will be deducted from any money due the Contractor. This deduction will not be considered a penalty but as liquidated damages.

The schedule of liquidated damages set forth below is an amount, agreed to for purposes of this Contract by the Contractor and the City, as reasonably representing the additional costs incurred by the City, both for its time, labor and expenses, and for those damages and inconveniences suffered by the residents of the City as a result of delay in completion of the Project.

Schedule of Liquidated Damages

Original Amount of Contract		Liquidated Damages per Contract Day
For More Than	Up to & Incl.	
\$ 0	\$ 100,000	\$ 200
\$ 100,000	\$ 500,000	\$ 500
\$ 500,000	\$ 1,000,000	\$ 750
\$ 1,000,000	\$ 2,000,000	\$ 1,000

Due account shall be taken of any adjustments of the Contract Time for completion of the Work granted under the provisions of Subsection 108.07.

Permitting the Contractor to continue and finish the Work or any part thereof after the Contract Time has elapsed shall not be construed as a waiver on the part of the City of any of its rights under the Contract.

Deductions assessed as liquidated damages under this Section shall not relieve the Contractor from liability for any damages or costs resulting from delays to other Contractors on the Project or other Projects caused by a failure of the assessed Contractor to complete the Work according to Contract Time.

### **REVISION OF SECTION 109 MEASUREMENT AND PAYMENT**

In subsection 109.01 change all references to CDOT to the City.

In subsection 109.04 (c) 1. delete the formulas for Hourly Rate and Standby Rate (RR and SR respectively). Payment will be made on a flat rate for hourly and standby rental rates plus EOC.

Delete subsection 109.04 (f) and replace with the following:

- (f) The Contractor's representative and the Inspector shall, on a daily basis, agree in writing on the quantities of labor, equipment and materials used for work, extra work, and/ or force account work.

Subsection 109.04 (h) shall include the following:

Time extension for force account work shall be allowed only if a controlling operation or critical path item of the project is interrupted. Time extension requests shall meet the requirements of subsection 108.08. Force account items shall be completed in a workmanlike manner so as not to cause undue delays.

In subsection 109.06 (a) delete the second sentence and replace with the following:

The amount to be retained will be 10 percent of the value of the completed work to a maximum of 5% of the total contract amount including change orders and contingency.

Subsection 109.06 (a) shall include the following:

At the time of the Preconstruction meeting, the Contractor shall submit to the City a schedule of partial progress payments. This schedule will show the percentage of Work completed and the date and dollar amount of each anticipated progress payment.

The City will pay any monies due the Contractor within 30 days of approval of a Request for Partial Payment.

Delete subsection 109.06 (b) and replace with the following:

- (b) Securities are not acceptable to the City in lieu of standard amount retained.

Add subsection 109.08 as follows:

**109.08 Final Guarantee.** All work shall be and is guaranteed by the Contractor for a specified period of one year from and after the date of written final acceptance of all work by the City, unless a longer period is specified. All other current applicable State statutes shall apply.

If within the guarantee period, non-emergency repairs, changes, or replacements are required in connection with guaranteed work which, as determined by the City, is rendered necessary as the result of the use of materials, equipment or workmanship which are inferior, defective or not in accordance with the terms of the contract, the Contractor shall, within 14 calendar days from receipt of notice from the City, and without expense to the City:

- (a) place in satisfactory condition, in every particular, all of such guaranteed work, correct all defects therein, or proceed with replacement of defective or unsatisfactory work where deemed necessary by the Engineer; and
- (b) make good all damage to the building site, equipment or contents thereof which, in the opinion of the Engineer, is the result of the use of materials, equipment or workmanship which are inferior, defective, or not in accordance with

(c) the terms of the contract; and make good any work or material disturbed, or the equipment and contents of any building or structure on the site, in fulfilling any such guarantee.

In the case of emergency repairs, changes or replacements, the Contractor shall promptly upon receipt of Notice from the city and without expense to the City, perform the necessary actions to remediate the situation.

Revised 03/2011

### **REVISION OF SECTION 201 CLEARING AND GRUBBING**

Section 201 of the CDOT Standard Specifications is hereby revised for this project as follows:

In subsection 201.03 (a) change the Area basis from acres to square yards.

In subsection 201.04 change all references to acres to square yards.

Revised 02/2011

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

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

Subsection 202.02 shall include the following:

Areas within existing asphalt pavement that are designated for removal or patching shall be sawcut to the full depth of the asphalt or cut by a method approved by the Engineer which leaves a vertical face on the existing pavement and no deformation of the surface at the cut. Limits of cutting for patching shall be as directed by the Engineer. Asphalt sawing or other approved cutting methods shall be incidental to the pay items for HBP (Patching), Removal of Asphalt, or pay items which include removal of asphalt pavement.

All street cuts shall be in straight lines. Irregular shaped cuts with more than four (4) sides or cuts within existing patches shall not be allowed. Street cuts shall have no longitudinal joints within the wheel tracks.

Trees with a specified trunk diameter measured one foot above the ground surface and shrubs that are designated for removal under this section shall be removed in accordance with the requirements of Section 201. Removal of remaining vegetation as required by the project will be paid under Section 201.

Irrigation lines to be abandoned shall be adequately capped at the point of abandonment to prevent leaks or blowouts of the line that is to remain. The irrigation lines that are to be abandoned can remain in place unless removal is necessary to allow other work.

Subsection 202.03 shall include the following:

All inlet castings, manhole rings and covers and other metal items relating to structures to be removed shall remain the property of the City or the owning utility company. This material shall be reused on the project where possible or as directed by the Engineer. Material not reused on the project shall be delivered to the City or owning utility company unless arrangements have been made for it to be picked up by the City or owning utility company.

Subsection 202.07 shall include the following:

Concrete from curbs, gutters, sidewalks and pavements may not be used in fills unless crushed to meet the gradation requirements for Class 4 Aggregate Base Course.

Subsection 202.09 shall include the following:

Planers shall operate moving against traffic in areas being planed in order to ensure that trucks used in hauling removed materials will be able to arrive and depart with the flow of traffic.

Planing shall result in a surface acceptable to the Engineer. Acceptability shall be based upon the following criteria:

1. Free of surface ridges in excess of ¼ inch.
2. Planed surface parallel to lane lines.
3. Surface area free of excess surface fines.
4. All planed surfaces, especially wheel ruts, show scoring by planer teeth.
5. Specified cut depth attained at edges of roadway appurtenances and curb lips.

Vertical cuts adjacent to traffic lanes from rotomilling over 1" depth shall be delineated at 50 foot intervals immediately after removal operations.

The Contractor shall use caution when planing around manholes, water valve boxes and other roadway appurtenances. Manholes, water valve boxes and other similar structures shall either be adjusted to below the bottom of the cut prior to commencing planing operations or cut around using planing equipment. The maximum deviation between the top of the milled pavement and top of the manhole or water valve box shall be no more than ¾ inch in areas open to traffic. This condition may be achieved by placing a temporary wedge of HBP around the structure. This temporary taper shall be removed prior to placement of paving fabric and new HBP.

Subsection 202.11 shall include the following:

Removal of trees will be measured by the actual number of trees removed with specified diameters measured 4.5 feet above the ground surface. Multiple tree trunks from one root structure with one trunk being the specified diameter will be considered one tree. Trees with a diameter less than 4" or when removal of trees is not included as a separate pay item, removal of trees shall be included in clearing and grubbing.

Removal of existing asphalt pavement for patching, to include asphalt sawing or other approved methods of cutting existing asphalt pavement, will not be measured but shall be incidental to the pay item for HBP (Patching).

Abandon irrigation line will be measured by the actual number of point of connections that require capping.

Subsection 202.12 shall include the following:

<u>Pay Item</u>	<u>Pay Unit</u>
Removal of Tree (< 12")	Each
Removal of Tree (> 12")	Each
Abandon Irrigation Lines	Each

Revision 03/2011

### **REVISION OF SECTION 206 EXCAVATION AND BACKFILL FOR STRUCTURES**

Section 206 of the CDOT Standard Specifications is hereby revised for this project as follows:

Add subsection 206.02 (d) as follows:

(d) Squeegee material, when approved for application by the Engineer, shall meet the following gradation:

<u>Sieve Designation</u>	<u>Percent by Weight Passing</u>
3/8 inch	100
No. 4	60-90
No. 8	0-45
No. 16	0-25
No. 50	0-6
No. 200	0-2

In subsection 206.03 delete the thirteenth paragraph and replace with the following:

Compaction of structure backfill (flow fill) will not be required except as necessary to ensure complete filling of any voids around structures and pipe.

Subsection 206.03 shall include the following:

Squeegee material shall only be used as bedding for reinforced concrete pipe. Compactive effort shall be used on squeegee material to consolidate the material around the pipe haunches.

Backfill and compaction shall be accomplished immediately upon completion of each item. Open trench length shall not exceed one hundred (**100**) feet during construction. During non-construction periods (evenings, weekends and holidays) all trenches shall be backfilled and compacted, excepting an area not exceeding **400** square feet as the daily pipe terminal, and structures not completed or to adequate strength. The Engineer may require backfilling of the pipe terminus if the terminus is located in an intersection or the remaining street width is inadequate to safely convey two-way traffic around the area of the terminus.

Bracing, shoring, sheeting, etc., shall be in accordance with all applicable State and Federal Occupational Safety and Health requirements. Shoring shall be removed as the work and backfilling operations progress unless ordered by the Engineer to be left in place. The Contractor will be paid for shoring so ordered to be left in place on the basis of invoiced material only. Shoring shall be considered as incidental to construction and all costs incurred, except for materials ordered to be left in place will be considered to be included in the unit price bid for the construction of each section of sewer or associated structure.

**The decision to brace, shore or sheet the excavation shall be entirely the Contractor's responsibility.** However, if the Engineer is of the opinion that at any point the trench walls are not properly supported, he may order the placement of additional supports by and at the expense of the Contractor, and compliance with such order shall not relieve or release the Contractor from his responsibilities for the safety of the work.

Delete subsection 206.06(c) and replace with the following:

Excavation, bedding, backfill, compaction, disposal of surplus material, haul, water and all other required work for construction of pipe and structures will not be measured and paid for separately but shall be considered incidental to construction of the pipe and/or structure. Pipe and structures will not be considered for payment until all backfill is completed.

Add subsections 206.06 (e) as follows:

Structure Backfill (Flow-fill) used at the direction of the Engineer will be measured in accordance with the lesser of that quantity calculated as shown in M-206-1 or the actual quantity used. Structure Backfill (Flow-fill) not required by the Contract Documents may be used at the Contractor's discretion but will not be measured and paid for.

Subsection 206.07 shall include the following:

Structure Backfill (Class 1, 2 or Flow-fill) will be paid according to the unit prices on the Bid Schedule only when the excavated material is unacceptable for backfill as determined by the Engineer.

Structure Excavation will be paid according to the unit price on the Bid Schedule only when over-excavation is required for removal of unsuitable material and replacement by Structure Backfill (Class 1, 2 or Flow-fill).

Revised 03/2011

## REVISION OF SECTION 208 EROSION CONTROL

Section 208 of the CDOT Standard Specifications is hereby revised for this project as follows:

In subsection 208.03 change the following references:

All references to CDOT to City

All references to The Region Water Pollution Control Manager to City Stormwater Coordinator

Add subsection 208.03 (f) as follows:

(f) Stormwater Management Plan & CDPHE Permit

1. Unless notified in writing to the contrary, the Contractor shall prepare SWMP immediately following City Council Approval of the Project. Following Council Approval, the City shall provide the Contractor with a Notice of Intent, authorizing the Contractor to begin work on the SWMP while the Project contract documents are being signed. This expedited process is designed to minimize delays to the Project from SWMP preparation and permitting with the Colorado Department of Public Health and Environment (CDPHE).
2. The SWMP is required for all projects regardless of whether or not an "Erosion and Sediment Control Plan" is shown in the plans. If provided, the "Erosion and Sediment Control Plan" may be made part of (and modified by) the SWMP document. The City shall provide examples of a City approved SWMP document upon request.
3. When necessary, immediately following written approval of the SWMP, the Contractor shall make application to the CDPHE for a "General Permit Application for Stormwater Discharges Associated with Construction Activity". The Contractor shall prepare all application materials and pay the application fee. Typically, the CDPHE issues a stormwater permit within 10 days of application. No land disturbance work may proceed until a Stormwater permit has been received by the Contractor, and a copy of same has been provided to the City.

Subsection 208.04 (f) shall include the following:

Any sediment or debris which may have accumulated as a result of construction in any waterway, swale, stormwater detention area, inlet structure, curb, pipe or any other system of conveyance of water shall be promptly removed by the Contractor to the satisfaction of the Engineer. This includes routine cleaning and maintenance of any BMP that prevents construction sediment from entering a City stormwater collection system or directly into a waterway.

Add subsection 208.05 (t)

(t) Street Sweeping

The Contractor shall make every effort to ensure that sediment and construction debris does not leave the construction site and be deposited on surrounding streets. Recognizing that complete prevention of migrating soil and rock material is impossible, the City has provided a reasonable allowance for Street Sweeping mobilizations. Each Street Sweeping unit shall consist of one mobilization and a minimum of 2 hours of Street Sweeping with a mechanized wet sweeping device designed to minimize dust while removing all evidence of construction activity from all surrounding streets. The time during each mobilization may be extended by request of the City, to ensure that all construction debris is removed from existing streets, at no additional cost or pay item charge to the City.

Should the City determine that additional Street Sweeping mobilizations are required during the course of the Project to remove construction debris from the project site or surrounding streets, the City shall notify the Contractor, and the Contractor shall provide these at no additional cost to the City.

All evidence of Construction debris on surrounding streets extending less than 50 feet beyond the Limits of Construction shall be promptly removed by the Contractor by sweeping at the end of each working day, at no additional cost to the City. Significant evidence of Construction debris extending beyond fifty (50) feet from the Limits of Construction shall be removed by the Contractor at the end of each work week, or the last working day before a weekend or holiday, whichever comes sooner. To perform this removal, the Contractor may utilize a Street Sweeping pay item, or remove the debris via conventional sweeping (in a manner to control dust), at no additional cost to the City. Once the Contractor has exhausted his Street Sweeping pay item quantity, the Contractor shall regularly remove (per the requirements of this Section) Construction debris via Street Sweeping or other sweeping method designed to minimize dust (pressure washing or use of only water for purposes of cleaning is not acceptable) to the end of Construction Activity at no additional cost to the City.

**REVISION OF SECTION 304  
AGGREGATE BASE COURSE**

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

Subsection 304.01 shall include the following:

This work includes the placement of recycled (reclaimed) asphalt produced from milling an existing asphalt street pavement as directed by the Engineer.

Subsection 304.02 shall include the following:

The source of aggregate for Aggregate Base Course is not designated. Approval of the aggregate as a source for the Class(es) of aggregate specified will be contingent on material meeting the appropriate gradation requirements and having a resistance value of at least 72 when tested the Hveem Stabilometer Method.

In general, the use of recycled materials is supported by the City and preference will be given to recycled materials as much as possible.

Recycled asphalt material shall be produced from milling an existing asphalt street or from crushing asphaltic pavement removed from a roadway. The material shall generally meet the gradation requirements of Class 4 or 6 Aggregate Base Course. The maximum size aggregate (material) will be determined by the Engineer in the field.

Recycled Portland cement concrete or asphaltic concrete may be used in lieu of natural or processed natural aggregate if it meets the general size, gradation and resistance requirements of the class of ABC specified and the substitution is approved by the Engineer.

Aggregate material for Stabilization Material (Granular) shall generally meet the requirements of Aggregate Base Course Classes 4, 5 or 6. Stabilization material may be crusher waste, reclaimed asphalt, reclaimed concrete, pit run gravels or other Contractor supplied material (minus 4 inch) acceptable to the Engineer. This material shall be readily compactable with minimal effort and shall be clean and free from contaminating materials such as clay or clay lumps and organic matter. The material shall not be cross mixed with other types of materials such as milled asphalt, non specific gravel materials, rock, etc. Presence of contaminating materials, clay or clay lumps or organic matter will be grounds for rejection by the Engineer.

Aggregate Base Course (Crusher Fines) shall be stabilized, in accordance with the manufacturer's recommendations, with a non-toxic, organic binder that is a colorless and odorless concentrated powder that binds the aggregate. The aggregate shall meet the following requirements:

**CRUSHER FINES (1/4" minus Aggregate Gradation)**

Sieve Size	Percentage passing by Weight
3/8"	100
#4	90 – 100
#8	75 – 80
#16	55 – 65
#30	40 – 50
#50	25 – 35
#100	15 – 20
#200	10 – 15

Subsection 304.04 shall include the following:

Recycled asphalt pavement material, in general, is intended for use in maintaining driveways and other accesses and to improve the subgrade characteristics during construction of the project. The material may be incorporated into the

subgrade after the need for it in a particular location expires. Material shall be free of organic materials, clay and clay lumps and shall not be mixed with other materials prior to placement. The presence of contaminating or foreign material will be grounds for rejection by the Engineer.

Aggregate material for Stabilization Material (Granular) shall be placed on a geogrid material in the bottom of the excavation. The geogrid material shall be placed accordance with manufacturer's recommendation in the bottom of the over excavated area in the roadway to be stabilized. After placement of the geogrid material, the granular roadway stabilization material will be placed full depth. The Contractor shall minimize the amount of rubber tired equipment allowed on the stabilization material and shall preferentially use a small tracked dozer or loader to spread the granular material. After placement and rough shaping of the granular material, the surface may be shaped to final cross section with a maintainer. Water for compaction shall be sparingly applied as required. The use of vibratory equipment may be used as long as the subgrade does not show evidence of failure as evidenced by deflection of the aggregate surface.

Aggregate Base Course (Crusher Fines) shall be a placed in a compacted lift of 4 inch depth.

Subsection 304.07 shall include the following:

Recycled Asphalt Pavement will be measured by the ton of material placed as directed by the Engineer.

Stabilization Material (Granular) will be measured by the ton compacted in place and accepted by the Engineer.

Subsection 304.08 shall include the following:

The accepted quantities of Stabilization Material (Granular) will be paid for at the contract price bid per ton of material, as shown in the bid schedule.

The accepted quantities of recycled asphaltic concrete and recycled Portland cement concrete will be paid for at the contract bid price per ton of material as shown in the bid schedule. If no separate bid price is provided, the recycled material will be paid for as Aggregate Base Course or extra work.

<u>Pay Item</u>	<u>Pay Unit</u>
Stabilization Material (Granular)	Ton
Recycled Concrete Pavement	Ton
Recycled Asphaltic Concrete	Ton

Revised 03/2011

**REVISION OF SECTION 403  
HOT MIX ASPHALT**

In subsection 403.01 the last paragraph shall include the following:

This work consists of constructing one or more courses of bituminous pavement on a prepared base in accordance with these specifications, and in conformity with the lines, grades, thicknesses, and typical cross sections shown on the plans or established.

Subsection 403.03 shall include the following:

Areas to be patched back shall be saw cut, unless alternative methods of cutting which produce straight lines and vertical cuts are approved by the Engineer. Limits of cutting shall be as specified on the plans or as directed by the Engineer. Jagged edges are unacceptable and shall be replaced at the Contractors expense. Prior to placement of the patch, all exposed sides of the existing pavement shall be thoroughly coated with tack.

All materials excavated from the patch area shall become the property of the Contractor and hauled from the site.

**REVISION OF SECTION 601  
STRUCTURAL CONCRETE**

Section 601 of the CDOT Standard Specifications is hereby revised for this project as follows:

Subsection 601.19 shall include the following:

Backside footers will be measured by the linear foot of footer constructed in accordance with the plans or as directed by the Engineer.

Subsection 601.20 shall include the following:

<b>Pay Item</b>	<b>Pay Unit</b>
Backside Footer	Linear Foot

Revised 03/2011

**REVISION OF SECTION 602  
REINFORCING STEEL**

Section 602 of the CDOT Standard Specifications is hereby revised for this project as follows:

Delete subsection 602.07

Delete subsection 602.08 and replace with the following:

**602.08.** Payment for reinforcement will be included in the contract unit price bid for individual structures and no separate payment will be made for reinforcement.

Revised 08/2012

**REVISION OF SECTION 614  
TRAFFIC CONTROL DEVICES**

Section 614 of the CDOT Standard Specifications is hereby revised for this project as follows:

Subsection 614.13 shall include the following:

Traffic signs will be measured by unit including all materials included in the steel sign post and sign panel and other work necessary to complete the item.

Subsection 614.14 shall include the following:

<b>Pay Item</b>	<b>Pay Unit</b>
Traffic Sign	Each

Revised 03/2011

**REVISION OF SECTION 627  
PAVEMENT MARKING**

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

Subsection 627.02 shall include the following:

Pavement marking material shall be paint and pre-formed plastic conforming to the requirements of Section 708 and 713 respectively. Contractor shall submit product data for approval by the Engineer.

Subsection 627.08 shall include the following:

Application of pre-formed plastic pavement marking materials shall be in accordance with the manufacturer's written specifications. Contractor shall submit manufacturer's pavement surface preparation and application specifications, for each type of marking material, for approval by the Engineer.

Pre-formed plastic pavement marking materials shall be inlaid into fresh pavement when the pavement temperature is between 135 degrees and 150 degrees.

Delete subsection 627.12 (e) and replace with the following:

(e) Pavement word and symbol markings, transverse and longitudinal crosswalk lines, and stop lines will not be measured, but shall be the number of symbols placed or the linear feet of tape, color and width as specified, placed.

Subsection 627.13 shall include the following:

<b>Pay Item</b>	<b>Pay Unit</b>
Epoxy Pavement Marking	Linear Foot
Preformed Pavement Marking (Handicap)	Each
Preformed Pavement Marking (Type – ____ SF)	Each

Revised 03/2011

### **REVISION OF SECTION 630 CONSTRUCTION ZONE TRAFFIC CONTROL**

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

Subsection 630.10 shall include the following:

If the Contract Documents do not include a Traffic Control Plan (TCP), the Contractor shall submit a method for handling traffic (MHT). The MHT must utilize the Manual on Uniform Traffic Control Devices (MUTCD) or Standard Plans S-630-1 and S-630-2 for devices that are proposed. Approval of the MHT does not relieve the Contractor of traffic control liability specifically assigned to him under this Contract. A copy of the approved MHT shall be available at the project site at all times in order that Division personnel may verify compliance with the specified traffic control requirements.

The Contractor's MHT shall also include the following:

- (1) The number of flag persons to be used.
- (2) The number of authorized 24-hour days a traffic control supervisor will be required.

The Contractor shall erect and maintain warning lights, signs, barricades and sufficient safeguards around all excavations, embankments and obstructions.

Subsection 630.13 shall include the following:

The Contractor shall provide an inventory of all existing pavement marking to be disturbed to the Engineer prior to beginning work.

All warning and construction zone traffic control devices shall bear the name, address and phone number of the barricade company that owns them. The phone number shall be a 24 hour a day dispatched hot line in the event an emergency situation occurs where additional devices are needed or existing devices must be removed.

The Contractor shall install construction zone traffic control devices in locations where they do not block or impede sidewalks for pedestrians, disabled persons, bicyclists or other existing traffic control devices. A minimum four foot wide, unobstructed sidewalk area is to be maintained where possible. In the event that a minimum four foot wide

sidewalk area with a minimum overhead clearance of 7 feet 6 inches cannot be maintained, a pedestrian/bicycle detour plan shall be submitted in conjunction with the traffic control plan.

All existing traffic control devices including traffic signals, signs, and pavement markings that are compatible with the construction zone traffic control shall remain visible and fully operational. If these devices are incompatible with the temporary construction, they shall be covered, relocated or removed.

Whenever the Contractor removes, obliterates or covers in any way, any pavement markings including lane lines and crosswalks, he shall replace them on a daily basis. Prior to opening affected areas to traffic, all pavement marking shall be placed in accordance with the Plans and Specifications or as directed by the Engineer.

The Contractor shall equip all vehicles operating within the moving lanes with flashing amber lights visible from all directions.

Subsection 630.15 shall include the following:

Signs, barricades, traffic channelizing devices, flashing beacons (portable), method of handling traffic, traffic control supervisor, flagging, and all other requirements of Subsection 630 are included in the pay item for Traffic Control Management unless they are identified in the Bid Schedule as separate pay items.

Subsection 630.16 shall include the following:

No payment will be made under Section 630 until the method of handling traffic (MHT) has been submitted and accepted.

<b>Pay Item</b>	<b>Pay Unit</b>
Traffic Control Management	Lump Sum