BID REQUEST NO. B1900110

WELD COUNTY
DEPARTMENT OF PUBLIC WORKS

CONTRACT BID DOCUMENTS
AND SPECIFICATIONS FOR
WCR 39 EXTENSION PROJECT

June 21, 2019

Weld County Public Works
Division of Engineering
P.O. Box 758
1111 H Street
Greeley, Colorado 80632
970-304-6496
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The following checked forms and provisions take precedence over plan drawings and supplement the 2017 edition of the Colorado Department of Transportation “Standard Specifications for Road and Bridge Construction” (Standard Specifications) which is to be used to administer the construction of this project.

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REQUEST FOR BID
WELD COUNTY, COLORADO
1150 O STREET
GREELEY, CO 80631

DATE: JUNE 21, 2019
BID NUMBER: B1900110
DESCRIPTION: WCR 39 EXTENSION PROJECT
MANDATORY PRE-BID CONFERENCE DATE: JULY 8, 2019
BID OPENING DATE: JULY 17, 2019

1. NOTICE TO BIDDERS:
The Board of County Commissioners of Weld County, Colorado, by and through its
Controller/Purchasing Director (collectively referred to herein as, “Weld County”), wishes to
purchase the following:

WCR 39 EXTENSION PROJECT

The project in general consists of construction of roadway from WCR 50.5 to WCR 52, installation of
culverts, roadway stabilization, unclassified excavation, embankment, aggregate base course
placement, hot mix asphalt placement, etc.

A mandatory pre-bid conference will be held at 10:00 a.m., on July 8, 2019, at the Weld County
Public Works Building. The Public Works Building is located at 1111 H Street in Greeley. Bidders
must participate and record their presence at the pre-bid conference to be allowed to submit bids.

Bids for the above stated merchandise, equipment, and/or services will be received at the Office of
the Weld County Purchasing Department in the Weld County Administrative Building, 1150 O Street
Room #107 Greeley CO 80631 until: 10:00am on Wednesday July 17, 2019 (Weld County
Purchasing Time Clock)

PAGES 1 – 15 OF THIS REQUEST FOR BIDS CONTAIN GENERAL INFORMATION FOR THE
REQUEST NUMBER REFERRED TO ABOVE. NOT ALL OF THE INFORMATION CONTAINED IN
PAGES 1 – 15 MAY BE APPLICABLE FOR EVERY PURCHASE. BID SPECIFICS FOLLOW PAGE
15.

2. INVITATION TO BID:

Weld County requests bids for the purchase of the above-listed merchandise, equipment, and/or
services.

Bids shall include any and all charges for freight, delivery, containers, packaging, less all
taxes and discounts, and shall, in every way, be the total net price which the bidder will
expect the Weld County to pay if awarded the bid. Merchandise and/or equipment shall be
delivered to the location(s) specified herein.

You can find information concerning this request at two locations: On the Weld County Purchasing
website at https://www.weldgov.com/departments/purchasing/bids_proposals located under “Current
Requests”. And, on the Bidnet Direct website at www.bidnetdirect.com. Weld County Government
is a member of BidNet Direct. BidNet Direct is an on-line notification system which is being utilized
by multiple non-profit and governmental entities. Participating entities post their bids, quotes, proposals, addendums, and awards on this one centralized system.

**Bid Delivery to Weld County – 2 methods:**

A. **Email.** Emailed bids are preferred. Bids may be emailed to: bids@weldgov.com. Emailed bids must include the following statement on the email: "I hereby waive my right to a sealed bid". An email confirmation will be sent when we receive your bid/proposal. If more than one copy of the bid is requested, you must submit/mail hard copies of the bid proposal.

B. **Mail or Hand Delivery.** Mailed (or hand delivered) bids should be sent in a sealed envelope with the bid title and bid number on it. Please address to: Weld County Purchasing Department, 1150 O Street, Room #107 Greeley, CO 80631. Please call Purchasing at 970-400-4222 or 4223 if you have any questions.

3. **INSTRUCTIONS TO BIDDERS: INTRODUCTORY INFORMATION**

Bids shall be typewritten or written in ink on forms prepared by the Weld County Purchasing Department. Each bid must give the full business address of bidder and be signed by him with his usual signature. Bids by partnerships must furnish the full names of all partners and must be signed with the partnership name by one of the members of the partnership or by an authorized representative, followed by the signature and title of the person signing. Bids by corporations must be signed with the legal name of the corporation, followed by the name of the state of the incorporation and by the signature and title of the president, secretary, or other person authorized to bind it in the matter. The name of each person signing shall also be typed or printed below the signature. A bid by a person who affixes to his signature the word "president," "secretary," "agent," or other title without disclosing his principal, may be held to the bid of the individual signing. When requested by the Weld County Controller/Purchasing Director, satisfactory evidence of the authority of the officer signing on behalf of a corporation shall be furnished. All corrections or erasures shall be initialed by the person signing the bid. All bidders shall agree to comply with all of the conditions, requirements, specifications, and/or instructions of this bid as stated or implied herein. All designations and prices shall be fully and clearly set forth. All blank spaces in the bid forms shall be suitably filled in.

Bids may be withdrawn upon written request to and approval of the Weld County Controller/Purchasing Director; said request being received from the withdrawing bidder prior to the time fixed for award. Negligence on the part of a bidder in preparing the bid confers no right for the withdrawal of the bid after it has been awarded.

Late or unsigned bids shall not be accepted or considered. It is the responsibility of the bidder to ensure that the bid arrives in the Weld County Purchasing Department on or prior to the time indicated in Section 1., entitled, "Notice to Bidders." Bids received prior to the time of opening will be kept unopened in a secure place. No responsibility will attach to the Weld County Controller/Purchasing Director for the premature opening of a bid not properly addressed and identified.

In accordance with Section 14-9(3) of the Weld County Home Rule Charter, Weld County will give preference to resident Weld County bidders in all cases where said bids are competitive in price and quality. Weld County reserves the right to reject any and all bids, to waive any informalities in the bids, to award the bid to multiple vendors, and to accept the bid that, in the opinion of the Board of County Commissioners, is to the best interests of Weld County. The bid(s) may be awarded to more than one vendor.
Terms Defined: Terms used in these instructions to Bidders and elsewhere throughout the Contract Documents are defined in the General Provisions, CDOT, Standard Specification for Road and Bridge Construction, Section 101.

Qualification of Bidders: Qualification statements, attached with this document, are required to be completed by Bidders. If requested by Weld County, a Statement of Qualifications will be completed for the Subcontractors listed by the Contractor within 72 hours of the request. Failure to submit qualifications may be cause for rejection of Bids. The Owner shall consider the following criteria in evaluating the Bidder's qualifications following the opening of Bids:

Experience and performance records on similar work. Ability to complete the Work within the Contract Time.

Familiarization with the Work: Before submitting his Bid, each prospective Bidder shall familiarize themselves with the Work, the site where the Work is to be performed, local labor conditions and all local, state and federal laws, ordinances, rules, regulations and other factors affecting performance of the Work. He shall carefully correlate his observations with requirements of the Contract Documents and Drawings and otherwise satisfy himself of the expense and difficulties attending performance of the Work. The submission of a Bid will constitute an incontrovertible representation by the Bidder that he has complied with every requirement of this paragraph.

Interpretation of Contract Documents to Prospective Bidders: Any prospective Bidder who discovers ambiguities or is in doubt as to the true meaning of any part of the Contract Documents or Drawings shall make a request to the Engineer for an interpretation thereof. Interpretations will be made only by Addenda, duly issued, and copies of each Addendum will be mailed or delivered to each Contract Document holder of record. Unless approved by the Controller/Purchasing Director, no interpretation Addenda will be issued within the last seven (7) days before the date set for opening of Bids. The Bidder shall be solely responsible for any interpretation of the Contract Documents or Drawings other than by duly issued Addenda.

Preparation of the Bid: Bidders are required to use the Proposal Forms which are included in this package and on the basis indicated in the Bid Forms. The Bid Proposal must be filled out completely, in detail, and signed by the Bidder. Bids by partnerships must be executed in the partnership name and signed by a partner. His title must appear under his signature and the official address of the partnership must be shown below the signature. Bids by corporations must be executed in the corporate name by the president or a vice president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature. Names of all persons signing must be printed below their signatures. A power of attorney must accompany the signature of anyone not otherwise authorized to bind the Bidder.

Modification or Withdrawal of Bid: Bids may be modified or withdrawn by an appropriate document duly executed in the manner that a Bid must be executed, and delivered to the place where Bids are to be submitted at any time prior to the final time set for receiving Bids. Bidders may modify or withdraw Bids by electronic communication at any time prior to the time set for receiving Bids provided the instruction is positively identified. Any electronic modification should not reveal the amended Bid price, but should provide only the addition, subtraction or modification. A duly executed document confirming the electronic modification shall be submitted within three days after Bids are opened. The Controller/Purchasing Director may at their sole discretion, release any Bid at any time.
4. AWARD AND EXECUTION OF CONTRACT

Basis of Award: Only firm Bids will be considered. The award of the Contract, if it is awarded, will be to the lowest responsible bidder whose Bid compares favorably upon evaluation with other Bids. Weld County intends to award the Contract to the lowest responsible Bidder within the limits of funds available and to best serve its interests. The County reserves the right to waive informalities and/or irregularities and to reject any or all bids.

Evaluation of Bids: The evaluation of Bids will include consideration of Subcontractors and suppliers. All Bidders shall submit a list of all Subcontractors he expects to use in the Work with the Bid. The experience statement with pertinent information on similar Projects shall be furnished with the name of each Subcontractor proposed to perform work on the project. The use of Subcontractors listed by the Bidder and accepted by County prior to the Notice of Award will be required in the performance of the Work. All Bidders shall submit with their Bid a list of the suppliers as indicated in the Bid Forms.

Contract Execution: The successful Bidder shall be required to execute the Contract and to furnish the Performance Bond, Labor & Materials Payment Bond and Certificate of Insurance within ten (10) calendar days of receipt of the Notice of Award. The Certificate of Insurance shall name Weld County as additional insured. Failure to execute the contract and furnish the required paperwork within the time frame mentioned above shall be just cause for the annulment of the Award and, in the event of such annulment, the Award may then be made to another Bidder, or the County may reject all Bids or call for other Bids. The County, within ten (10) days of receipt of acceptable Performance Bid, Labor & Materials Payment Bond, and signed Contract from the successful Bidder will issue the Notice to Proceed.

In submitting the bid, the bidder agrees that the signed bid submitted, all of the documents of the Request for Proposal contained herein (including, but not limited to, product specifications and scope of services), the successful bidder's response, and the formal acceptance of the bid by Weld County, together constitutes a contract, with the contract date being the date of formal acceptance of the bid by Weld County. The County may require a separate contract, which if required, has been made a part of this RFP.

5. PERFORMANCE, LABOR, MATERIAL AND PAYMENT BOND

The successful Bidder shall be required to execute the Performance Bond and Labor & Materials Payment Bond in the amount of 100% of the Contract plus the value of the force account items, covering the faithful performance of the Contract and the payment of all obligations arising there-under. The Bonds shall be executed on the forms included with the Contract Documents by a surety company authorized to do business in the State of Colorado and acceptable as surety to Weld County. The Bidder shall deliver the Bonds to the Owner not later than the date of execution of the Contract.

6. INDIRECT COSTS

Governmental Fees: The cost of all construction licenses, building and other permits, and governmental inspections required by public authorities for performing the Work, which are applicable at the time Bids are opened and which are not specified to be obtained by the County, shall be included in the Bid price.

Royalties: The cost of all royalties and license fees on equipment and materials to be furnished and incorporated in the Work shall be included in the Bid price.
Utilities: Unless otherwise specified, the Bidder shall include in his Bid the cost of all electrical, water, sanitary, gas, telephone, and similar facilities and services required by him in performing the Work.

Cash Allowances: The Bidder shall include in his Bid such sums as he deems proper for overhead costs and profits on account of cash allowances named in the Bid Documents.

7. SITE CONDITIONS
Familiarization with the Site: The prospective Bidder shall by careful examination, satisfy themselves of the following:

- Nature and location of the site where the Work is to be performed.
- Character, quality, and quantity of surface and subsurface materials, water, structures and utilities to be encountered.
- Character of construction equipment and facilities needed for performance of the Work.
- General local conditions.
- Availability of lands as set forth in the General Conditions.

Access to the Site: The Bidder shall carefully review the Drawings and the Project Special Conditions for provisions concerning access to the site during performance of the Work. The Bidder shall carefully review the locations of the site where the work is to be performed. The Bidder shall make all arrangements, as deemed necessary, for access to property outside of County Right of Way, prior to beginning the work.

8. SUCCESSFUL BIDDER HIRING PRACTICES – ILLEGAL ALIENS

Successful bidder certifies, warrants, and agrees that it does not knowingly employ or contract with an illegal alien who will perform work under this contract. Successful bidder will confirm the employment eligibility of all employees who are newly hired for employment in the United States to perform work under this Agreement, through participation in the E-Verify program or the State of Colorado program established pursuant to C.R.S. §8-17.5-102(5)(c). Successful bidder shall not knowingly employ or contract with an illegal alien to perform work under this Agreement or enter into a contract with a subcontractor that fails to certify with Successful bidder that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Agreement. Successful bidder shall not use E-Verify Program or State of Colorado program procedures to undertake pre-employment screening or job applicants while this Agreement is being performed. If Successful bidder obtains actual knowledge that a subcontractor performing work under the public contract for services knowingly employs or contracts with an illegal alien Successful bidder shall notify the subcontractor and County within three (3) days that Successful bidder has actual knowledge that a subcontractor is employing or contracting with an illegal alien and shall terminate the subcontract if a subcontractor does not stop employing or contracting with the illegal alien within three (3) days of receiving notice. Successful bidder shall not terminate the contract if within three days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien. Successful bidder shall comply with reasonable requests made in the course of an investigation, undertaken pursuant to C.R.S. §8-17.5-102(5), by the Colorado Department of Labor and Employment. If Successful bidder participates in the State of Colorado program, Successful bidder shall, within twenty days after hiring a new employee to perform work under the contract, affirm that Successful bidder has examined the legal work status of such employee, retained file copies of the documents, and not altered or falsified the identification documents for such employees. Successful bidder shall deliver to County, a written notarized affirmation that it has examined the legal work status of such employee and shall comply with all of the other requirements of the State of Colorado program. If Successful bidder fails to comply with any requirement of this provision or of C.R.S. §8-17.5-101 et
seq., County, may terminate this Agreement for breach, and if so terminated, Successful bidder shall be liable for actual and consequential damages.

Except where exempted by federal law and except as provided in C.R.S. § 24-76.5-103(3), if Successful bidder receives federal or state funds under the contract, Successful bidder must confirm that any individual natural person eighteen (18) years of age or older is lawfully present in the United States pursuant to C.R.S. § 24-76.5-103(4), if such individual applies for public benefits provided under the contract. If Successful bidder operates as a sole proprietor, it hereby swears or affirms under penalty of perjury that it: (a) is a citizen of the United States or is otherwise lawfully present in the United States pursuant to federal law, (b) shall produce one of the forms of identification required by C.R.S. § 24-76.5-101, et seq., and (c) shall produce one of the forms of identification required by C.R.S. § 24-76.5-103 prior to the effective date of the contract.

9. GENERAL PROVISIONS

A. Fund Availability: Financial obligations of the Weld County payable after the current fiscal year are contingent upon funds for that purpose being appropriated, budgeted and otherwise made available. By acceptance of the bid, Weld County does not warrant that funds will be available to fund the contract beyond the current fiscal year.

B. Trade Secrets and other Confidential Information: Weld County discourages bidders from submitting confidential information, including trade secrets, that cannot be disclosed to the public. If necessary, confidential information of the bidder shall be transmitted separately from the main bid submittal, clearly denoting in red on the information at the top the word, “CONFIDENTIAL.” However, the successful bidder is advised that as a public entity, Weld County must comply with the provisions of C.R.S. 24-72-201, et seq., the Colorado Open Records Act (CORA), with regard to public records, and cannot guarantee the confidentiality of all documents. The bidder is responsible for ensuring that all information contained within the confidential portion of the submittal is exempt from disclosure pursuant to C.R.S. 24-72-204(3)(a)(IV) (Trade secrets, privileged information, and confidential commercial, financial, geological, or geophysical data). If Weld County receives a CORA request for bid information marked “CONFIDENTIAL”, staff will review the confidential materials to determine whether any of them may be withheld from disclosure pursuant to CORA and disclose those portions staff determines are not protected from disclosure. Weld County staff will not be responsible for redacting or identifying Confidential information which is included within the body of the bid and not separately identified. Any document which is incorporated as an exhibit into any contract executed by the County shall be a public document regardless of whether it is marked as confidential.

C. Governmental Immunity: No term or condition of the contract shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protections or other provisions, of the Colorado Governmental Immunity Act §§24-10-101 et seq., as applicable now or hereafter amended.

D. Independent Contractor: The successful bidder shall perform its duties hereunder as an independent contractor and not as an employee. He or she shall be solely responsible for its acts and those of its agents and employees for all acts performed pursuant to the contract. Neither the successful bidder nor any agent or employee thereof shall be deemed to be an agent or employee of Weld County. The successful bidder and its employees and agents are not entitled to unemployment insurance or workers’ compensation benefits through Weld County and Weld County shall not pay for or otherwise provide such coverage for the successful bidder or any of its agents or employees. Unemployment insurance benefits will be available to the successful bidder and its employees and agents only if such coverage is made available by the successful bidder or a third party. The
successful bidder shall pay when due all applicable employment taxes and income taxes and local head taxes (if applicable) incurred pursuant to the contract. The successful bidder shall not have authorization, express or implied, to bind Weld County to any agreement, liability or understanding, except as expressly set forth in the contract. The successful bidder shall have the following responsibilities with regard to workers’ compensation and unemployment compensation insurance matters: (a) provide and keep in force workers’ compensation and unemployment compensation insurance in the amounts required by law, and (b) provide proof thereof when requested to do so by Weld County.

E. **Compliance with Law:** The successful bidder shall strictly comply with all applicable federal and State laws, rules and regulations in effect or hereafter established, including without limitation, laws applicable to discrimination and unfair employment practices.

F. **Choice of Law:** Colorado law, and rules and regulations established pursuant thereto, shall be applied in the interpretation, execution, and enforcement of the contract. Any provision included or incorporated herein by reference which conflicts with said laws, rules and/or regulations shall be null and void.

G. **No Third-Party Beneficiary Enforcement:** It is expressly understood and agreed that the enforcement of the terms and conditions of the contract, and all rights of action relating to such enforcement, shall be strictly reserved to the undersigned parties and nothing in the contract shall give or allow any claim or right of action whatsoever by any other person not included in the contract. It is the express intention of the undersigned parties that any entity other than the undersigned parties receiving services or benefits under the contract shall be an incidental beneficiary only.

H. **Attorney’s Fees/Legal Costs:** In the event of a dispute between Weld County and the successful bidder, concerning the contract, the parties agree that Weld County shall not be liable to or responsible for the payment of attorney fees and/or legal costs incurred by or on behalf of the successful bidder.

I. **Disadvantaged Business Enterprises:** Weld County assures 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, national origin, sex, age, or disability in consideration for an award.

J. **Procurement and Performance:** The successful bidder agrees to procure the materials, equipment and/or products necessary for the project and agrees to diligently provide all services, labor, personnel and materials necessary to perform and complete the project. The successful bidder shall faithfully perform the work in accordance with the standards of professional care, skill, training, diligence and judgment provided by highly competent contractors performing construction services of a similar nature to those described in this Agreement. The successful bidder shall further be responsible for the timely completion and acknowledges that a failure to comply with the standards and requirements outlined in the Bid within the time limits prescribed by County may result in County’s decision to withhold payment or to terminate this Agreement.

K. **Term:** The term of this Agreement begins upon the date of the execution of this Agreement by County and shall continue through and until successful bidder’s completion of the responsibilities described in the Bid.
L. **Termination:** County has the right to terminate this Agreement, with or without cause on thirty (30) days written notice. Furthermore, this Agreement may be terminated at any time without notice upon a material breach of the terms of the Agreement.

M. **Extension or Modification:** Any amendments or modifications to this agreement shall be in writing signed by both parties. No additional services or work performed by the successful bidder shall be the basis for additional compensation unless and until the successful bidder has obtained written authorization and acknowledgement by County for such additional services. Accordingly, no claim that the County has been unjustly enriched by any additional services, whether or not there is in fact any such unjust enrichment, shall be the basis of any increase in the compensation payable hereunder. In the event that written authorization and acknowledgment by the County for such additional services is not timely executed and issued in strict accordance with this Agreement, the successful bidder’s rights with respect to such additional services shall be deemed waived and such failure shall result in non-payment for such additional services or work performed.

N. **Subcontractors:** The successful bidder acknowledges that County has entered into this Agreement in reliance upon the particular reputation and expertise of the successful bidder. The successful bidder shall not enter into any subcontractor agreements for the completion of this Project without County’s prior written consent, which may be withheld in County’s sole discretion. County shall have the right in its reasonable discretion to approve all personnel assigned to the subject Project during the performance of this Agreement and no personnel to whom County has an objection, in its reasonable discretion, shall be assigned to the Project. The successful bidder shall require each subcontractor, as approved by County and to the extent of the Services to be performed by the subcontractor, to be bound to the successful bidder by the terms of this Agreement, and to assume toward the successful bidder all the obligations and responsibilities which the successful bidder, by this Agreement, assumes toward County. County shall have the right (but not the obligation) to enforce the provisions of this Agreement against any subcontractor hired by the successful bidder and the successful bidder shall cooperate in such process. The successful bidder shall be responsible for the acts and omissions of its agents, employees and subcontractors.

O. **Warranty.** Contractor warrants that construction services performed under this Agreement will be performed in a manner consistent with the professional construction standards governing such services and the provisions of this Agreement. Contractor further represents and warrants that all construction services shall be performed by qualified personnel in a professional and workmanlike manner, consistent with industry standards, and that all construction services will conform to applicable specifications. In addition to the foregoing warranties, Contractor is aware that all work performed on this Project pursuant to this Agreement is subject to a one-year warranty period during which Contractor must correct any failures or deficiencies caused by contractor’s workmanship or performance. This warranty shall commence on the date of County’s final inspection and acceptance of the Project.

P. **Non-Assignment.** The successful bidder may not assign or transfer this Agreement or any interest therein or claim thereunder, without the prior written approval of County. Any attempts by the successful bidder to assign or transfer its rights hereunder without such prior approval by County shall, at the option of County, automatically terminate this Agreement and all rights of the successful bidder hereunder. Such consent may be granted or denied at the sole and absolute discretion of County.

Q. **Interruptions.** Neither party to this Agreement shall be liable to the other for delays in delivery or failure to deliver or otherwise to perform any obligation under this Agreement, where such failure is due to any cause beyond its reasonable control, including but not limited to Acts of God, fires, strikes, war, flood, earthquakes or Governmental actions.
R. **Non-Exclusive Agreement.** This Agreement is nonexclusive, and County may engage or use other contractors or persons to perform services of the same or similar nature.

S. **Employee Financial Interest/Conflict of Interest – C.R.S. §§24-18-201 et seq. and §24-50-507.** The signatories to this Agreement agree that to their knowledge, no employee of Weld County has any personal or beneficial interest whatsoever in the service or property which is the subject matter of this Agreement. County has no interest and shall not acquire any interest direct or indirect, that would in any manner or degree interfere with the performance of the successful bidder’s services and the successful bidder shall not employ any person having such known interests. During the term of this Agreement, the successful bidder shall not engage in any business or personal activities or practices or maintain any relationships which actually conflicts with or in any way appear to conflict with the full performance of its obligations under this Agreement. Failure by the successful bidder to ensure compliance with this provision may result, in County’s sole discretion, in immediate termination of this Agreement. No employee of the successful bidder nor any member of the successful bidder's family shall serve on a County Board, committee or hold any such position which either by rule, practice or action nominates, recommends, supervises the successful bidder’s operations, or authorizes funding to the successful bidder.

T. **Severability.** If any term or condition of this Agreement shall be held to be invalid, illegal, or unenforceable by a court of competent jurisdiction, this Agreement shall be construed and enforced without such provision, to the extent that this Agreement is then capable of execution within the original intent of the parties.

U. **Compliance with Davis-Bacon Wage Rates.** The successful bidder understands and agrees that, if required by the Scope of Work, the work shall be in compliance with the Davis-Bacon Wage Rates.

V. **Board of County Commissioners of Weld County Approval.** This Agreement shall not be valid until it has been approved by the Board of County Commissioners.

W. **Compensation Amount.** Upon the successful bidder’s successful completion of the construction of the Project, and County’s acceptance of the same, County agrees to pay an amount no greater than the amount of the accepted bid. The successful bidder acknowledges no payment in excess of that amount will be made by County unless a “change order” authorizing such additional payment has been specifically approved by the Director of Weld County Public Works, or by formal resolution of the Weld County Board of County Commissioners, as required pursuant to the Weld County Code. County will not withhold any taxes from monies paid to the successful bidder hereunder and the successful bidder agrees to be solely responsible for the accurate reporting and payment of any taxes related to payments made pursuant to the terms of this Agreement.

10. **INSURANCE REQUIREMENTS**

**General Requirements:** Successful bidders/Contract Professionals must secure, at or before the time of execution of any agreement or commencement of any work, the following insurance covering all operations, goods or services provided pursuant to this request. Successful bidders/Contract Professionals shall keep the required insurance coverage in force at all times during the term of the Agreement, or any extension thereof, and during any warranty period. The required insurance shall be underwritten by an insurer licensed to do business in Colorado and rated by A.M. Best Company as “A” VIII or better. Each policy shall contain a valid provision or endorsement stating “Should any of the above-described policies by canceled or should any coverage be reduced before the expiration date thereof, the issuing company shall send written notice to the Weld County Controller/Purchasing
Director by certified mail, return receipt requested. Such written notice shall be sent thirty (30) days prior to such cancellation or reduction unless due to non-payment of premiums for which notice shall be sent ten (10) days prior. If any policy is in excess of a deductible or self-insured retention, County must be notified by the Successful bidder/Contract Professional. Successful bidder/Contract Professional shall be responsible for the payment of any deductible or self-insured retention. County reserves the right to require Successful bidder/Contract Professional to provide a bond, at no cost to County, in the amount of the deductible or self-insured retention to guarantee payment of claims.

The insurance coverages specified in this Agreement are the minimum requirements, and these requirements do not decrease or limit the liability of Successful bidder/Contract Professional. The County in no way warrants that the minimum limits contained herein are sufficient to protect the Successful bidder from liabilities that might arise out of the performance of the work under this Contract by the Successful bidder, its agents, representatives, employees, or subcontractors. The successful bidder shall assess its own risks and if it deems appropriate and/or prudent, maintain higher limits and/or broader coverages. The successful bidder is not relieved of any liability or other obligations assumed or pursuant to the Contract by reason of its failure to obtain or maintain insurance in sufficient amounts, duration, or types. The successful bidder/Contract Professional shall maintain, at its own expense, any additional kinds or amounts of insurance that it may deem necessary to cover its obligations and liabilities under this Agreement. Any modification to these requirements must be made in writing by Weld County.

The successful bidder stipulates that it has met the insurance requirements identified herein. The successful bidder shall be responsible for the professional quality, technical accuracy, and quantity of all construction services provided, the timely delivery of said services, and the coordination of all services rendered by the successful bidder and shall, without additional compensation, promptly remedy and correct any errors, omissions, or other deficiencies.

**INDEMNITY:** The successful bidder shall defend, indemnify and hold harmless County, its officers, agents, and employees, from and against injury, loss damage, liability, suits, actions, or claims of any type or character arising out of the work done in fulfillment of the terms of this Contract or on account of any act, claim or amount arising or recovered under workers’ compensation law or arising out of the failure of the successful bidder to conform to any statutes, ordinances, regulation, law or court decree. The successful bidder shall be fully responsible and liable for any and all injuries or damage received or sustained by any person, persons, or property on account of its performance under this Agreement or its failure to comply with the provisions of the Agreement, or on account of or in consequence of neglect of the successful bidder in its construction methods or procedures; or in its provisions of the materials required herein, or from any claims or amounts arising or recovered under the Worker’s Compensation Act, or other law, ordinance, order, or decree. This paragraph shall survive expiration or termination hereof. It is agreed that the successful bidder will be responsible for primary loss investigation, defense and judgment costs where this contract of indemnity applies. In consideration of the award of this contract, the successful bidder agrees to waive all rights of subrogation against the County its associated and/or affiliated entities, successors, or assigns, its elected officials, trustees, employees, agents, and volunteers for losses arising from the work performed by the successful bidder for the County. A failure to comply with this provision shall result in County’s right to immediately terminate this Agreement.

**Types of Insurance:** The successful bidder/Contract Professional shall obtain, and maintain at all times during the term of any Agreement, insurance in the following kinds and amounts:

**Workers’ Compensation Insurance** as required by state statute, and Employer’s Liability Insurance covering all of the successful bidder’s Contract Professional’s employees acting within the course and
scope of their employment. Policy shall contain a waiver of subrogation against the County. This requirement shall not apply when a successful bidder or subcontractor is exempt under Colorado Workers’ Compensation Act., AND when such successful bidder or subcontractor executes the appropriate sole proprietor waiver form.

Minimum Limits:

<table>
<thead>
<tr>
<th>Coverage</th>
<th>Statutory</th>
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<tbody>
<tr>
<td>Coverage A (Workers’ Compensation)</td>
<td>Statutory</td>
</tr>
<tr>
<td>Coverage B (Employers Liability)</td>
<td>$500,000</td>
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</tbody>
</table>

Commercial General Liability Insurance written on ISO occurrence form CG 00 01 10/93 or equivalent, covering premises operations, explosions, collapse and underground hazard, personal advertising injury, fire damage, independent Contractors, products and completed operations, blanket contractual liability, personal injury, liability assumed under an insured contract (including defense costs assumed under contract, designated construction projects(s) general aggregate limit, ISO CG 2503 or equivalent additional insured—owners, lessees or successful bidders endorsement, ISO Form 2010 or equivalent, additional insured—owners, lessees or successful bidders endorsement, ISO CG 2037 or equivalent, the policy shall be endorsed to include the following additional insured language on the additional insured endorsements specified above: “Weld County, its subsidiary, parent, associated and/or affiliated entities, successors, or assigns, its elected officials, trustees, employees, agents, and volunteers named as an additional insured with respect to liability and defense of suits arising out of the activities performed by, or on behalf of the Successful bidder, including completed operations” and the minimum limits must be as follows:

- $1,000,000 each occurrence;
- $2,000,000 general aggregate;
- $2,000,000 products and completed operations aggregate;
- $1,000,000 Personal Advertising injury
- $50,000 any one fire; and
- $500,000 errors and omissions.
- $5,000 Medical payments one person

Automobile Liability: Successful bidder/Contract Professional shall maintain limits of $1,000,000 for bodily injury per person, $1,000,000 for bodily injury for each accident, and $1,000,000 for property damage applicable to all vehicles operating both on County property and elsewhere, for vehicles owned, hired, and non-owned vehicles used in the performance of this Contract.

For all general liability, excess/umbrella liability, liquor liability, pollution liability and professional liability policies, if the policy is a claims-made policy, the retroactive date must be on or before the contract date or the first date when any goods or services were provided to County, whichever is earlier.

Successful bidders/Contract Professionals shall secure and deliver to the County at or before the time of execution of this Agreement, and shall keep in force at all times during the term of the Agreement as the same may be extended as herein provided, a commercial general liability insurance policy, including public liability and property damage, in form and company acceptable to and approved by said Administrator, covering all operations hereunder set forth in the related Bid or Request for Proposal.

Proof of Insurance: County reserves the right to require the successful bidder/Contract Professional to provide a certificate of insurance, a policy, or other proof of insurance as required by the County’s Risk Administrator in his sole discretion.
**Additional Insureds:** For general liability, excess/umbrella liability, pollution legal liability, liquor liability, and inland marine, Successful bidder/Contract Professional’s insurer shall name County as an additional insured.

**Waiver of Subrogation:** For all coverages, Successful bidder/Contract Professional’s insurer shall waive subrogation rights against County.

**Subcontractors:** All subcontractors, independent contractors, sub-vendors, suppliers or other entities providing goods or services required by this Agreement shall be subject to all of the requirements herein and shall procure and maintain the same coverages required of Successful bidder/Contract Professional. Successful bidder/Contract Professional shall include all such subcontractors, independent contractors, sub-vendors suppliers or other entities as insureds under its policies or shall ensure that all subcontractors maintain the required coverages. Successful bidder/Contract Professional agrees to provide proof of insurance for all such subcontractors, independent contractors, sub-vendors suppliers or other entities upon request by the County.

**Contractor’s Pollution Liability: (Not Required for This Project)**

Weld County requires this coverage whenever work at issue under this Contract involves potential pollution risk to the environment or losses caused by pollution conditions (including asbestos) that may arise from the operations of the successful bidder described in the Successful bidder’s scope of services. Policy shall cover the successful bidder’s completed operations. Coverage shall apply to sudden and gradual pollution conditions resulting from the escape of release of smoke, vapors, fumes, acids, alkalis, toxic chemicals, liquids, or gases, natural gas, waste materials, or other irritants, contaminants, or pollutants (including asbestos). If the coverage is written on a claims-made basis, the successful bidder warrants that any retroactive date applicable to coverage under the policy precedes the effective date of this Contract; and that continuous coverage will be maintained or an extended discovery period will be exercised for a period of three (3) years beginning from the time that work under this contract is completed. The policy shall be endorsed to include the following as Additional Insureds: “Weld County its subsidiary, parent, associated and/or affiliated entities, successors, or assigns, its elected officials, trustees, employees, agents, and volunteers named as an additional insured with respect to liability and defense of suits arising out of the activities performed by, or on behalf of the Successful bidder, including completed operations”.

**Minimum Limits:**

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<td>Per Loss</td>
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<tr>
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**Builders’ Risk Insurance or Installation Floater – Completed Value Basis (Required)**

Unless otherwise provided, the Contractor shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, Builders’ Risk Insurance in the amount of the initial Contract Sum, plus value of subsequent modifications, change orders, and cost of material supplied or installed by others, comprising total value of the entire Project at the site on a replacement cost basis without optional deductibles.

(a) Policy must provide coverage from the time any covered property becomes the responsibility of the Contractor, and continue without interruption during construction, renovation, or installation, including any time during which the covered property is being transported to the construction installation site, or awaiting installation, whether on or off site.
(b) Such Builders’ Risk Insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made or until no person or entity other than the County’s has insurable interest in the property to be covered, whichever is later.

(c) The Builders’ Risk insurance shall include interests of the County and if applicable, affiliated or associate entities, the General Contractor, subcontractors and sub-tier contractors in the Project.

(d) The Builders’ Risk Coverage shall be written on a Special Covered Cause of Loss form and shall include theft, vandalism, malicious mischief, collapse, false-work, temporary buildings, transit, debris removal including demolition, increased cost of construction, architect’s fees and expenses, flood (including water damage), earthquake, and if applicable, all below and above ground structures, piping, foundations including underground water and sewer mains, piling including the ground on which the structure rests and excavation, backfilling, filling, and grading.

(e) The Builders’ Risk shall include a Beneficial Occupancy Clause. The policy shall specifically permit occupancy of the building during construction. County Contractor shall take reasonable steps to obtain consent of the insurance company and delete any provisions with regard to restrictions within any Occupancy Clauses within the Builder’s Risk Policy. The Builder’s Risk Policy shall remain in force until acceptance of the project by the County.

(f) Equipment Breakdown Coverage (a.k.a. Boiler & Machinery) shall be included as required by the Contract Documents or by law, which shall specifically cover insured equipment during installation and testing (including cold and hot testing).

(g) The deductible shall not exceed $25,000 and shall be the responsibility of the Contractor except for losses that involve all Acts of God such as flood, earthquake, windstorm, tsunami, volcano, etc.

The terms of this Agreement are contained in the terms recited in this Request for Bid and in the Response to the Bid each of which forms an integral part of this Agreement. Those documents are specifically incorporated herein by this reference.

**Insurance Requirements Unique to Working in Union Pacific Railroad Property (Required)**

Before commencing any work, the Contractor must provide Union Pacific Railroad with (i) the insurance binders, policies, certificates and endorsements set forth in Exhibit C of the draft Contractor’s Right of Entry Agreement (CROE), and (ii) the insurance endorsements obtained by each subcontractor as required under Section 12 of Exhibit B of the draft CROE. The draft CROE is provided in the Project Special Provisions under Railroad Coordination.
BID PROPOSAL

To: Weld County Purchasing Department  
Attention: Controller/Purchasing Director  
P.O. Box 758, 1150 “O” Street  
Greeley, Colorado 80632

Bid Proposal for: WCR 39 Extension Project

PROPOSAL
Pursuant to and in full compliance with all Contract Documents the undersigned Bidder hereby proposes to furnish all labor and materials and to perform all Work required for the complete and prompt execution of everything described or shown in or reasonably implied from the Bidding Documents, including the Drawings and Specifications, for the Work above indicated for the monies indicated below which includes all State, County and local taxes normally payable with respect to such Work. The amounts stated include all allowances for profit and overhead, taxes, fees and permits, transportation, services, tools and equipment, labor and materials and other incidental costs.

The Bidder and all Sub-Bidders shall include in their bid all Sales and Use Tax if applicable. State of Colorado and Weld County tax shall not be included. Upon application, the State of Colorado Department of Revenue shall issue to a Bidder or Sub-Bidder a Certificate or Certificates of Exemption indicating that the purchase of construction or building materials is for a purpose stated in Section 39-26-114, CRS, and is free from Colorado State Sales Tax.

EXAMINATION OF DOCUMENTS AND SITE
The Bidder has carefully examined the Bidding Documents, including the Drawings and Specifications, and has examined the site of the Work, so as to fully appraise himself of the conditions at the site and to gain a clear understanding of the Work to be executed and is thoroughly familiar with all local, state and federal laws, ordinances, rules, regulations and other factors affecting performance of the Work.

PROPOSAL GUARANTEE
This Bid Proposal is accompanied by the required Bid Bond of five percent (5%) based upon the Total Cost of all items required to be Bid. Weld County, Colorado is authorized to hold said Bid Bond for a period of not more than sixty (60) days after the opening of the Bids for the Work indicated, unless the undersigned Bidder is awarded the Contract within said period, in which event the Owner may retain said Bid Bond until the undersigned Bidder has executed the required Agreement and furnished the required Performance Bond, Labor & Materials Payment Bond, and Certificates of Insurance.

TIME OF COMPLETION
The Bidder agrees to make his best effort to complete the entire Project as soon as possible and within the time specified in the Project Special Conditions after the issuance of the Notice to Proceed subject to the CDOT Standard Specifications for Road and Bridge Construction, Section 108.

EXECUTION OF DOCUMENTS
The Bidder understands that if this Bid Proposal is accepted, he must execute the required Agreement and furnish the required Performance Bond, Labor & Materials Payment Bond and Insurance Certificates within ten (10) calendar days from the date of Notice of Award.

METHOD OF AWARD
The Owner reserves the right to reject any Bid from any Bidder to complete the Work as specified regardless of the amount of the Bid.
It is understood by the Bidder, how Bids shall be awarded and that should the cost of the Bid exceed budgeted funds, the Owner reserves the right to reject any or all Bids or portions of Work Bid or the use of any of the methods stated in the Instructions to Bidders to obtain the most advantageous Bid price.

All bids will be reviewed by the Owner and Engineer. For any discrepancy between words and figures; the words will control. All mathematics will be checked, and the correct total used for determining the low bidder.
<table>
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<tr>
<th>ITEM NO.</th>
<th>BID SCHEDULE ITEM DESCRIPTION</th>
<th>UNIT</th>
<th>BID QUANTITY</th>
<th>UNIT PRICE (DOLLARS)</th>
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<td>BID QUANTITY</td>
<td>UNIT PRICE (DOLLARS)</td>
<td>TOTAL PRICE (DOLLARS)</td>
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<td>626</td>
<td>Mobilization</td>
<td>LS</td>
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<td>627</td>
<td>Pavement Marking (White)</td>
<td>GAL</td>
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<td>Survey Monumentation (Type 4)</td>
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<td>75</td>
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<td>Traffic Control Management</td>
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<td>630</td>
<td>Channelizer Drums</td>
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<td>700</td>
<td>Wetland Restoration</td>
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<td>FA</td>
<td>1</td>
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<td>700</td>
<td>Minor Contract Revisions</td>
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<td>FA</td>
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<td>700</td>
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<td>700</td>
<td>Paving Spring 2020</td>
<td>FA</td>
<td>1</td>
<td>$100,000</td>
<td>$100,000</td>
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</table>

NOTE: INCLUDE ALL FORCE ACCOUNT ITEMS IN TOTAL BID AMOUNT.

Total Bid (Dollars):
Amounts are to be shown in both words and figures. In case of discrepancy, the amount shown in words will govern. The above unit prices shall include all labor, materials, bailing, shoring, removal, overhead, profit, insurance, etc., to cover the finished work of the several kinds called for. Bidder understands that the County reserves the right to reject any or all bids and to waive any informality in the bidding. The Bidder agrees that this bid shall be good and may not be withdrawn for a period of thirty (30) calendar days after the scheduled closing time for receiving bids. Upon receipt of County's written acceptance of this bid, Bidder will execute the formal contract attached within ten (10) calendar days and deliver a Surety Bond or Bonds as required by the AGREEMENT.

The bid security attached is to become the property of the County in the event the contract and bond are not executed within the time above set forth, as liquidated damages for the delay and additional expense to the County caused thereby.

Respectively submitted,

By: ________________________________

(SEAL - If bid is by a corporation)  Title: ________________________________

Address: ________________________________

____________________________________
NOTE: The following are items of work to be completed by Weld County:

*Materials Quality Acceptance Testing*
*Construction Inspection*

**RECEIPT OF ADDENDA**
The undersigned acknowledges receipt of the following Addenda to the Invitation for Bids, Drawings, Specifications and other Contract Documents.

Addendum No. __________________________ Date:___________ By:______________

Addendum No. __________________________ Date:___________ By:______________

Addendum No. __________________________ Date:___________ By:______________

Bidder agrees to perform all Work described in the Contract Documents for the unit prices as shown in the Bid Schedule. Payment will be based on the Lump Sum price or the actual quantities furnished, installed or constructed. The undersigned, by his or her signature, hereby acknowledges and represents that:

1. The bid proposed herein meets all the conditions, specifications and special provisions set forth in the request for bid for Request No. B1900110
2. The quotations set forth herein are exclusive of any federal excise taxes and all other state and local taxes.
3. He or she is authorized to bind the below-named bidder for the amount shown on the accompanying proposal sheets.
4. The signed bid submitted, all the documents of the Request for Proposal contained herein (including, but not limited to, product specifications and scope of services), and the formal acceptance of the bid by Weld County, together constitutes a contract, with the contract date being the date of formal acceptance of the bid by Weld County.
5. Weld County reserves the right to reject any and all bids, to waive any informality in the bids, and to accept the bid that, in the opinion of the Board of County Commissioners, is to the best interests of Weld County. The bid(s) may be awarded to more than one vendor.

FIRM______________________________ BY __________________________

(Please print)

BUSINESS ADDRESS________________________ DATE __________

CITY, STATE, ZIP CODE ________________________________

TELEPHONE NO ___________ FAX ___________ TAX ID # __________

SIGNATURE ________________________________

E-MAIL ________________________________

WELD COUNTY IS EXEMPT FROM COLORADO SALES TAXES. THE CERTIFICATE OF EXEMPTION NUMBER IS #98-03551-0000. YOU DO NOT NEED TO SEND BACK PAGES 1 – 17.
BID BOND

PROJECT: WCR 39 EXTENSION PROJECT

KNOW ALL MEN BY THESE PRESENTS, that ________________________________ as Principal, and ________________________________ as Surety, are hereby held and firmly bound unto Weld County, Colorado (hereinafter called the "Owner") in the penal sum of __________________________ Dollars ($__________), lawful money of the United States of America, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly to these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the Principal has submitted the accompanying Bid dated __________, 2019 for the WCR 39 EXTENSION PROJECT as set out in the accompanying Bid.

WHEREAS, the Owner has required as a condition for receiving said Bid that the principal deposit with the Owner either a certified check equivalent to not less than five percent (5%) of the amount of said Bid or in lieu thereof furnish a Bid Bond for said amount conditioned such that in the event of failure to execute the proposed Contract for such construction if the Contract is to be awarded to him, that said sum be paid immediately to the Owner as liquidated damages and not as a penalty for the principal's failure to perform.

NOW THEREFORE, if the principal shall, within the period specified therefore:

A. On the attached prescribed forms presented to him for signature, enter into a written Contract with the Owner in accordance with his Bid as accepted, and give a Performance Bond with good and sufficient sureties, as may be required upon the forms prescribed by the Owner for the faithful performance and the proper fulfillment of said Contract, or

B. Withdraw said Bid within the time specified, or

C. Pay to the Owner the sum determined upon herein as liquidated damages, and not as a penalty, then this obligation shall be void and of no effect, otherwise to remain in full force and effect.

IN WITNESS WHEREOF, the above parties have executed this instrument under their several seals this day __________ of ____________, 2019 the name and corporate seal of each corporate party being hereto affixed, and these presents duly signed by its undersigned representative pursuant to authority of its governing board.

Principal ________________________________
Address ________________________________
ATTEST: ________________________________
By: ________________________________

By: ________________________________

Surety ________________________________
Address ________________________________
ATTEST: ________________________________
By: ________________________________
INSTRUCTIONS

The full firm name and residence of each individual party to the bond must be inserted in the first paragraph.

If the principal is a partnership, the full name of all partners must be inserted in the first paragraph which must recite that they are partners composing the partnership (to be named), and all partners must execute the bond as individuals.

The state of incorporation of each corporate party to the bond must be inserted in the first paragraph and the bond must be executed under the corporate seal of said party attested by its secretary or other authorized officer.

Power of Attorney must accompany this bond when signed by other than an officer of either the principal or surety.

A standard printed bond form may be used in lieu of the foregoing form provided that the security stipulations protecting the Owner are not in any way reduced by use of such standard printed bond form.
I hereby attest that I am the person responsible within my firm for the final decision as to the price(s) and amount of this bid or, if not, that I have written authorization, enclosed herewith, from that person to make the statements set out below on his or her behalf and on behalf of my firm.

I further attest that:

1. The price(s) and amount of this bid have been arrived at independently, without consultation, communication or agreement for the purpose or with the effect of restricting competition with any other firm or person who is a bidder or potential prime bidder.

2A. Neither the price(s) nor the amount of this bid have been disclosed to any other firm or person who is a bidder or potential prime bidder on this project, and will not be so disclosed prior to bid opening.

2B. Neither the prices nor the amount of the bid of any other firm or person who is a bidder or potential prime bidder on this project have been disclosed to me or my firm.

3A. No attempt has been made to solicit, cause or induce any firm or person who is a bidder or potential prime bidder to refrain from bidding on this project, or to submit a bid higher than the bid of this firm, or any intentionally high or non-competitive bid or other form of complementary bid.

3B. No agreement has been promised or solicited for any other firm or person who is a bidder or potential prime bidder on this project to submit an intentionally high, noncompetitive or other form of complementary bid on this project.

4. The bid of my firm is made in good faith and not pursuant to any consultation, communication, agreement of discussion with, or inducement or solicitation by or from any firm or person to submit any intentionally high, noncompetitive or other form of complementary bid.

5. My firm has not offered or entered into a subcontract or agreement regarding the purchase or sale of materials or services from any firm or person, or offered, promised or paid cash or anything of value to any firm or person, whether in connection with this or any other project, in consideration for an agreement or promise by any firm or person to refrain from bidding or to submit any intentionally high, noncompetitive or other form of complementary bid or agreeing or promising to do so on this project.

6. My firm has not accepted or been promised any subcontract or agreement regarding the sale of materials or services to any firm or person, and has not been promised or paid cash or anything of value by any firm or person, whether in connection with this or any other project, in consideration for my firm's submitting any intentionally high, noncompetitive or other form of complementary bid, or agreeing or promising to do so, on this project.

7. I have made a diligent inquiry of all members, officers, employees, and agents of my firm with responsibilities relating to the preparation, approval or submission of my firm's bid on this project and have been advised by each of them that he or she has not participated in any communication, consultation, discussion, agreement, collusion, or other conduct inconsistent with any of the statements and representations made in this affidavit.

8. I understand and my firm understands that any misstatement in this affidavit is and shall be treated as a fraudulent concealment from the Colorado Department of Transportation, of the true facts relating to submission of bids for this contract.

I DECLARE UNDER PENALTY OF PERJURY IN THE SECOND DEGREE, AND ANY OTHER APPLICABLE STATE OR FEDERAL LAWS, THAT THE STATEMENTS MADE ON THIS DOCUMENT ARE TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

<table>
<thead>
<tr>
<th>Contractor's firm or company name</th>
<th>By</th>
<th>Date</th>
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<table>
<thead>
<tr>
<th>2nd contractor's firm or company name. ([Joint venture])</th>
<th>By</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

Sworn to before me this day of, 20

Notary Public

My commission expires

NOTE: This document must be signed in ink.
NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

WCR 39 EXTENSION PROJECT

State of ________________________________

County of ______________________________

being first duly sworn, deposes and says that:

(1) He is ________________________________ of ________________________________

_______________________________, the Bidder that has submitted the attached Bid;

(2) He is fully informed respecting the preparation and contents of the attached Bid and of all
pertinent circumstances respecting such Bid;

(3) Such Bid is genuine and is not a collusive or sham Bid;

(4) Neither the said Bidder nor any of its officers, partners, owners, agents, representatives,
employees or parties in interest, including this affined, has in any way colluded, conspired,
connived or agreed, directly or indirectly with another Bidder, firm or person to submit a collusive
or sham Bid in connection with the Contract for which the attached Bid has been submitted or
to refrain from bidding in connection with such Contract, or has in any manner, directly or
indirectly, sought by agreement or collusion or communication or conference with any other
Bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to
fix an overhead, profit or cost element of the Bid price of any other Bidder, or to secure through
any collusion, conspiracy, connivance or unlawful agreement any advantage against the (Local
Public Agency) or any person interested in the proposed Contract; and

(5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any
collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its
agents, representatives, owners, employees, or parties in interest, including is affined.

(Signed) ________________________________

Title ________________________________

Subscribed and sworn to me this

_______________________________ day of ______________________, 2019

By: ________________________________

Notary Public

My Commission expires: ________________________________
NOTICE OF AWARD

PROJECT: WCR 39 EXTENSION PROJECT

To: ____________________________
______________________________

Project Description: WCR 39 EXTENSION PROJECT

The project in general consists of construction of roadway from WCR 50.5 to WCR 52, installation of culverts, roadway stabilization, unclassified excavation, embankment, aggregate base course placement, hot mix asphalt placement, etc.

The Owner has considered the Bid submitted by you for the above described Work in response to its Invitation for Bids and Instructions to Bidders.

You are hereby notified that your Bid has been accepted in the amount of ____________ or as shown in the Bid Schedule. You are required by the Instructions to Bidders to execute two originals of the Agreement and furnish the required Performance Bond, Payment Bond and Certificates of Insurance within ten (10) calendar days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said Bonds within ten (10) calendar days from the date of this Notice, said Owner will be entitled to consider all your rights arising out of the Owner’s acceptance of your bid as abandoned. The Owner will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this Notice of Award to the Owner.

Dated this _____ day of ________, 2019

Weld County, Colorado, Owner

By: _____________________________
    Erich Green, Project Engineer

ACCEPTANCE OF NOTICE

Receipt of the above Notice of Award is hereby acknowledged by _______________________
____________________________ (Contractor)

Dated this _____________ day of ____________________, 2019

By: ____________________________  Title: ____________________________
WELD COUNTY AGREEMENT (SAMPLE) FOR CONSTRUCTION SERVICES
BETWEEN WELD COUNTY &

WCR 39 EXTENSION PROJECT (SAMPLE)

THIS AGREEMENT is made and entered into this ___ day of ____________, 2019, by and between the County of Weld, a body corporate and politic of the State of Colorado, by and through its Board of County Commissioners, whose address is 1150 “O” Street, Greeley, Colorado 80631 hereinafter referred to as “County,” and ____________, whose address is __________________________ hereinafter referred to as “Contractor”.

WHEREAS, WCR 39 is in need of construction between WCR 50.5 and 52 due to the closure of a Union Pacific Railroad Crossing, (hereinafter referred to as the “Project”), and

WHEREAS, in the interests of public health, safety and welfare, it is necessary to undertake the improvements of this roadway, and

WHEREAS, County requires an independent contract construction professional to perform the construction services required by County and set forth in Exhibit A;

WHEREAS, Contractor is willing to perform and has the specific ability to perform the required Construction Services at or below the cost set forth in Exhibit B;

WHEREAS, Contractor is authorized to do business in the State of Colorado and has the time, skill, expertise, and experience necessary to provide the equipment, materials and services as set forth below;

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, the parties hereto agree as follows:

1. Introduction. The terms of this Agreement are contained in the terms recited in this document and in Exhibits A and B, each of which forms an integral part of this Agreement. Exhibits A and B are specifically incorporated herein by this reference. County and Contractor acknowledge and agree that this Agreement, including specifically Exhibits A and B, define the performance obligations of Contractor and Contractor’s willingness and ability to meet those requirements.

Exhibit A consists of County’s Request for Bid (RFB) as set forth in “Bid Package No. B1900110”. The RFB contains all the specific requirements of the County.

Exhibit B consists of Contractor’s Response to County’s Request for Bid. The Response confirms Contractor’s obligations under this Agreement.

2. Service or Work. Contractor agrees to procure the materials, equipment and/or products necessary for the Project and agrees to diligently provide all services, labor, personnel and materials necessary to perform and complete the Project described in Exhibit A which is attached hereto and incorporated herein by reference. Contractor shall coordinate with, the Weld County Director of Public Works or other designated supervisory personnel, (the “Manager”), to perform the services described on attached Exhibits A and B. Contractor shall faithfully perform the work in accordance with the standards of professional care, skill, training, diligence and judgment provided by highly competent Contractors performing construction services of a similar nature to those described in this Agreement. Contractor shall further be responsible for the timely completion and acknowledges that a failure to comply with the standards and requirements of Exhibits A and B within the time limits prescribed by County may result in County’s decision to withhold payment or to terminate this Agreement. In its sole discretion, the County,
by the Director of the Department of Public Works or his or her designee, may extend the time for the Contractor to complete the service or work, by not more than thirty (30) days. Such extension shall not increase the compensation to be paid to the Contractor nor change any other term herein.

3. **Term.** The term of this Agreement begins upon the date of the execution of this Agreement by County, and shall continue through and until Contractor’s completion of the responsibilities described in Exhibits A and B. Both parties to this Agreement understand and agree that the laws of the State of Colorado prohibit County from entering into Agreements which bind County for periods longer than one year. Therefore, within the thirty (30) days preceding the anniversary date of this Agreement, County shall notify Contractor if it wishes to renew this Contract.

4. **Termination.** County has the right to terminate this Agreement, with or without cause on thirty (30) days written notice. Furthermore, this Agreement may be terminated at any time without notice upon a material breach of the terms of the Agreement. However, nothing herein shall be construed as giving Contractor the right to provide materials (or services) under this Agreement beyond the time when such materials (or services) become unsatisfactory to the County.

If this Agreement is terminated by County, Contractor shall be compensated for, and such compensation shall be limited to, (1) the sum of the amounts contained in invoices which it has submitted and which have been approved by the County; (2) the reasonable value to County of the materials which Contractor provided prior to the date of the termination notice, but which had not yet been approved for payment; and (3) the cost of any work which the County approves in writing which it determines is needed to accomplish an orderly termination of the work. County shall be entitled to the use of all material generated pursuant to this Agreement upon termination.

Upon termination, County shall take possession of all materials, equipment, tools and facilities owned by County which Contractor is using, by whatever method it deems expedient; and, Contractor shall deliver to County all drawings, drafts or other documents it has completed or partially completed under this Agreement, together with all other items, materials and documents which have been paid for by County, and these items, materials and documents shall be the property of County. Copies of work product incomplete at the time of termination shall be marked “DRAFT-INCOMPLETE.”

Upon termination of this Agreement by County, Contractor shall have no claim of any kind whatsoever against the County by reason of such termination or by reason of any act incidental thereto, except for compensation for work satisfactorily performed and/or materials described herein properly delivered.

5. **Extension or Modification.** Any amendments or modifications to this agreement shall be in writing signed by both parties. No additional services or work performed by Contractor shall be the basis for additional compensation unless and until Contractor has obtained written authorization and acknowledgement by County for such additional services. Accordingly, no claim that the County has been unjustly enriched by any additional services, whether or not there is in fact any such unjust enrichment, shall be the basis of any increase in the compensation payable hereunder.

6. **Compensation/Contract Amount.** Upon Contractor’s successful completion of the construction of the Project, and County's acceptance of the same, County agrees to pay an amount no greater than $__________, which is the bid set forth in Exhibit B. Contractor acknowledges no payment in excess of that amount will be made by County unless a “change order” authorizing such additional payment has been specifically approved by the Director of Weld County Public Works, or by formal resolution of the Weld County Board of County Commissioners, as required pursuant to the Weld County Code. Any other provision of this Agreement notwithstanding, in no event shall County be liable for payment for services rendered and expenses incurred by Contractor under the terms of this Agreement for any amount in excess of the sum of the bid amount set forth in Exhibit B. Contractor acknowledges
that any work it performs beyond that specifically authorized by County is performed at Contractor’s risk and without authorization under this Agreement. County shall not be liable for the payment of taxes, late charges or penalties of any nature other than the compensation stated herein.

County will not withhold any taxes from monies paid to the Contractor hereunder and Contractor agrees to be solely responsible for the accurate reporting and payment of any taxes related to payments made pursuant to the terms of this Agreement.

Notwithstanding anything to the contrary contained in this Agreement, County shall have no obligations under this Agreement after, nor shall any payments be made to Contractor in respect of any period after December 31 of any year, without an appropriation therefore by County in accordance with a budget adopted by the Board of County Commissioners in compliance with Article 25, title 30 of the Colorado Revised Statutes, the Local Government Budget Law (C.R.S. 29-1-101 et. seq.) and the TABOR Amendment (Colorado Constitution, Article X, Sec. 20)

7. **Independent Contractor.** Contractor agrees that it is an independent Contractor and that Contractor’s officers, agents or employees will not become employees of County, nor entitled to any employee benefits from County as a result of the execution of this Agreement. Contractor shall perform its duties hereunder as an independent Contractor. Contractor shall be solely responsible for its acts and those of its agents and employees for all acts performed pursuant to this Agreement. Contractor, its employees and agents are not entitled to unemployment insurance or workers’ compensation benefits through County and County shall not pay for or otherwise provide such coverage for Contractor or any of its agents or employees. Contractor shall pay when due all applicable employment taxes and income taxes and local head taxes (if applicable) incurred pursuant to this Agreement. Contractor shall not have authorization, express or implied, to bind County to any agreement, liability or understanding, except as expressly set forth in this Agreement.

8. **Subcontractors.** Contractor acknowledges that County has entered into this Agreement in reliance upon the particular reputation and expertise of Contractor. Contractor shall not enter into any subcontractor agreements for the completion of this Project without County’s prior written consent, which may be withheld in County’s sole discretion. County shall have the right in its reasonable discretion to approve all personnel assigned to the subject Project during the performance of this Agreement and no personnel to whom County has an objection, in its reasonable discretion, shall be assigned to the Project. Contractor shall require each subcontractor, as approved by County and to the extent of the Services to be performed by the subcontractor, to be bound to Contractor by the terms of this Agreement, and to assume toward Contractor all the obligations and responsibilities which Contractor, by this Agreement, assumes toward County. County shall have the right (but not the obligation) to enforce the provisions of this Agreement against any subcontractor hired by Contractor and Contractor shall cooperate in such process. The Contractor shall be responsible for the acts and omissions of its agents, employees and subcontractors.

9. **Ownership.** All work and information obtained by Contractor under this Agreement or individual work order shall become or remain (as applicable), the property of County. In addition, all reports, data, plans, drawings, records and computer files generated by Contractor in relation to this Agreement and all reports, test results and all other tangible materials obtained and/or produced in connection with the performance of this Agreement, whether or not such materials are in completed form, shall at all times be considered the property of the County. Contractor shall not make use of such material for purposes other than in connection with this Agreement without prior written approval of County.

10. **Confidentiality.** Confidential financial information of Contractor should be transmitted separately from the main bid submittal, clearly denoting in red on the financial information at the top the word, “CONFIDENTIAL.” However, Contractor is advised that as a public entity, Weld County must comply with
the provisions of C.R.S. 24-72-201, et seq., with regard to public records, and cannot guarantee the confidentiality of all documents. Contractor agrees to keep confidential all of County’s confidential information. Contractor agrees not to sell, assign, distribute, or disclose any such confidential information to any other person or entity without seeking written permission from the County. Contractor agrees to advise its employees, agents, and consultants, of the confidential and proprietary nature of this confidential information and of the restrictions imposed by this agreement.

11. Warranty. Contractor warrants that construction services performed under this Agreement will be performed in a manner consistent with the professional construction standards governing such services and the provisions of this Agreement. Contractor further represents and warrants that all construction services shall be performed by qualified personnel in a professional and workmanlike manner, consistent with industry standards, and that all construction services will conform to applicable specifications.

In addition to the foregoing warranties, Contractor is aware that all work performed on this Project pursuant to this Agreement is subject to a one-year warranty period during which Contractor must correct any failures or deficiencies caused by contractor’s workmanship or performance. This warranty shall commence on the date of County’s final inspection and acceptance of the Project.

12. Acceptance of Services Not a Waiver. Upon completion of the work, Contractor shall submit to County originals of all test results, reports, etc., generated during completion of this work. Acceptance by County of reports, incidental material(s), and structures furnished under this Agreement shall not in any way relieve Contractor of responsibility for the quality and accuracy of the construction of the project. In no event shall any action by County hereunder constitute or be construed to be a waiver by County of any breach of this Agreement or default which may then exist on the part of Contractor, and County’s action or inaction when any such breach or default shall exist shall not impair or prejudice any right or remedy available to County with respect to such breach or default. No assent expressed or implied, to any breach of any one or more covenants, provisions or conditions of the Agreement shall be deemed or taken to be a waiver of any other breach. Acceptance by the County of, or payment for, the construction completed under this Agreement shall not be construed as a waiver of any of the County’s rights under this Agreement or under the law generally.

13. Insurance and Indemnification. General Requirements: Contractors/Contract Professionals must secure, at or before the time of execution of any agreement or commencement of any work, the following insurance covering all operations, goods or services provided pursuant to this request. Contractors/Contract Professionals shall keep the required insurance coverage in force at all times during the term of the Agreement, or any extension thereof, and during any warranty period. The required insurance shall be underwritten by an insurer licensed to do business in Colorado and rated by A.M. Best Company as “A” VIII or better. Each policy shall contain a valid provision or endorsement stating “Should any of the above-described policies be canceled or should any coverage be reduced before the expiration date thereof, the issuing company shall send written notice to the Weld County Controller/Purchasing Director by certified mail, return receipt requested. Such written notice shall be sent thirty (30) days prior to such cancellation or reduction unless due to non-payment of premiums for which notice shall be sent ten (10) days prior. If any policy is in excess of a deductible or self-insured retention, County must be notified by the Contractor/Contract Professional. Contractor/Contract Professional shall be responsible for the payment of any deductible or self-insured retention. County reserves the right to require Contractor/Contract Professional to provide a bond, at no cost to County, in the amount of the deductible or self-insured retention to guarantee payment of claims.

The insurance coverages specified in this Agreement are the minimum requirements, and these requirements do not decrease or limit the liability of Contractor/Contract Professional. The County in no way warrants that the minimum limits contained herein are sufficient to protect the Contractor from liabilities that might arise out of the performance of the work under this Contract by the Contractor, its
agents, representatives, employees, or subcontractors. The Contractor is not relieved of any liability or other obligations assumed or pursuant to the Contract by reason of its failure to obtain or maintain insurance in sufficient amounts, duration, or types. Any modification to these requirements must be made in writing by Weld County.

The Contractor stipulates that it has met the insurance requirements identified herein. The Contractor shall be responsible for the professional quality, technical accuracy, and quantity of all construction services provided, the timely delivery of said services, and the coordination of all services rendered by the Contractor and shall, without additional compensation, promptly remedy and correct any errors, omissions, or other deficiencies.

**Indemnity:** The Contractor shall defend, indemnify and hold harmless County, its officers, agents, and employees, from and against injury, loss damage, liability, suits, actions, or claims of any type or character arising out of the work done in fulfillment of the terms of this Contract or on account of any act, claim or amount arising or recovered under workers’ compensation law or arising out of the failure of the Contractor to conform to any statutes, ordinances, regulation, law or court decree. The Contractor shall be fully responsible and liable for any and all injuries or damage received or sustained by any person, persons, or property on account of its performance under this Agreement or its failure to comply with the provisions of the Agreement, or on account of or in consequence of neglect of the Contractor in its construction methods or procedures; or in its provisions of the materials required herein, or from any claims or amounts arising or recovered under the Worker's Compensation Act, or other law, ordinance, order, or decree. This paragraph shall survive expiration or termination hereof. It is agreed that the Contractor will be responsible for primary loss investigation, defense and judgment costs where this contract of indemnity applies. In consideration of the award of this contract, the Contractor agrees to waive all rights of subrogation against the County its associated and/or affiliated entities, successors, or assigns, its elected officials, trustees, employees, agents, and volunteers for losses arising from the work performed by the Contractor for the County. A failure to comply with this provision shall result in County’s right to immediately terminate this Agreement.

**Types of Insurance:** The Contractor/Contract Professional shall obtain, and maintain at all times during the term of any Agreement, insurance in the following kinds and amounts:

**Workers’ Compensation Insurance** as required by state statute, and Employer’s Liability Insurance covering all the Contractor’s Contract Professional’s employees acting within the course and scope of their employment. Policy shall contain a waiver of subrogation against the County. This requirement shall not apply when a Contractor or subcontractor is exempt under Colorado Workers’ Compensation Act., AND when such Contractor or subcontractor executes the appropriate sole proprietor waiver form.

**Minimum Limits:**
- Coverage A (Workers’ Compensation) Statutory
- Coverage B (Employers Liability) $500,000

**Commercial General Liability Insurance** written on ISO occurrence form CG 00 01 equivalent, covering premises operations, explosions, collapse and underground hazard, personal advertising injury, fire damage, independent Contractors, products and completed operations, blanket contractual liability, personal injury, and liability assumed under an insured contract. The policy shall be endorsed to include 1) the Additional Insured Endorsements CG 2010 (or equivalent), 2) CG 2037 Additional Insured for products/completed operations, and 3) the Designated Construction Projects General Aggregate Endorsement CG 2503. The policy shall be endorsed to include the following additional insured language on the additional insured endorsements specified above: “Weld County, its subsidiary, parent, associated and/or affiliated entities, successors, or assigns, its elected officials, trustees, employees, agents, and volunteers named as an additional insured with respect to liability and defense of suits arising out of the
activities performed by, or on behalf of the Contractor, including completed operations” and the minimum limits must be as follows:

$1,000,000 each occurrence;
$2,000,000 general aggregate;
$2,000,000 products and completed operations aggregate;
$1,000,000 Personal Advertising injury
$50,000 any one fire; and
$500,000 errors and omissions.
$5,000 Medical payments one person

**Automobile Liability:** Contractor/Contract Professional shall maintain limits of $1,000,000 for bodily injury per person, $1,000,000 for bodily injury for each accident, and $1,000,000 for property damage applicable to all vehicles operating both on County property and elsewhere, for vehicles owned, hired, and non-owned vehicles used in the performance of this Contract.

For all general liability, excess/umbrella liability, liquor liability, pollution liability and professional liability policies, if the policy is a claims-made policy, the retroactive date must be on or before the contract date or the first date when any goods or services were provided to County, whichever is earlier.

Contractors/Contract Professionals shall secure and deliver to the County at or before the time of execution of this Agreement, and shall keep in force at all times during the term of the Agreement as the same may be extended as herein provided, a commercial general liability insurance policy, including public liability and property damage, in form and company acceptable to and approved by said Administrator, covering all operations hereunder set forth in the related Bid or Request for Proposal.

**Proof of Insurance:** County reserves the right to require the Contractor/Contract Professional to provide a certificate of insurance, a policy, or other proof of insurance as required by the County’s Risk Administrator in his sole discretion.

**Additional Insureds:** For general liability, excess/umbrella liability, pollution legal liability, liquor liability, and inland marine, Contractor/Contract Professional’s insurer shall name County, State of Colorado, and CDOT as an additional insured.

**Waiver of Subrogation:** For all coverages, Contractor/Contract Professional’s insurer shall waive subrogation rights against County.

**Subcontractors:** All subcontractors, independent Contractors, sub-vendors, suppliers or other entities providing goods or services required by this Agreement shall be subject to all the requirements herein and shall procure and maintain the same coverages required of Contractor/Contract Professional. Contractor/Contract Professional shall include all such subcontractors, independent Contractors, sub-vendors suppliers or other entities as insureds under its policies or shall ensure that all subcontractors maintain the required coverages. Contractor/Contract Professional agrees to provide proof of insurance for all such subcontractors, independent Contractors, sub-vendors suppliers or other entities upon request by the County.

**Contractors Pollution Liability (Not Required for This Project)**
Weld County requires this coverage whenever work at issue under this Contract involves potential pollution risk to the environment or losses caused by pollution conditions (including asbestos) that may arise from the operations of the Contractor described in the Contractor’s scope of services. Policy shall cover the Contractor’s completed operations. Coverage shall apply to sudden and gradual pollution conditions resulting from the escape of release of smoke, vapors, fumes, acids, alkalis, toxic chemicals,
liquids, or gases, natural gas, waste materials, or other irritants, contaminants, or pollutants (including asbestos). If the coverage is written on a claims-made basis, the Contractor warrants that any retroactive date applicable to coverage under the policy precedes the effective date of this Contract; and that continuous coverage will be maintained or an extended discovery period will be exercised for a period of three (3) years beginning from the time that work under this contract is completed. The policy shall be endorsed to include the following as Additional Insureds: “Weld County its subsidiary, parent, associated and/or affiliated entities, successors, or assigns, its elected officials, trustees, employees, agents, and volunteers named as an additional insured with respect to liability and defense of suits arising out of the activities performed by, or on behalf of the Contractor, including completed operations”.

**Minimum Limits:**

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**Builders' Risk Insurance or Installation Floater – Completed Value Basis (Required)**

Unless otherwise provided, the Contractor shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, Builders' Risk Insurance in the amount of the initial Contract Sum, plus value of subsequent modifications, change orders, and cost of material supplied or installed by others, comprising total value of the entire Project at the site on a replacement cost basis without optional deductibles.

(h) Policy must provide coverage from the time any covered property becomes the responsibility of the Contractor, and continue without interruption during construction, renovation, or installation, including any time during which the covered property is being transported to the construction installation site, or awaiting installation, whether on or off site.

(i) Such Builders' Risk Insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made or until no person or entity other than the County’s has insurable interest in the property to be covered, whichever is later.

(j) The Builders' Risk insurance shall include interests of the County and if applicable, affiliated or associate entities, the General Contractor, subcontractors and sub-tier contractors in the Project.

(k) The Builders' Risk Coverage shall be written on a **Special** Covered Cause of Loss form and shall include theft, vandalism, malicious mischief, collapse, false-work, temporary buildings, transit, debris removal including demolition, increased cost of construction, architect’s fees and expenses, flood (including water damage), earthquake, and if applicable, all below and above ground structures, piping, foundations including underground water and sewer mains, piling including the ground on which the structure rests and excavation, backfilling, filling, and grading.

(l) The Builders’ Risk shall include a Beneficial Occupancy Clause. The policy shall specifically permit occupancy of the building during construction. County Contractor shall take reasonable steps to obtain consent of the insurance company and delete any provisions with regard to restrictions within any Occupancy Clauses within the Builder’s Risk Policy. The Builder's Risk Policy shall remain in force until acceptance of the project by the County.

(m) Equipment Breakdown Coverage (a.k.a. Boiler & Machinery) shall be included as required by the Contract Documents or by law, which shall specifically cover insured equipment during installation and testing (including cold and hot testing).
(n) The deductible shall not exceed $25,000 and shall be the responsibility of the Contractor except for losses that involve all Acts of God such as flood, earthquake, windstorm, tsunami, volcano, etc.

14. **Non-Assignment.** Contractor may not assign or transfer this Agreement or any interest therein or claim thereunder, without the prior written approval of County. Any attempts by Contractor to assign or transfer its rights hereunder without such prior approval by County shall, at the option of County, automatically terminate this Agreement and all rights of Contractor hereunder. Such consent may be granted or denied at the sole and absolute discretion of County.

15. **Examination of Records.** To the extent required by law, the Contractor agrees that any duly authorized representative of County, including the County Auditor, shall have access to and the right to examine and audit any books, documents, papers and records of Contractor, involving all matters and/or transactions related to this Agreement. The Contractor agrees to maintain these documents for three years from the date of the last payment received.

16. **Interruptions.** Neither party to this Agreement shall be liable to the other for delays in delivery or failure to deliver or otherwise to perform any obligation under this Agreement, where such failure is due to any cause beyond its reasonable control, including but not limited to Acts of God, fires, strikes, war, flood, earthquakes or Governmental actions.

17. **Notices.** County may designate, prior to commencement of work, its project representative (“County Representative”) who shall make, within the scope of his or her authority, and all necessary and proper decisions with reference to the project. All requests for contract interpretations, change orders, and other clarification or instruction shall be directed to County Representative. The County Representative for purposes of this Agreement is hereby identified as, Erich Green, Project Engineer. All notices or other communications (including annual maintenance made by one party to the other concerning the terms and conditions of this contract shall be deemed delivered under the following circumstances:

- a) personal service by a reputable courier service requiring signature for receipt; or
- b) five (5) days following delivery to the United States Postal Service, postage prepaid addressed to a party at the address set forth in this contract; or
- c) electronic transmission via email at the address set forth below, where a receipt or acknowledgment is required by the sending party; or
- d) transmission via facsimile, at the number set forth below, where a receipt or acknowledgment is required by the sending party.

Either party may change its notice address(es) by written notice to the other.

**Notification Information:**

**Contractor:**
- Attn.: President,
- Address:
- Address:
- E-mail:
- Facsimile:

**County:**
18. **Compliance with Law.** Contractor shall strictly comply with all applicable federal and State laws, rules and regulations in effect or hereafter established, including without limitation, laws applicable to discrimination and unfair employment practices.

19. **Non-Exclusive Agreement.** This Agreement is nonexclusive, and County may engage or use other Contractors or persons to perform services of the same or similar nature.

20. **Entire Agreement/Modifications.** This Agreement including the Exhibits attached hereto and incorporated herein, contains the entire agreement between the parties with respect to the subject matter contained in this Agreement. This instrument supersedes all prior negotiations, representations, and understandings or agreements with respect to the subject matter contained in this Agreement. This Agreement may be changed or supplemented only by a written instrument signed by both parties.

21. **Fund Availability.** Financial obligations of the County payable after the current fiscal year are contingent upon funds for that purpose being appropriated, budgeted and otherwise made available. Execution of this Agreement by County does not create an obligation on the part of County to expend funds not otherwise appropriated in each succeeding year.

22. **Employee Financial Interest/Conflict of Interest – C.R.S. §§24-18-201 et seq. and §24-50-507.** The signatories to this Agreement agree that to their knowledge, no employee of Weld County has any personal or beneficial interest whatsoever in the service or property which is the subject matter of this Agreement. County has no interest and shall not acquire any interest direct or indirect, that would in any manner or degree interfere with the performance of Contractor’s services and Contractor shall not employ any person having such known interests. During the term of this Agreement, Contractor shall not engage in any business or personal activities or practices or maintain any relationships which actually conflicts with or in any way appear to conflict with the full performance of its obligations under this Agreement. Failure by Contractor to ensure compliance with this provision may result, in County’s sole discretion, in immediate termination of this Agreement. No employee of Contractor nor any member of Contractor’s family shall serve on a County Board, committee or hold any such position which either by rule, practice or action nominates, recommends, supervises Contractor’s operations, or authorizes funding to Contractor.

23. **Severability.** If any term or condition of this Agreement shall be held to be invalid, illegal, or unenforceable by a court of competent jurisdiction, this Agreement shall be construed and enforced without such provision, to the extent that this Agreement is then capable of execution within the original intent of the parties.

24. **Governmental Immunity.** No term or condition of this contract shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protections or other provisions, of the Colorado Governmental Immunity Act §§24-10-101 et seq., as applicable now or hereafter amended.

25. **No Third-Party Beneficiary.** It is expressly understood and agreed that the enforcement of the terms and conditions of this Agreement, and all rights of action relating to such enforcement, shall be strictly reserved to the undersigned parties and nothing in this Agreement shall give or allow any claim or right of action whatsoever by any other person not included in this Agreement. It is the express intention of
the undersigned parties that any entity other than the undersigned parties receiving services or benefits under this Agreement shall be an incidental beneficiary only.

26. **Board of County Commissioners of Weld County Approval.** This Agreement shall not be valid until it has been approved by the Board of County Commissioners of Weld County, Colorado or its designee.

27. **Choice of Law/Jurisdiction.** Colorado law, and rules and regulations established pursuant thereto, shall be applied in the interpretation, execution, and enforcement of this Agreement. Any provision included or incorporated herein by reference which conflicts with said laws, rules and/or regulations shall be null and void. In the event of a legal dispute between the parties, Contractor agrees that the Weld County District Court shall have exclusive jurisdiction to resolve said dispute.

28. **Public Contracts for Services C.R.S. §8-17.5-101.** Contractor certifies, warrants, and agrees that it does not knowingly employ or contract with an illegal alien who will perform work under this contract. Contractor will confirm the employment eligibility of all employees who are newly hired for employment in the United States to perform work under this Agreement or enter into a contract with a subcontractor that fails to certify with Contractor that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Agreement. Contractor shall not use E-Verify Program or State of Colorado program procedures to undertake pre-employment screening or job applicants while this Agreement is being performed. If Contractor obtains actual knowledge that a subcontractor performing work under the public contract for services knowingly employs or contracts with an illegal alien Contractor shall notify the subcontractor and County within three (3) days that Contractor has actual knowledge that a subcontractor is employing or contracting with an illegal alien and shall terminate the subcontract if a subcontractor does not stop employing or contracting with the illegal alien within three (3) days of receiving notice. Contractor shall not terminate the contract if within three days the subcontractor provides information to establish that the subcontractor has not knowingly employed or contracted with an illegal alien. Contractor shall comply with reasonable requests made in the course of an investigation, undertaken pursuant to C.R.S. §8-17.5-102(5), by the Colorado Department of Labor and Employment. If Contractor participates in the State of Colorado program, Contractor shall, within twenty days after hiring a new employee to perform work under the contract, affirm that Contractor has examined the legal work status of such employee, retained file copies of the documents, and not altered or falsified the identification documents for such employees. Contractor shall deliver to County, a written notarized affirmation that it has examined the legal work status of such employee and shall comply with all the other requirements of the State of Colorado program. If Contractor fails to comply with any requirement of this provision or of C.R.S. §8-17.5-101 et seq., County, may terminate this Agreement for breach, and if so terminated, Contractor shall be liable for actual and consequential damages.

Except where exempted by federal law and except as provided in C.R.S. §24-76.5-103(3), if Contractor receives federal or state funds under the contract, Contractor must confirm that any individual natural person eighteen (18) years of age or older is lawfully present in the United States pursuant to C.R.S. §24-76.5-103(4), if such individual applies for public benefits provided under the contract. If Contractor operates as a sole proprietor, it hereby swears or affirms under penalty of perjury that it: (a) is a citizen of the United States or is otherwise lawfully present in the United States pursuant to federal law, (b) shall produce one of the forms of identification required by C.R.S. §24-76.5-101, et seq., and (c) shall produce one of the forms of identification required by C.R.S. §24-76.5-103 prior to the effective date of the contract.

29. **Official Engineering Publications.** Contractor acknowledges and agrees that the Colorado Department of Transportation "Standard Specifications for Road and Bridge Construction" and the
Colorado Department of Transportation Standard Plans “M & S Standards” establish the requirements for all work performed by Contractor under this Agreement, and Contractor agrees to meet or exceed all standards set by these publications. Contractor further acknowledges and agrees that a failure to meet the standards set by these publications may result in withholding by County of some or all the Contract Amount.

30. **Compliance with Davis-Bacon Wage Rates.** Contractor understands and agrees that, if required by the provisions of Exhibit A, the work shall be in compliance with the Davis-Bacon Wage Rates. (If compliance with this statute is required by County under this Agreement, a copy of the information is contained in Exhibit A, County’s Request for Bid, and is a part this Agreement.)

31. **Attorney’s Fees/Legal Costs.** In the event of a dispute between County and Contractor, concerning this Agreement, the parties agree that each party shall be responsible for the payment of attorney fees and/or legal costs incurred by or on its own behalf.

32. **Binding Arbitration Prohibited:** Weld County does not agree to binding arbitration by any extra-judicial body or person. Any provision to the contrary in this Agreement or incorporated herein by reference shall be null and void.

33. **Public Contracts for Services C.R.S. §8-17-101.** For public contracts in excess of $500,000 annually, or for public contracts for road or bridge construction in excess of $50,000, Contractor certifies, warrants, and agrees that Colorado labor shall be employed to perform at least eighty percent of the work under this Contract. “Colorado labor” means any person who is a resident of the state of Colorado at the time of the public works project, who can provide a valid Colorado driver's license, a valid Colorado state-issued photo identification, or documentation that he or she has resided in Colorado for the last thirty days. The County, in its sole discretion, may waive the eighty percent requirement if there is reasonable evidence to demonstrate insufficient Colorado labor is available to perform the work, and this requirement would create an undue burden that would substantially prevent the work from proceeding to completion. This section shall not apply to any project which is funded in whole or in part with federal funds, or where otherwise contrary to federal law.

**Acknowledgment.** County and Contractor acknowledge that each has read this Agreement, understands it and agrees to be bound by its terms. Both parties further agree that this Agreement, with the attached Exhibits A and B, is the complete and exclusive statement of agreement between the parties and supersedes all proposals or prior agreements, oral or written, and any other communications between the parties relating to the subject matter of this Agreement.

**IN WITNESS WHEREOF,** the parties hereto have signed this Agreement this ______ day of ______, 2019.

**CONTRACTOR:**

________________________________________________________________________

By: ___________________________ Date: ______________

Name: __________________________

Title: __________________________
WELD COUNTY:
ATTEST:

Weld County Clerk to the Board

BY: __________________________
    Deputy Clerk to the Board

BOARD OF COUNTY COMMISSIONERS
WELD COUNTY, COLORADO

______________________________
Barbara Kirkmeyer, Chair
PERFORMANCE BOND
(PAGE 1 OF 2)

PROJECT: WCR 39 EXTENSION PROJECT

KNOW ALL MEN BY THE PRESENTS; that

__________________________________________
(Name of Contractor)
__________________________________________
Address of Contractor)

hereinafter called Contractor, and a (Corporation, Partnership, or Individual)

__________________________________________
(Name of Surety)
__________________________________________
(Address of Surety)

hereinafter called surety, are held and firmly bound unto
__________________________________________
Weld County, Colorado
__________________________________________
(Name of Owner)
__________________________________________
P.O. Box 758, 1111 H Street, Greeley, Colorado 80632
(Address of Owner)

hereinafter called Owner, in the penal sum of ____________________________ Dollars, ($ _________________) in lawful money of the United States of America, 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 Contractor entered into a certain Contract with the Owner, dated the ______ day of ______________ 2019, a copy of which is hereto attached and made a part hereof for the construction of:

PROJECT: WCR 39 EXTENSION PROJECT described in the Invitation for Bids, Bid No. B1900110.

NOW THEREFORE, if the Contractor shall well, truly and faithfully perform its duties, all of 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 guaranty 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 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 thereunder of the Specifications accompanying the same shall in any way 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.
PROJECT: WCR 39 EXTENSION PROJECT

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.

IN WITNESS WHEREOF, this instrument is executed in two (2) counterparts, each one of which shall be deemed an original, this ___________________ day of ____________________, 2019.

________________________________________
Contractor

________________________________________
(Contractor) Secretary

(SEAL)

________________________________________
(Address)

________________________________________
(Address)

ATTEST:

________________________________________
(Surety) Secretary

(SEAL)

________________________________________
Attorney-in-Fact

________________________________________
(Address)

________________________________________
(Address)

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 where the Project is located.
LABOR & MATERIALS PAYMENT BOND
(PAGE 1 OF 2)

PROJECT: WCR 39 EXTENSION PROJECT

KNOW ALL MEN BY THE PRESENTS; that

________________________________________
(Name of Contractor)

________________________________________
(Address of Contractor)

hereinafter called Contractor, and a (Corporation, Partnership, or Individual)

________________________________________
(Name of Surety)

________________________________________
(Address of Surety)

hereinafter called surety, are held and firmly bound unto
Weld County, Colorado

________________________________________
(Name of Owner)

________________________________________
(P.O. Box 758, 1111 H Street, Greeley, Colorado 80632)
(Address of Owner)

hereinafter called Owner, in the penal sum of ____________________ Dollars ($_____________________), in lawful money of the United States of America, 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 Contractor entered into a certain Contract with the Owner, dated the ____________________ day of ________________________, 2019, a copy of which is hereto attached and made a part hereof for the construction of:

PROJECT: WCR 39 EXTENSION PROJECT described in the Invitation for Bids, Bid No. B1900110.

NOW, THEREFORE, if the Contractor 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, 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 thereunder of the Specifications accompanying the same shall in any way 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.
PROJECT: WCR 39 EXTENSION PROJECT

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.

IN WITNESS WHEREOF, this instrument is executed in two (2) counterparts, each one of which shall be deemed an original,

this ___________________________ day of _____________________, 2019.

__________________________________________
Contractor

__________________________________________
(Contractor) Secretary

(SEAL)

__________________________
(Witness as to Contractor)       ____________________________

__________________________
(Address)       ____________________________

(Address)

ATTEST:

__________________________________________
(Surety) Secretary

(SEAL)

__________________________
(Witness as to Surety)       ____________________________

(Address)       ____________________________

(Address)

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 where the Project is located.
NOTICE TO PROCEED

PROJECT: WCR 39 EXTENSION PROJECT

To: ___________________________ Date: ____________
________________________________
________________________________

Name of Project:

PROJECT: WCR 39 EXTENSION PROJECT described in the Invitation for Bids, Bid No. B1900110.

You are hereby notified to commence Work in accordance with the Agreement dated _________. The date of completion of all Work is therefore ________________.

By __________________________________________
Erich Green, Project Engineer
Weld County, Colorado, Owner

ACCEPTANCE OF NOTICE

Receipt of the above Notice to Proceed is hereby acknowledged by:

__________________________________________ (Contractor)
Dated this ______ day of _____________________, 2019.

By __________________________________________

Title __________________________________________
CHANGE ORDER NO. (EXAMPLE)

PROJECT: WCR 39 EXTENSION PROJECT

Date: ____________________

PROJECT: WCR 39 EXTENSION PROJECT described in the Invitation for Bids, Bid No. B1900110

Owner: ____________________ Weld County, Colorado ____________________

Contractor: ____________________

The following change is hereby made to the Contract Documents:

CHANGE TO CONTRACT PRICE:

Original Contract Price: ____________________

Current Contract Price adjusted by previous Change Order: ____________________

The Contract Price due to this Change Order will be increased by: ____________________

The New Contract Price, including this Change Order, will be: ____________________

CHANGE TO CONTRACT TIME:

The Contract Time will be increased by ________________ calendar days.

The date for completion of all Work will be ____________________.

RECOMMENDED:

Owner Representative: ____________________ Date: ________________

Erich Green (Project Engineer)

APPROVALS:

CONTRACTOR:
Name: ____________________ Date: ____________________

Title: ____________________

WELD COUNTY: BOARD OF COUNTY COMMISSIONERS
ATTEST: WELD COUNTY, COLORADO
Weld County Clerk to the Board

BY: ____________________

Deputy Clerk to the Board ________________ Chairperson ____________________
CERTIFICATE OF SUBSTANTIAL COMPLETION

PROJECT: WCR 39 EXTENSION PROJECT described in the Invitation for Bids, Bid No. B1900110.

Contractor: ____________________________________________________________

Contract For: WCR 39 EXTENSION PROJECT described in the Invitation for Bids, Bid No. B1900110. Contract Dated:____________________

This Certificate of Substantial Completion applies to all Work that has been sufficiently completed in accordance with the Contract Documents and as modified by any change orders agreed to by the parties, so that the County and/or Owner can utilize the project for the use for which it was intended, except for the following specified parts thereof:

The Work to which this Certificate applies has been inspected by authorized representatives of the Owner, Contractor and Engineer, and that Work is hereby declared to be substantially complete in accordance with the Contract Documents on

Date of Substantial Completion

A list of items to be completed or corrected is attached hereto. This list may not be all-inclusive, and the failure to include an item in it does not alter the responsibility of the Contractor to complete all the Work in accordance with the Contract Documents. The items in the list shall be completed or corrected by the Contractor within __14__ days of the above date of Substantial Completion.

To be effective, this form must be signed by the Owner, the Engineer, and the Contractor.

Owner: ______________________________________________________ Date:________

Engineer: _________________________________________________ Date:________

Contractor: ______________________________________________ Date:________
LIEN WAIVER (GENERAL CONTRACTOR)

PROJECT: WCR 39 EXTENSION PROJECT

TO: Weld County Public Works
    Attn: Erich Green, Project Engineer
    P.O. Box 758
    Greeley, Colorado 80632

Gentlemen:

For a valuable consideration paid by the Board of County Commissioners of Weld County, the receipt and sufficiency of which is hereby acknowledged, the undersigned hereby, releases unto Weld County and to its heirs, executors, administrators or assigns, all rights of the undersigned to claim a mechanic's lien for material heretofore furnished for use in and for labor heretofore performed upon the construction, alteration, addition to or repair of the structures or improvements described in the Contract Documents as:

PROJECT: WCR 39 EXTENSION PROJECT described in the Invitation for Bids, Bid No. B1900110.

Contractor: __________________________________________________________________________
(If no legal description is shown following the description of Project, we acknowledge that the foregoing is an adequate description of the real properties and improvements inasmuch as the foregoing is the description given in the Contract Documents which govern the performance of the Work for which consideration has been received.)

In executing this release, we certify that all claims for labor, or materials, or both, furnished or performed on our behalf by our material suppliers or subcontractors have been paid or that satisfactory arrangement for payment has been made.

We agree to defend Weld County from any and all claims on the part of our material suppliers, laborers, employees, servants and agents or subcontractors arising from our Work on the Project, and we further agree to reimburse the Board of County Commissioners of Weld County for any and all costs, including reasonable attorney fees, which they may incur as a result of such claims.

____________________________________________________________________________________
Contractor
By: ________________________________________________________________________________
Title: ________________________________________________________________________________
Date: ________________________________________________________________________________

STATE OF ________________________ )
COUNTY OF ______________________ ) ss.
The foregoing instrument was acknowledged before me this ______ day of ________, ______, 2019,

by________________________________________
My commission expires:
Notary Public____________________________
FINAL LIEN WAIVER (SUBCONTRACTORS)

PROJECT: WCR 39 EXTENSION PROJECT

To All Whom It May Concern:

WHEREAS, the undersigned has been employed by (A) __________________________ to furnish labor and materials for (B) __________________________ work, under a contract (C) __________________________ for the improvement of the premises described as (D) __________________________

____ County of __________________________, State of __________________________ of which __________________________ is the Owner.

NOW, THEREFORE, this ____________ day of __________________________, 2019, for and in consideration of the sum of (E) __________________________ Dollars paid simultaneously herewith, the receipt whereof is hereby acknowledged by the undersigned, the undersigned does hereby waive and release any lien rights to, or claim of lien with respect to and on said above described premises, and the improvements thereon, and on the monies or other considerations due or to become due from the Owner, on account of labor, services, material, fixtures, apparatus or machinery heretofore or which may hereafter be furnished by the undersigned to or for the above described premises by virtue of said contract.

(F) __________________________

(Name of sole ownership, corporation or partnership)

(Affix Corporate seal here)

(SEAL)

(Signature of Authorized Representative)

Title: __________________________

INSTRUCTIONS FOR FINAL WAIVER

(A) Person or firm with whom you agreed to furnish either labor, or services, or materials, or both.
(B) Fill in nature and extent of work; strike the word labor or the word materials if not in your contract.
(C) If you have more than one contract on the same premises, describe the contract by number if available, date and extent of work.
(D) Furnish an accurate enough description of the improvement and location of the premises so that it can be distinguished from any other property.
(E) Amount shown should be the amount actually received and equal to total amount of contract as adjusted.
(F) If waiver is for a corporation, corporate name should be used, corporate seal affixed and title of officer signing waiver should be set forth; if waiver is for a partnership, the partnership name should be used, partner should sign and designate himself as partner.
NOTICE OF FINAL ACCEPTANCE

PROJECT: WCR 39 EXTENSION PROJECT

TO: ___________________________ Date: ____________

_____________________________

_____________________________


This is to inform you that the above referenced job, has been satisfactorily completed in accordance with the Contract

Documents and is hereby accepted. Final payment will be made on or about ______________

________

Final acceptance does not relieve the Contractor of the minimum one (1) year guarantee on all work and materials incorporated into this Project. Such guarantee shall begin on the date of this acceptance.

By: ___________________________
Erich Green, Project Engineer
Weld County, Colorado, Owner

ACCEPTANCE OF NOTICE

Receipt of the above Notice of Final Acceptance is hereby acknowledged by:

Dated this ______ day of ___________________________ 2019.

By______________________________
(Contractor)

Title______________________________
1. List names of partnerships or joint ventures  
   - None

2. List decreases in the contractors fiscal or workmanship qualifications compared to the last prequalification statement submitted to CDOT. (Attach additional sheets if necessary.)
   - Key personnel changes  
     - None
   - Key equipment changes  
     - None
   - Fiscal capability changes (legal actions, etc.)  
     - None
   - Other changes that may affect the contractor's ability to perform work  
     - None

---

I DECLARE UNDER PENALTY OF PERJURY IN THE SECOND DEGREE, AND ANY OTHER APPLICABLE STATE OR FEDERAL LAWS, THAT THE STATEMENTS MADE ON THIS DOCUMENT ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

<table>
<thead>
<tr>
<th>Contractor's firm or company name</th>
<th>By</th>
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<table>
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<tr>
<th>2nd Contractor's firm or company name (if joint venture)</th>
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Title

CDOT Form #65 1/82
COLORADO DEPARTMENT OF TRANSPORTATION

ASSIGNMENT OF ANTITRUST CLAIMS

Contractor and Colorado Department of Transportation (CDOT) recognize that in actual economic practice antitrust violations ultimately impact on CDOT. Therefore, for good cause and as consideration for executing this contract and for receiving payments hereunder:

1. Contractor hereby irrevocably assigns to CDOT any and all claims it may now have or which may hereafter accrue to it under federal or state antitrust laws in connection with the particular project, goods or services purchased or acquired by CDOT pursuant to this contract.

2. Contractor hereby expressly agrees:

   a. That, upon becoming aware that a third party has commenced a civil action asserting on Contractor's behalf an antitrust claim which has been assigned to CDOT hereunder, Contractor shall immediately advise in writing:
      (1) Such third party that the antitrust claim has been assigned to CDOT, and
      (2) CDOT that such civil action is pending and of the date on which, in accordance with subparagraph a. (1) above, Contractor notified such third party that the antitrust claim had been assigned to CDOT;
   b. To take no action which will in any way diminish the value of the claims or rights assigned or dedicated to CDOT hereunder; and
   c. Promptly to pay over to CDOT its proper share of any payment under an antitrust claim brought on Contractor's behalf by any third party and which claim has been assigned to CDOT hereunder.

3. Further, Contractor agrees that in the event it hires one or more subcontractors to perform any of its duties under the contract, Contractor shall require that each such subcontractor:

   a. Irrevocably assign to CDOT (as a third party beneficiary) any and all claims that such subcontractor may have or which may thereafter accrue to the subcontractor under federal or state antitrust laws in connection with any goods or services provided by the subcontractor in carrying out the subcontractor's obligations to Contractor;
   b. Upon becoming aware that a third party has commenced a civil action on the subcontractor's behalf asserting an antitrust claim which has been assigned to CDOT hereunder, shall immediately advise in writing:
      (1) Such third party that the antitrust claim has been assigned to CDOT, and
      (2) Contractor and CDOT that such civil action is pending and of the date on which, in accordance with subparagraph b. (1) above, the subcontractor notified such third party that the antitrust claim had been assigned to CDOT;
   c. Take no action which will in any way diminish the value of the claims or rights assigned or dedicated to CDOT hereunder; and
   d. Promptly pay over to CDOT its proper share of any payment under an antitrust claim brought on the subcontractor's behalf by any third party and which claim has been assigned or dedicated to CDOT pursuant hereeto.

I, acting in my capacity as officer of a bidder (bidders if a joint venture) do agree to the above assignment of antitrust claims.

Contractor's firm or company name

By

Date

Title

Second contractor's firm or company name (if joint venture)

By

Date

Title

CDOT Form#821 12/91
PROJECT SPECIAL PROVISIONS
WELD COUNTY PUBLIC WORKS DEPARTMENT

The Colorado Department of Transportation 2017 Standard Specifications for Road and Bridge Construction (as amended), the latest edition of the CDOT Field Materials Manual (as amended), and the latest edition of the CDOT Construction Manual (as amended) provide the standards and specifications for the construction of this project. The latest revisions to formerly issued Standard Special Provisions (SSP) that modify the CDOT 2017 Standard Specifications for Road and Bridge Construction are hereby incorporated by reference. The following Weld County special provisions supplement or modify the Standard Specifications and take precedence over the Standard Specifications and plans.

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NOTICE TO BIDDERS

The proposal guaranty shall be a certified check, cashier's check, or bid bond in the amount of 5 percent of the Contractor's total bid.

Pursuant to subsections 102.04 and 102.05, it is recommended that bidders on this project review the work site and plan details with an authorized Department representative. Prospective bidders shall contact one of the following listed authorized Department representatives at least 12 hours in advance of the time they wish to go over the project.

Information regarding the project may be obtained from the following authorized representatives.

Erich Green, P.E. Project Engineer  
Weld County Public Works Department  
1111 H Street  
Greeley, CO 80632  
Office Phone: 970-304-6496, ext. 3742  
egreen@weldgov.com

Don Dunker, P.E. County Engineer  
Weld County Public Works Department  
1111 H Street  
Greeley, CO 80632  
Office Phone: 970-304-6496, ext. 3749  
ddunker@weldgov.com

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

A mandatory pre-bid conference will be held on July 8, 2018 beginning at 10 a.m. at 1111 H St, Greeley, CO 80632, Public Works Conference Room. Bids will be accepted only from pre-qualified bidders who attend the mandatory pre-bid conference.

Questions received from bidders along with Weld County responses will be posted on the Weld County web site listed below as they become available.

https://www.weldgov.com/departments/purchasing/bids_proposals located under Bids/Proposals/Tabulations.

If the bidder has a question or requests clarification that involves the bidder’s innovative or proprietary means and methods, phasing, scheduling, or other aspects of construction of the project, the Project Engineer will address the question or clarification. The Engineer will keep the bidder’s innovation confidential and will not share this information with other bidders.

The Engineer will determine whether questions are innovative or proprietary in nature. If the Engineer determines that a question does not warrant confidentiality, the bidder may withdraw the question. If the bidder withdraws the question, the Engineer will not answer the question and the question will not be documented on the web site. If the bidder does not withdraw the question, the question will be answered, and both the question and answer will be posted on the web site. If the Engineer agrees that a question warrants confidentiality, the Engineer will answer the question, and keep both question and answer confidential. Weld County will keep a record of both question and answer in their confidential file.

All questions shall be directed to the contacts listed above no later than 7:00 A.M. on Thursday July 11, 2019. Final questions and answers will be posted no later than 5:00pm on July 15, 2019.

This contract has a Department of Local Affairs (DOLA) Grant associated with it and the grant completion date is December 31, 2019.

END OF SECTION
COMMENCEMENT AND COMPLETION OF WORK

The Contractor shall commence work under the Contract as required in the "Notice to Proceed" letter and will complete all work by **October 31, 2019** unless the period for completion is extended otherwise by the County. The work is a calendar day contract. One calendar day of contract time will be assessed for each calendar day from the date that Contract time starts excluding Saturdays, Sundays, and holidays (except with written approval). No weather days or less than full time charges days will be granted in this contract.

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

Salient features to be shown on the Contractor's Progress Schedule are:

1. Mobilization
2. Construction Surveying
3. Traffic Control
4. Wetland Protection Fencing Installation
5. Initial and Final Erosion Control Installation
6. Clearing and Grubbing
7. Excavation
8. Triple HERCP Culvert Construction
9. Dewatering
10. Other RCP Culvert Installations
11. Roadway Embankment Construction
12. Aggregate Base Course
13. Hot Mix Asphalt paving
14. Wetland Mitigation Installation
15. Permanent Fencing
16. Striping and Signage
17. Setting of Road Right-of-Way Monuments
18. Delivery of As-Constructed Drawings

END OF SECTION
REVISION OF SECTION 101
DEFINITION OF TERMS

Technical Specifications related to construction materials and methods for the work required under this contract shall consist of the “Colorado Department of Transportation, Standard Specifications for Road and Bridge Construction” dated 2017. Where the Project Special Provisions and the CDOT Specifications contradict one another, the more stringent specification shall apply as determined by Weld County.

Certain terms utilized in the Specifications referred to in the paragraph above shall be interpreted to have different meanings within the scope of this Contract. A summary of redefinitions follows:

Subsection 101.10 “CDOT Resident Engineer” shall mean an employee designated as such by the Weld County Public Works Department.

Subsection 101.28: “Department” shall mean the Weld County Public Works Department.

Subsection 101.29: “Chief Engineer” shall mean the Weld County Public Works Director or designated representative.

Subsection 101.36: Holidays recognized by Weld County are:
- New Year’s Day
- Washington/Lincoln Day
- Memorial Day
- Independence Day (includes an extra holiday day to replace Colorado Day)
- Labor Day
- Veterans Day
- Thanksgiving (includes an extra holiday day to replace Martin Luther King Day)
- Christmas (includes an extra holiday day to replace Columbus Day)

The Contractor shall verify with the County’s Project Engineer which days are considered the floating holidays.

Subsection 101.37: “Inspector” shall mean an employee designated as such by the Weld County Public Works Department.

Subsection 101.48: “CDOT project personnel” shall mean personnel designated as such by the Weld County Public Works Department.

Subsection 101.51 “Project Engineer” shall mean an employee designated as such by the Weld County Public Works Department.

Subsection 101.58: “Region Transportation Director” shall mean Weld County Public Works Director or designated representative.

Subsection 101.65: Roadway prism defined as toe of slope to toe of slope.

Subsection 101.76: “State” shall mean Weld County.

All references to State, CDOT, and the Department of Transportation shall be defined as Weld County acting directly or through its duly authorized representative or agent.

END OF SECTION
Section 102 of the Standard Specifications is hereby revised for this project as follows:

**Subsection 102.02 shall be revised as follows:**

In the first paragraph, delete “The Department will publish bidding opportunities to prospective bidders on the CDOT Business Center website.” and replace with “The Department will publish bidding opportunities to prospective bidders on the Weld County Purchasing website at https://www.weldgov.com/departments/purchasing/bids_proposals located under Bids / Proposals / Tabulations.

Delete the second paragraph and replace with:

“All bidders on the projects shall submit bids by the following method:

**Bid Delivery to Weld County:**

1. **Email.** Emailed bids are preferred. Bids may be emailed to: bids@weldgov.com. Emailed bids must include the following statement on the email: “I hereby waive my right to a sealed bid”. An email confirmation will be sent when we receive your bid/proposal. If more than one copy of the bid is requested, you must submit/mail hard copies of the bid proposal.

2. **Mail or Hand Delivery.** Mailed (or hand delivered) bids should be sent in a sealed envelope with the bid title and bid number on it. Please address to: Weld County Purchasing Department, 1150 O Street, Room #107 Greeley, CO 80631.”

**Subsection 102.05 shall include the following:**

After the proposals have been opened, the winning bidder may obtain electronic sets of plans and special provisions at no cost from Weld County. Subcontractors and suppliers may obtain plans from the successful bidder.

**END OF SECTION**
REVISION OF SECTION 103
CONSIDERATION OF PROPOSALS

Section 103 of the 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 (bids) are opened and read, they will be evaluated, and the Contract awarded or rejected in accordance with the “Rules” referenced in subsection 102.01.

The winning bidder shall submit a completed CONTRACTORS PERFORMANCE CAPABILITY STATEMENT, Form 605, and a completed ASSIGNMENT OF ANTITRUST CLAIMS, Form 621 to the Award Officer prior to 4:30 P.M. on the tenth calendar day after the bid opening.

Failure to submit the Forms 605 and 621 may result in the denial of award to the apparent low responsible bidder and forfeiture of the proposal guaranty.

END OF SECTION
REVISION OF SECTION 104
SCOPE OF WORK

Section 104 of the Standard Specifications is hereby revised for this project as follows:

Delete Subsection 104.02(a) and replace as follows:

It is the County’s expectation to complete this project with no change orders resulting in additional cost unless such change orders are initiated by the County. Change orders for differing site conditions will be entertained by the County in the event of extraordinary circumstances. However, the County is under no obligation to approve said change orders. No cost change orders, reduction in cost change orders, and County initiated change orders may occur.

The Contractor shall not be entitled to a change order for Differing Site Conditions. By way of example, Differing Site Conditions included but are not limited to:

1. Encountering groundwater.
2. Discovery of debris (buried or unburied within the ROW).
3. Existing asphalt thicknesses that are different than expected.
4. Lack of on-site appropriate strength materials.
5. Increased costs due to relocations of utilities and/or oil and gas facilities.
6. Increased costs due to ROW or easement acquisitions.
7. Discovery of septic systems, leach fields, or other ancillary wastewater infrastructure.
8. Discovery of unknown irrigation facilities, landscape irrigation systems, or water wells.
10. Unsuitable materials excavation.
11. High water levels in the on-site drainage ways due to stormwater runoff, snowmelt, or groundwater.

The Contractor shall be expected to manage the risks associated with water levels in the project area to meet the project completion date.

During the progress of work, if extraordinary conditions are discovered, the party discovering such conditions shall promptly notify the other party in writing of the specific conditions before the site is disturbed and the affected work is performed. The Contractor shall bear the burden of proving that a Differing Site Condition is an extraordinary circumstance, and that the condition could not reasonably be worked around so as to avoid additional costs. Each request for a change order relating to a Differing Site Condition shall be accompanied by a statement signed by a qualified professional setting forth all relevant assumptions made by the Contractor with respect to the condition of the Site, justifying the basis for such assumptions, explaining exactly how the existing conditions are eligible for a change order under the terms of the Contract, and stating the efforts undertaken by the Contractor to find alternative design or construction solutions to eliminate or minimize the problem and the associated costs.

Upon written notifications, the Engineer will investigate the conditions, and determine if an extraordinary condition exists that will cause an increase or decrease in the cost or time required for the performance of any work under the Contract, an adjustment, excluding anticipated profits will be made and the Contract modified in writing accordingly. The Engineer will notify the Contractor of the determination whether or not an adjustment of the Contract is warranted. No Contract adjustment which results in a benefit to the Contractor will be allowed unless the Contractor has provided the required written notice.

Subsection 104.02(c) shall be revised as follows:

(1) When the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction.

And
(2) When a major item of work is increased more than 150 percent or decreased below 25 percent of the original contract quantity. Any allowance for an increase in quantity shall apply only to that portion more than 150 percent of original contract item quantity, or in case of a decrease below 25 percent, to the actual amount of work performed. A major item is defined to be any item having an original contract value more than 10 percent of the original contract amount.

**Subsection 104.05** the provisions regarding rights in and use of Materials found on the Work are replaced with the following:

The Contractor shall not excavate or remove any Material from within the roadway, which is not within the grading limits, as indicated by the slope and grade lines, without written authorization from the Engineer or Inspector.

**Subsection 104.06** shall be revised to include the following:

Any excess soil materials generated from excavation shall become the property of the Contractor and shall be hauled to a disposal site approved by the Weld County Engineer or Inspector. Backfill areas shall be graded such that the final grades are similar to the final grades as described in the Contract Drawings, unless otherwise directed by the Engineer.

The Contractor shall be responsible for removing all debris and trash including debris and trash that may be dumped on the project from the jobsite on a daily basis. Any debris and trash which may be washed or blown away shall be located, removed, and disposed of away from the site at a certified landfill location.

Any petroleum products accidentally spilled or leaked shall be cleaned up and disposed of immediately. The Contractor shall be held liable for any damages resulting from the spillage or leakage of any hazardous materials into a drainage way, wetland, or other sensitive area.

**Subsection 104.07 paragraph 4, starting with “Net cost savings…”** shall be revised as follows:

Net cost savings on VECPs shall be split equally between the Contractor and Weld County as determined in the Basis of Payment section of this specification. VECPs shall be submitted prior to the start of construction activities relating to the VECP.

**Subsection 104.07(d)(2) shall be deleted and replaced as follows:**

2. For all VECPs, the incentive payment shall be calculated as follows:

\[(\text{gross cost of deleted work}) - (\text{gross cost of added work}) = (\text{gross savings})\]

\[(\text{gross savings}) - (\text{Contractor’s engineering costs}) - (\text{Weld County’s engineering costs}) = (\text{net savings})\]

\[\text{Contractor’s total incentive} = (\text{net savings})/2\]

Lost opportunity shall not be considered part of the calculations. The Contractor’s engineering costs will be reimbursable only for outside consultant costs that are verified by certified billings. Weld County’s engineering costs shall be actual consultant costs billed to Weld County and extraordinary in-house personnel labor costs. These labor costs will be calculated at the fixed amount of $100.00 per hour per employee. Project personnel assigned to the field office or who work on the project on a regular basis shall not be included in Weld County’s portion of the costs.

**END OF SECTION**
Section 105 of the Standard Specifications is hereby revised for the project as follows:

Subsection 105.01 the provisions regarding Authority of the Engineer shall include the following:

Weld County has the authority by written order to suspend the Work wholly or in part for the reasons delineated in the Contract Documents.

All employees shall have the skill and experience and any licenses or certifications required to perform the Work assigned to them. If the County determines in its sole discretion that any Person employed by the Contractor or by any Subcontractor is not performing the Work properly and skillfully, then, at the written request of the County, the Contractor or such Subcontractor shall remove such Person and such Person shall not be re-employed on the Project without the prior written approval of the County. If the Contractor or the Subcontractor fails to remove such Person(s) or fails to furnish skilled and experienced personnel for the proper performance of the Work, then the County may, in its sole discretion, suspend the affected portion of the Work by delivery of written notice of such suspension to the Contractor. Such suspension shall in no way relieve the Contractor of any obligation contained in the Contract Documents or entitle the Contractor to a Change Order.

Weld County in its sole discretion may require the Contractor to replace project management staff (Project Manager, Superintendent, Project Engineer, etc.) for any reason. This will also apply to all the Contractor’s subcontractors. At the written request of the County, the Contractor or such Subcontractor shall remove such Person and such Person shall not be re-employed on the Project without the prior written approval of the County. If the Contractor or the Subcontractor fails to remove such Person(s), then the County may, in its sole discretion, suspend the affected portion of the Work by delivery of written notice of such suspension to the Contractor. Such suspension shall in no way relieve the Contractor of any obligation contained in the Contract Documents or entitle the Contractor to a Change Order.

Subsection 105.02 the provisions regarding Plans, Shop Drawings, Working Drawings, other Submittals and Construction Drawings shall include the following:

Provisions regarding plans, shop drawings, working drawings and construction documents are set forth in the Contract Documents.

For the purposes of review, working drawings are the same as shop drawings and shall be reviewed in the same manner.

Subsection 105.02(f), paragraph 3 shall be revised to include the following:

The Contractor shall provide “As-Constructed” drawings prior to final payment. The As-Constructed drawings shall be completed in accordance with Section 121.2.3 of the CDOT Construction Manual and CDOT Procedural Directive 508.1 – Professional Engineer's Stamp. The As-Constructed drawings shall be stamped, signed, and dated by a licensed professional engineer or professional land surveyor registered in the State of Colorado. References in Section 121.2.3 of the CDOT Construction Manual to the Project Engineer shall apply to the Contractor.

Subsection 105.03 the provisions regarding conformity to the Contract are revised as follows:

When the Engineer or Inspector finds the Materials furnished, Work performed, or the finished product are not in conformity with the Contract Documents, and Weld County determines, in its sole discretion, that it has resulted in an inferior or unsatisfactory product, the Work or Materials shall be removed and replaced or otherwise corrected by and at the expense of the Contractor.
Materials will be sampled and tested by the Contractor in accordance with the sampling and testing schedules and procedures contained in the Contract Documents. The quantity represented by 2,000 tons will constitute a lot. The Engineer may establish a lot consisting of the quantity represented by any number of consecutive random samples from one to seven inclusive when it is necessary to represent short production runs, significant Material changes, or other unusual characteristics of the Work. Tests that are determined to have sampling or testing errors will not be used.

The Contractor will not have the option of accepting a price reduction in lieu of producing Material that complies with the Contract Documents. Continued production of nonconforming Material will not be permitted. Material, which is obviously defective, may be isolated and rejected by Weld County without regard to sampling sequence or location within a lot. Rejected material shall be removed at the Contractor’s expense.

Subsection 105.03 the two paragraphs following the TABLE OF PRICE REDUCTION FACTORS and starting with “If P is less …” shall be deleted and replaced as follows:

If P is a negative number quantity, the material will be accepted as being in conformity. In cases where one or more elements show a positive P value, such positive values will be added and the resulting sum will be used to determine the total P value. If the total P value is between 0 (zero) and 25, the Engineer may require correction or may accept the material at a reduced price. If P is greater than 25, the Engineer may: (1) require complete removal and replacement with specification material at no additional cost to the Department; (2) require corrective action to bring the material into conformity at no additional cost to the Department; or (3) 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 with an appropriate price reduction to be based on engineering evaluation but not to be less than that which have occurred had a reduction been made where P=25.

If the P for aggregate gradation for items 206, 304, or the gradation of hydrated lime for item 403 is 0 (zero) or greater the reduction will apply to the contract price multiplied by the Multipliers (M) listed in the following table:

Subsection 105.07(b)(1) shall be revised as follows: Delete the last sentence of the tenth paragraph and replace with the following:

“Within 24 hours after each profile is collected, the Contractor shall submit the data electronically to the Project Engineer and Project Inspector.”

Subsection 105.08(a)(3) shall be revised as follows: Delete the third sentence and replace with the following:

“The Contractor shall submit the data electronically to the Project Engineer and Project Inspector.”

Subsection 105.09 shall be revised as follows: Delete subsection 105.09 (and replace with the following:

These specifications, the supplemental specifications, the plans, special provisions, and all supplementary documents are essential parts of the Contract, and a requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work.

In the event of a discrepancy, the order of precedence is as follows:

(a) Contract Documents including Exhibits, Addenda, and Appendices
(b) Special Provisions
i. Weld County Special Provisions
ii. CDOT Project Special Provisions
iii. CDOT Standard Special Provisions
iv. CDOT Field Materials Manual (Latest Edition)
v. CDOT Construction Manual (Latest Edition)
(c) CDOT Standard Specifications
(d) Plans
  i. Detailed Plans
  ii. Standard Plans
  iii. Calculated dimensions will govern over scaled dimensions

Notwithstanding the foregoing, in the event of conflicting requirements involving any requirement within the Contract Documents, the County shall have the right to determine, in its sole discretion, which requirement(s) apply. The Contractor shall request the County’s determination respecting the order of precedence among conflicting provisions promptly upon becoming aware of any such conflict.

The Contractor shall not take advantage of any apparent error or omission in the Contract. Should it appear that the work to be done or any matter relative thereto is not sufficiently detailed or explained in the Contract Documents, the Contractor shall immediately notify the Project Manager in writing for further written explanations as may be necessary and shall conform to the explanation provided. The Contractor shall promptly notify the Project Manager of all error which it may discover in the Contract Documents and shall obtain specific instructions in writing regarding any such error before proceeding with the work affected thereby. The Project Manager will make corrections and interpretations as necessary to fulfill the intent of the Contract.

The fact that the Contract Documents omit or mis-describe any details of any work which is necessary to carry out the intent of the Contract Documents, that are customarily performed under similar circumstances, shall not relieve the Contractor from performing such omitted work or mis-described details of the work, and they shall be performed as if fully and correctly set forth and described in the Contract Documents, without entitlement to a change order except as specifically allowed.

In Subsection 105.10, delete the first sentence which states:

The Contractor will be supplied with a minimum of six sets of contract documents.

Subsection 105.21 shall be revised as follows:

The Colorado Department of Transportation (CDOT) will not participate in the resolution process for any claims filed by the Contractor. Weld County will be the responsible party to such claims.

Subsection 105.22 shall be revised as follows:

The Colorado Department of Transportation (CDOT) will not participate in the resolution process for any claims filed by the Contractor. Weld County will be the responsible party to such claims.

Subsection 105.24 is amended as follows:

Delete all references to CDOT and replace with Weld County.

Delete: 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.
REVISION OF SECTION 105
CONTROL OF WORK

Replace with: The venue for all unresolved disputes with an aggregate value $15,000 or less shall be the County Court for Weld County.

Subsection 105.24(c) is amended as follows:
Delete: Division of Audit, 4201 E. Arkansas Ave, Denver, Co. 80222
Replace with: Weld County Board of Commissioners, 1150 O Street, Greeley, Co. 80632

Subsection 105.24(f) is amended as follows:
In the third paragraph delete “the City and County of Denver”
Replace with: “Weld County”
In the fourth paragraph delete “Denver District Court”
Replace with: “Weld County District Court”

END OF SECTION
REVISION OF SECTION 106
CONTROL OF MATERIAL

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

Subsection 106.05 shall include the following:

(h) Sampling and testing of small quantities. The materials listed below can be accepted without further sampling and testing on the basis of visual examination, provided the quantity is less than stated and the source has recently furnished or is currently furnishing similar material found to be satisfactory under normal Weld County sampling and testing procedures. Acceptance Method provided below.

Item 403 - Hot Mix Asphalt:

500 Tons or less, visually inspect and document in project file, all tests

501-2000 Tons, One process control sample /day of production / Mix Design (Asphalt Content, Gradation and 1 core for mat density)

2000 Tons or more, See PC Testing Frequency Guide in CDOT Field Materials Manual normal minimum testing

Material test results indicating nonconformance with project requirements when tested in small quantity frequency, will be price reduced according to subsection 105.05(a) for the quantity that the sample represents.

Reduction in testing and sampling in no way relieves contractor of submitting construction method statements, quality control plans or supplying specification materials.

For this project, Contractor process control testing of hot mix asphalt is mandatory.

END OF SECTION
REVISION OF SECTION 107
LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

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

Subsection 107.01 shall include the following after the first paragraph:

Failure to comply with all contractual obligations may lead to the suspension, debarment or both of the Contractor as stipulated in the “Rules”.

Subsection 107.06 shall be revised to include the following:

The Contractor and any subcontractor shall not require any laborer or mechanic employed in performance of the Contract to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his health or safety, as determined under construction safety and health standards (Rules and Regulations of the Federal Occupational Safety and Health Act of 1970 (OSHA) and as amended).

All facilities and work conditions shall comply with the Colorado and Local Health Department Regulations and with OSHA requirements.

Add subsection 107.06(j) immediately following subsection 107.06 as follows:

107.06(j) Performance of Safety Critical Work. The following work elements are considered safety critical work for this project:

(1) Overhead swinging of pipe
(2) Temporary works: shoring that exceeds 5 feet in height and cofferdams
(3) Excavation and embankment adjacent to the roadway, especially if it requires shoring

The Contractor shall submit, for record purposes only, an initial detailed construction plan that addresses safe construction of each of the safety critical elements. The detailed construction plan shall be submitted two weeks prior to the safety critical element conference described below. The construction plan shall be stamped “Approved for Construction” and signed by the Contractor. The construction plan will not be approved by the Engineer.

The Construction Plan shall include the following:

(1) Safety Critical Element for which the plan is being prepared and submitted.
(2) Contractor or subcontractor responsible for the plan preparation and the work.
(3) Schedule, procedures, equipment, and sequence of operations, that comply with the working hour limitations
(4) Temporary works required: falsework, bracing, shoring, etc.
(5) Additional actions that will be taken to ensure that the work will be performed safely.
(6) Names and qualifications of workers who will be in responsible charge of the work:
   a. Years of experience performing similar work
   b. Training taken in performing similar work
   c. Certifications earned in performing similar work
(7) Names and qualifications of workers operating cranes or other lifting equipment
   a. Years of experience performing similar work
   b. Training taken in performing similar work
   c. Certifications earned in performing similar work
(8) The construction plan shall address how the Contractor will handle contingencies such as:
   a. Unplanned events (storms, traffic accidents, etc.)
   b. Structural elements that don’t fit or line up
c. Replacement of workers who don’t perform the work safely  
d. Equipment failure  
e. Other potential difficulties inherent in the type of work being performed  

(9) Name and qualifications of Contractor’s person designated to determine and notify the Engineer in writing when it is safe to open a route to traffic after it has been closed for safety critical work.  

(10) Erection plan or bridge removal plan when submitted as required elsewhere by the specifications. Plan requirements that overlap with above requirements may be submitted only once.  

A safety critical element conference shall be held two weeks prior to beginning construction on each safety critical element. The Engineer, the Contractor, the safety critical element subcontractors, and the Contractor’s Engineer shall attend the conference.  

After the safety critical element conference, and prior to beginning work on the safety critical element, the Contractor shall submit a final construction plan to the Engineer for record purposes only. The Contractor’s Engineer shall sign and seal temporary works, such as falsework, shoring etc., related to construction plans for the safety critical elements. The final construction plan shall be stamped “Approved for Construction” and signed by the Contractor.  

The Contractor shall perform safety critical work only when the Engineer is on the project site. The Contractor’s Engineer shall be on site to inspect and provide written approval of safety critical work for which he provided signed and sealed construction details. Unless otherwise directed or approved, the Contractor’s Engineer need not be on site during the actual performance of safety critical work but shall be present to conduct inspection for written approval of the safety critical work.  

When ordered by the Engineer, the Contractor shall immediately stop safety critical work that is being performed in an unsafe manner or will result in an unsafe situation for the traveling public. Prior to stopping work, the Contractor shall make the situation safe for work stoppage. The Contractor shall submit an acceptable plan to correct the unsafe process before the Engineer will authorize resumption of the work.  

When ordered by the Engineer, the Contractor shall remove workers from the project that are performing the safety critical work in a manner that creates an unsafe situation for the public in accordance with subsection 108.06.  

Should an unplanned event occur, or the safety critical operation deviate from the submitted plan, the Contractor shall immediately cease operations on the safety critical element, except for performing any work necessary to ensure worksite safety, and provide proper protection of the work and the traveling public. If the Contractor intends to modify the submitted plan, he shall submit a revised plan to the Engineer prior to resuming operations.  

All costs associated with the preparation and implementation of each safety critical element construction plan will not be measured and paid for separately but shall be included in the work.  

Nothing in the section shall be construed to relieve the Contractor from ultimate liability for unsafe or negligent acts or to be a waiver of the Colorado Governmental Immunity Act on behalf of the Department.  

Subsection 107.15 shall be revised to include the following:  

For this project, the insurance certificates shall name Weld County, Town of LaSalle, and Union Pacific Railroad as additionally insured parties.
Subsection 107.17 shall be revised to include the following before the first paragraph:

The Contractor shall assess and understand the risk of working within a floodplain and drainage ways. Such risks include but are not limited to: floods, high groundwater, and fluctuation in flows. The Contractor shall be responsible for constructing and maintaining all temporary facilities within the waterway such as cofferdams and diversion of channel flows. Such work shall be subsidiary to other items of work.

Subsection 107.17 – Delete the third paragraph beginning with “Loss, injury, or damage to the contract work…” and replace with the following:

Loss, injury, or damage to the contract work due to unforeseeable causes beyond the control of and without fault or negligence of the Contractor, including but not restricted to acts of God, such as flood, earthquake, tornado, or other cataclysmic phenomenon or nature shall be restored by the Contractor at no cost to the County.

Subsection 107.19 shall be revised to include the following:

The Contractor shall be required to obtain permission to conduct any work, store materials or stockpiles, or park any construction equipment or vehicles on private property. The Contractor shall conduct their work within the right-of-way and easement boundaries shown on the Contract Drawings. Where right-of-way and easement boundaries shown on the Contract Drawings are located within Union Pacific Railroad (UPRR) property, the Contractor shall obtain right of entry permission from UPRR by applying for and entering into a Contractor’s Right of Entry Agreement with UPRR to conduct any work, store materials or stockpiles, or park any construction equipment or vehicles on UPRR private property. If working in the County right-of-way, the Contractor shall obtain a right-of-way permit from the Public Works Right-of-Way Permitting Technician, 970-304-6496.

The Contractor’s attention is directed to this subsection:

Subsection 107.25 shall be revised to include the following prior to the first sentence:

The requirements as called out in this subsection will be strictly enforced.

Subsection 107.25(c) shall include the following:

The Colorado Discharge Permit System Stormwater Construction Permit (CDPS-SCP) shall be obtained by the Contractor. The Contractor shall be responsible for complying with the applicable requirements of this permit. Per 107.25(d)(2), should any fines be levied by CDPHE, the Contractor shall be responsible for all such fines. The Contractor shall provide an Erosion Control Supervisor (ECS) for this project.

Delete Subsection 107.25(c)(1), Paragraph 5 and replace with the following:

The Contractor’s ECS shall coordinate with the County to perform regular inspections of the corrective work. The completed action items associated with the corrective work shall be shown as completed on the Punch List. Upon completion of all items shown, the Contractor shall submit the completed Punch List to the Engineer for review. Upon written approval of the Punch List, the Contractor shall submit the “Application for Transfer of Ownership for All Permits, Certifications, and Authorizations” to the CDPHE requesting transfer of ownership of the CDPS-SCP to Weld County Public Works.
Section 108 of the Standard Specifications is hereby revised for this project as follows:

**Subsection 108.01 shall include the following:**

Failure to comply with all contractual obligations may lead to the suspension, debarment, or both of the subcontractor, and if necessary, the Contractor as stipulated in the “Rules”.

**Delete the first paragraph of Subsection 108.03(b) and replace with the following:**

The Contractor shall use Microsoft Project scheduling software to develop and manage a CPM Project Schedule to plan, schedule, and report the progress of the work. On occasion, the Engineer may authorize in writing, the use of a bar chart to depict the CPM. If the Contractor wishes to utilize a bar chart schedule, the Engineer shall be notified in writing prior to the Pre-construction meeting. The Engineer is under no obligation to approve the use of a bar chart schedule. The schedule shall be submitted at least 5 working days prior to the start of the work. Work shall not begin until the Schedule is accepted in writing, unless otherwise approved by the Engineer.

**Delete the second paragraph starting with “The Contractor shall not carry on construction...” in subsection 108.08 and replace with the following:**

The Contractor shall not carry on construction operations on Saturdays, Sundays, or holidays; or prior to sunrise and after sunset, unless previously arranged and approved by the Project Engineer or Inspector. The Contractor shall not perform construction operations on any three or four-day holiday weekend without prior written approval. Requests for weekend construction operations shall be presented in writing to the Project Manager and Inspector Supervisor no later than Wednesday at 5 p.m. prior to the weekend in which the work will be performed. Written requests received after the deadline will be reviewed on a case by case basis. The Engineer is not required to provide written approval for weekend inspectable construction operations requests.

In the event, the weekend construction operations involve inspectable work (operations requiring a construction inspector), the Contractor shall provide a credit on the next pay application to the County. The amount credited shall be $400.00 for the first 4 hours and $100.00 per hour per day thereafter for each Inspector or Engineer required to perform inspections on the inspectable work or make project management decisions.

Construction operations shall stop at 5 p.m. the day before the start of the holiday weekend. Construction operations may resume after the holiday weekend has passed. The Contractor shall only make emergency repairs and provide proper protection of the work and the traveling public on the holiday weekend days.

**Delete subsection 108.08(a)(2), and replace with the following:**

*Calendar Day Contract.* When the work is on a calendar day basis, one calendar day of contract time will be assessed for each calendar day from the date that Contract time starts. Calendar Day Contracts have been adjusted prior to bid advertisement to account for no work on Saturdays, Sundays, and holidays by increasing the calendar days by the appropriate number of days. As stated in subsection 108.08, no inspectable construction operations shall occur on Saturdays, Sundays, and holidays unless prior approval has been granted. No weather days or less than full time charges days will be granted in this contract.
Delete subsection 108.08(b), and replace with the following:

When the Contract specifies a completion date, all work under the Contract shall be completed on or before the date specified. As stated in subsection 108.08, no inspectable construction operations shall occur on Saturdays, Sundays, and holidays unless prior approval has been granted. No extension of the completion date will be allowed for inclement weather, foreseeable causes, or conditions under the control of the Contractor. If all work under the Contract is not completed on or before the specified completion date, contract time will be assessed for each additional calendar day in accordance with subsection 108.08(a)(2) and liquidated damages will be assessed to the contractor per day, per the table in subsection 108.09 until the completion of the project.

Completion Date Contracts have been adjusted prior to bid advertisement to account for Saturdays, Sundays, and holidays by adjusting the completion date by the appropriate number of days. No weather days shall be given.

Subsection 108.09 shall include the following after the first paragraph:

Grant deadlines are associated with this project. Upon issuance of the Notice of Final Acceptance, the Contractor shall submit all required paperwork required to close out the project within 20 days. Failure to provide the required paperwork will result in the assessment of liquidated damages as outlined below.

In subsection 108.09 delete the schedule of liquidated damages and replace with the following:

<table>
<thead>
<tr>
<th>Original Contract Amount ($)</th>
<th>Liquidated Damages per Calendar Day ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>From More Than</td>
<td>To and Including</td>
</tr>
<tr>
<td>0</td>
<td>500,000</td>
</tr>
<tr>
<td>500,000</td>
<td>1,000,000</td>
</tr>
<tr>
<td>1,000,000</td>
<td>2,000,000</td>
</tr>
<tr>
<td>2,000,000</td>
<td>5,000,000</td>
</tr>
<tr>
<td>5,000,000</td>
<td>15,000,000</td>
</tr>
<tr>
<td>15,000,001</td>
<td>------------------</td>
</tr>
</tbody>
</table>

END OF SECTION
Section 109 of the Standard Specifications is hereby revised for the project as follows:

In subsection 109.01 add the following paragraph after the 17th paragraph:

All materials (304 - Class 6 Base Course, 403 - HMA, etc.) delivered to the project site that have been weighed by a certified scale, will be issued tickets by the source certified weigh master. These tickets will be collected and compiled by a representative of the Contractor at the project placement site. Tickets will be made available for inspection during placement to the Engineer or Inspector at all times. The Contractor will submit, in an envelope, within 48 hours of material placement, the following:

- Truck Tare List
- Original Scale Tickets
- Weld County Materials Quantity Reconciliation Sheet, signed by Contractor's representative

Material quantity discrepancies, such as waste or rejected loads will be tracked on the reconciliation sheet submitted by the contractor. Contractor will be made aware of any discrepancy immediately by the inspector.

Ticket package will be submitted to the inspector or engineer within 48 hours of placement. For material quantity submittals beyond this 48 hours, a price reduction on the material in question will occur as follows:

<table>
<thead>
<tr>
<th>Time Interval</th>
<th>Reduction Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 24 hours</td>
<td>2%</td>
</tr>
<tr>
<td>24 – less than 48 hours</td>
<td>5%</td>
</tr>
<tr>
<td>48 - less than 72 hours</td>
<td>25%</td>
</tr>
<tr>
<td>72 hours or greater</td>
<td>100%</td>
</tr>
</tbody>
</table>

In Subsection 109.01 after the last paragraph add the following:

The following work will not be measured and paid for separately but shall be included in applicable unit prices for which the work is required. The list below is not all-inclusive and there may be other items which are considered incidental to the project:

1. Earthwork requiring more than one handling
2. New materials (if required) for resetting fences
3. Fine grading
4. Soil conditioner
5. Fertilizer
6. Staging areas
7. Additional temporary construction easements if desired by the Contractor
8. Coordination with utility companies
9. All water

Subsection 109.06(a) – Delete the second sentence beginning with “The amount to be retained……”, and replace with the following:

The amount retained will be 5% of the value of the completed work, to a maximum of 5% of the contract amount. No retainage shall be released prior to Final Acceptance.
Subsection 109.06 (e) shall include the following after the first paragraph:

The Contractor shall submit the Form 1418, Monthly Payment Report, along with the project schedule updates, in accordance with subsections 108.03 (b) or 108.03 (c)(3). Failure to submit a complete and accurate Form 1418 shall be grounds for County to withhold subsequent payments or retainage to the Contractor.

In Subsection 109.07 – Delete and replace with the following:

Partial monthly payments to the Contractor for completed work will include payment only for materials actually incorporated in the work unless otherwise approved by the Engineer.

END OF SECTION
Section 201 of the Standard Specifications is hereby revised for this project as follows:

**Subsection 201.02 shall be revised to include the following:**

This work shall include removal and disposal of tree stumps, bushes, roots, sod, and any other vegetation or organics that interferes with the work.

This work shall include removal and disposal of all minor items for which there is no specific "removal bid item", including but not limited to wooden posts, metal posts, fence posts, concrete and metal drainage items. Also included in this bid item is the removal of the following items:

This work shall include removal of:

1. All trash, glass, cans, barrels, construction materials, and any other non-organic materials that interferes with the work.
2. All foundations, pavements, utility poles, fences, underground utilities, and other deleterious materials.
3. Sediment from existing pipes.
4. Delineators.
5. Gravel from access roads,
6. Trees smaller than 6" DBH. Trees and shrubs designated to be removed shall include the entire root ball and all roots larger than ½" diameter, and
7. Removal of the existing large landscape rocks within the project right-of-way adjacent to project Parcel 03. If these rocks are not recovered by the owner of project Parcel 03 and moved outside of the project right-of-way and temporary construction easement prior to July 19, 2019, they shall become the property of the Contractor and be removed and disposed of by the Contractor.

Any dump fees or other fees associated with Clearing and Grubbing shall be considered subsidiary to this bid item.

**END OF SECTION**
REVISION OF SECTION 202
REMOVAL AND TRIMMING OF TREES

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

Subsection 202.02 shall include the following:
This work includes the removal of trees as shown on the plans or as directed by the Engineer. This work includes the preservation from injury or defacement of all vegetation and objects designated to remain.

The Engineer will establish environmental limits. All trees, shrubs, plants, grasses, and other vegetative materials shall remain, except as designated by the Engineer.

Prior to beginning any construction, removal of encroaching vegetation (as determined by the Engineer) shall be completed. Once all directed clearing is completed and accepted, no additional clearing, trimming, cutting, or pruning will be allowed unless approved, in writing, by the Engineer.

Access for the removal of trees will be extremely limited. Trees shall be felled at the risk of the Contractor. Strict limits of disturbance will be defined and shall be adhered to.

Branches on trees or shrubs shall be removed as directed by the Engineer. All trimming shall be done by skilled workmen. All work shall be done according to the following requirements:

1. All final cuts shall leave no projections on or off the branch and shall not be cut so close as to eliminate the branch collar.
2. To avoid bark stripping, all branches 2 inches in diameter and larger shall be cut using the 3-cut method. These branches shall be lowered to the ground by proper ropes.
3. Tools used on trees known or found to be diseased, shall be disinfected with alcohol before they are used on other trees.
4. Structural weaknesses, decayed trunk or branches, or split crotches shall be reported to the Engineer.
5. When cutting back or topping trees, the Contractor shall use the drop-crotch method and avoid cutting back to small suckers. Smaller limbs and twigs shall be removed in such a manner so as to leave the foliage pattern evenly distributed.
6. When reducing size (cut back or topping) not more than one-third of the total area shall be reduced at a single operation.
7. Climbing spikes shall not be used on trees not scheduled for removal.

All brush, branches, limbs, and foliage smaller than 3 inches in diameter shall be chipped into mulch and stockpiled at a designated site. The trunks and limbs 3 inches and larger shall be cut into less than 6-foot lengths and hauled to a designated site. Stumps shall be left no higher than 2 feet above the ground surface and shall not be removed when within the areas to be excavated. When trees being cut off are outside the excavation limits, the stumps shall be cut so that no more than 3 inches remains above the ground surface. Stump grinding is required as directed by the Engineer and shall be subsidiary to Removal and Trimming of Trees.

Subsection 202.12 shall include the following:
Pay Item | Pay Unit
--- | ---
Removal of Tree | Each

Chipping, stockpiling mulch, and hauling and stockpiling trunks and limbs will not be paid for separately but shall be included in the work. Removal of trees less than 6 inches in diameter will not be paid for separately but shall be included in the work.
2
REVISION OF SECTION 202
REMOVAL AND TRIMMING OF TREES

All clearing and grubbing directed by the Engineer will be paid for as lump sum under the clearing and grubbing item.

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

202.02 **General the follow shall be added to the following:**
Gates shall be stored and free of damage when resetting. If gates are damaged, Contractor shall purchase new gates at no extra cost to the project.

Delete subsection 202.09, and replace it with the following:

202.09 **Removal of Asphalt Mat (Planing).** Prior to beginning planing operations, the Contractor shall submit a planing plan and a Process Control Plan (PCP) for approval by the Engineer. The planing plan shall include at a minimum:

1. The number, types and sizes of planers to be used.
2. The width and location of each planing pass.
3. The number and types of brooms to be used and their locations with respect to the planers.
4. The proposed method for planing and wedging around existing structures such as manholes, valve boxes and inlets.
5. The longitudinal and transverse typical sections for tie-ins at the end of the day.
6. If requested by the Engineer, a plan sheet showing the milling passes.

The PCP shall include as a minimum:

1. The schedule for replacing the cutting teeth.
2. The daily preventive maintenance schedule and checklist.
3. Proposed use of automatic grade controls.
4. The surface testing schedule for smoothness.
5. The process for filling distressed areas.
6. The schedule for testing macrotexture of the milled surface.
7. Corrective procedures if the milled surface does not meet the minimum macrotexture specification.
8. Corrective procedures if the milled surface does not meet the minimum transverse or longitudinal surface finish when measured with a 10-foot straightedge.

The Contractor shall not start the planing operation until the hot mix asphalt (HMA) mix design has been approved and a Form 43 has been signed by the Engineer.

The existing pavement shall be milled to the cross-slope as shown on the plans and shall have a surface finish that does not vary longitudinally or transversely more than ⅜ inch from a 10-foot straightedge. A 10-foot straightedge shall be supplied by the Contractor.

All milled surfaces shall be broomed with a pick-up broom, unless otherwise specified, before being opened to traffic. A sufficient number of brooms shall be used immediately after planing to remove all milled material remaining in the roadway.

If the Contractor fails to adequately clean the roadway, work shall cease until the Engineer has approved the Contractor’s revised written proposal to adequately clean the roadway.

The milled surface shall have a macrotexture equal to or less than 0.170 inches for single-lift overlays and 0.215 inches for multiple-lift overlays as tested in accordance with CP 77. Milled surfaces that do not meet these criteria shall require corrective action in accordance with the PCP. The Contractor shall be responsible for testing the macrotexture of the milled surface at the location directed by the Engineer in accordance with CP 77 at a stratified random frequency of one test per 10,000 square yards or a minimum of once per work day.
2

REVISION OF SECTION 202
REMOVAL OF STRUCTURES AND OBSTRUCTIONS

At the completion of each day’s work, longitudinal vertical edges greater than 1 inch shall be tapered. No transverse vertical edges will be allowed. Longitudinal milled surface tie-ins to existing pavement shall be tapered to not less than a 3:1 slope, transverse milled surface tie-ins to existing pavement shall be tapered to not less than a 50:1 slope. Transverse tapered joints may be tapered with the planing machine, a temporary asphalt ramp, or other methods approved by the Engineer. No longitudinal joint between the milled and existing surfaces shall fall between 1 to 5 feet of any lane line.

If the transverse joint is tapered with a temporary asphalt ramp, the milled surface at the joint shall be constructed as a butt joint the full depth of the lift of asphalt to be placed on the milled surface. The Contractor shall be responsible for maintaining this asphalt ramp until all corresponding HMA is placed. All work associated with this joint will not be paid for separately but shall be included in the cost of planing.

If the transverse joint is tapered with a planing machine, a butt joint shall be cut into the taper the full depth of the lift of asphalt to be placed on the milled surface prior to commencement of resurfacing. All work associated with this joint will not be paid for separately but shall be included in the cost of planing.

Other approved transverse joint tapers shall be maintained at the expense of the Contractor, and at a minimum shall incorporate a butt joint the full depth of the lift of asphalt to be placed on the milled surface prior to commencement of resurfacing.

Distressed or irregular areas identified in the planed surface by the Engineer shall be patched.

The roadway shall be left in a safe and usable condition at the end of each work day. The Contractor shall take appropriate measures to ensure that the milled surface does not trap or hold water. All required pavement markings removed by the planing shall be restored before the roadway is opened to traffic.

All planing shall be completed full width and parallel to the travel lanes before resurfacing commences unless otherwise directed by the Engineer.

All material generated by the planing operation shall become the property of the Contractor unless otherwise noted in the Contract.

Each planer shall conform to the following:

The planer shall have sufficient power, traction and stability to maintain an accurate depth of cut. The propulsion and guidance system of the planer shall be maintained in such condition that the planer may be operated to straight and true lines.

The planer shall be capable of operating with automatic grade controls (contact or non-contact) on both sides of the machine using a 30-foot averaging system or other approved grade control systems. The use of such controls shall be described in the Contractor’s PCP.

The planer shall be capable of picking up the removed material in a single operation. A self-loading conveyor shall be an integral part of the planer. Windrows will not be allowed. The planer shall be capable of operating with automatic grade controls (contact or non-contact) on both sides of the machine using a 30-foot averaging system or other approved grade control systems. The use of such controls shall be described in the Contractor’s QCP.

All material generated by the planing operation shall become the property of the Contractor unless otherwise noted in the Contract.
Subsection 202.11 shall include the following:

Removal of asphalt mat (planing)(special) will be measured by the area in square yards completed to the full depth of the existing roadway section and accepted.

Subsection 202.12 shall include the following:

Payment will be made under:

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Removal of Asphalt Mat (Planing)</td>
<td>Square Yard</td>
</tr>
<tr>
<td>Removal of Ditch Lining</td>
<td>Lineal Foot</td>
</tr>
<tr>
<td>Removal of Ground Sign</td>
<td>Each</td>
</tr>
<tr>
<td>Removal of Fence</td>
<td>Lineal Foot</td>
</tr>
<tr>
<td>Removal of Double Gate</td>
<td>Each</td>
</tr>
</tbody>
</table>

Macrotecture testing, macrotecture corrective actions, planers, brooms and all other work necessary to complete the item will not be measured and paid for separately but shall be included in the work.

Lighting required for nighttime operations will not be measured and paid for separately but shall be included in the work.

All fencing removals and installations within or along the edge of wetland areas as designated on the plans shall be completed by hand work only. Any fencing removal or installation resulting in the disturbance of a wetland area shall result in a liquidated damage of $1,000 per incident.

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

**Subsection 203.01 shall be revised as follows:**

Imported material used for backfilling pipes shall be tested for compatibility with the selected pipe material.

When non-Reinforced Concrete Pipe or Reinforced Concrete Pipe is used, the imported material shall be tested for sulfates and pH to ensure that it is compatible with the selected pipe material.

When Corrugated Steel Pipe, Bituminous Coated Corrugated Steel Pipe, or Precoated Corrugated Steel Pipe is used, the imported material shall be tested for sulfates, chlorides, pH, and resistivity.

When Aramid Fiber Bonded Corrugated Steel Pipe or Corrugated Aluminum Pipe is used, the imported material shall be tested for pH and resistivity.

When Plastic Pipe is selected, the imported material does not need to be tested for sulfates, chlorides, pH, and resistivity.

Sulfates, chlorides, pH, and resistivity shall be determined by the following procedures:

1. Water soluble sulfates using CP-L2103 Method B.
2. Chlorides using CPL 2104.

**Subsection 203.02 shall be revised as follows:**

(a) Unclassified Excavation. Unclassified excavation shall consist of the excavation of all materials of whatever character required for the work, obtained within the temporary construction easement as shown on the plans, including surface boulders and excavation for ditches and channels that is not removed under some other item. Any excess soil materials generated from excavation shall become the property of the Contractor and shall be hauled out of the project site and disposed of at a disposal site approved by the Weld County Inspector.

Unclassified Excavation (Complete in Place): Complete-in-place excavation shall consist of the excavation of all materials of whatever character required for the work, obtained within the temporary construction easement as shown on the plans, including surface boulders and excavation for ditches and channels that is not removed under some other item. Approved in-place excavation material shall be placed in embankments per the Plans and Specifications.

Delete Subsection 203.02(c) and replace with the following:

(c) **Removal of Unsuitable Material.** Unsuitable Material shall be removed from the job site per Local, State and Federal laws.

**Subsection 203.03 replace the first sentence with the following:**

All embankment material shall consist of material that has been obtained from required excavation or from an approved source. The Contractor shall not obtain embankment material, other than the material developed from suitable materials excavated on site, without written approval of the Project Engineer or
Inspector. Material excavated at the project site may be used if approved by Weld County Inspector or Engineer.

Subsection 203.03 replace all reference to CDOT’s lab with Weld County Lab

In Subsection 203.06 delete the 4th paragraph and replace with the following:

The cleared surface shall be completely broken up by plowing or scarifying to a minimum depth of 8 inches or as specified in the contract, the moisture content increased or decreased as necessary, and compacted to the specified embankment density for the material type present.

In subsection 203.07 add the following:

Some of the soil excavated on this project may be placed within the roadway prism or hauled off-site. However, the Project Inspector has the authority to order that certain material be placed within the embankment side slopes. Unsuitable excavation materials shall not be used for embankment and shall be hauled off the jobsite. Topsoil which has been stripped and stockpiled shall be placed on the top of embankment slopes. Excess topsoil shall be hauled off the jobsite.

In subsection 203.07(a), paragraph 2, add the following:

A sheep’s foot compactor shall not be used on A-1 material containing less than 30% retained on the ¾-inch sieve. Based on the Western Alliance for Quality Transportation Construction (WAQTC) inspection guidelines, the appropriate equipment to use on granular soils such as an A-1 soil, is a steel vibratory roller or pneumatic rubber-tired roller. Sheep’s foot rollers are appropriate for materials composed of cohesive soils and clay rich non-durable bedrock.

In subsection 203.07(b), paragraph 2, add the following:

3-inch Minus Rock shall be considered rock fill. Placement equipment shall be of the low ground pressure type when driving directly on geogrid or geofabric as approved by Weld County.

No. 57 / 67 rock shall be considered a rock fill with a 50% / 50% mixture by gradation; see table 703-1. Placement equipment shall be of the low ground pressure type when driving directly on geogrid or geofabric as approved by Weld County.

In subsection 203.08 Proof-rolling, delete the third paragraph and replace with the following:

The proof roller shall be operated in a systematic manner so that a record may be readily kept of the area tested and the working time required for the testing. Repair to the satisfaction of Engineer, areas that are observed to have soft spots in the subgrade or where deflection is not uniform or is deemed excessive as determined by the Engineer. The repair may involve unsuitable material excavation, geogrid reinforcement, replacement of excavated materials, or other methods as directed by the Engineer. After replacement and re-compaction, these areas may be proof rolled again if deemed necessary by the Engineer. The surface shall be maintained in a smooth condition, free from undulations and ruts, until other work is placed thereon or the work is accepted.

After the subgrade has been stabilized, the Contractor shall perform proof rolling in accordance with subsection 203.08. Final proof rolling will take place a maximum of two days (48 hours) after all mechanical stabilization or unbound aggregate work has been completed, unless otherwise approved by the Engineer. Final proof rolling will take place a minimum of two days after all lime or other chemical stabilization work has been completed, unless otherwise approved by the Engineer.
Add the following paragraph as subsection 203.08(a) Finishing:

The finished surface shall be smooth and uniform conforming to the typical sections. Variation from the stabilized subgrade plan elevations shall not exceed 0.04 feet. All irregularities, depressions, or weak spots, which develop, shall be corrected at the Contractor’s expense. The surface shall be maintained in a smooth condition, free from undulations and ruts until other work is placed thereon or the work is accepted.

Separate payment will be made for areas of unsuitable material excavation, geogrid reinforcement, and replacement of excavated materials.

Subsection 203.11 shall be revised to include the following:

The quantities for R-40 Embankment (Complete in Place) will not be measured, but will be the quantity designated in the Contract, unless field changes are ordered. If field changes are ordered, the quantities will be calculated using the revised dimensions and the additional volume of material shall be approved in writing by the Project Inspector prior to beginning the work. No allowances shall be made for shrinkage, swell, subsidence due to compaction of the existing ground or any other losses.

Subsection 203.12 shall be revised to include the following:

Payment for 3-inch Minus Rock shall be full compensation for all work necessary to complete the earthwork to the lines and grades when on the Plans. This includes scarification, wetting and drying of soils to obtain optimum moisture content, compaction, and testing.

Payment for No. 57 / 67 Rock shall be full compensation for all work necessary to complete the earthwork to the lines and grades when on the Plans. This includes scarification, wetting and drying of soils to obtain optimum moisture content, compaction, and testing.

Payment for R-40 Embankment (Complete in Place) shall be full compensation for all work necessary to complete the earthwork to the lines and grades when on the Plans. This includes scarification, wetting and drying of soils to obtain optimum moisture content, compaction, testing, and hauling and disposal of excess or unsuitable materials off the jobsite.

Payment will be made under:

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unclassified Excavation (Complete in Place)</td>
<td>Cubic Yard</td>
</tr>
<tr>
<td>Unsuitable Material (Muck)</td>
<td>Cubic Yard</td>
</tr>
<tr>
<td>3-inch Minus Rock</td>
<td>Cubic Yard</td>
</tr>
<tr>
<td>No. 57 / 67 Rock</td>
<td>Cubic Yard</td>
</tr>
<tr>
<td>R-40 Embankment (Complete in Place)</td>
<td>Cubic Yard</td>
</tr>
</tbody>
</table>

A portion of the Unclassified Excavation, if tested and approved by the Engineer, may be utilized for R-40 Embankment material.

END OF SECTION
1

REVISION OF SECTION 206
EXCAVATION AND BACKFILL FOR STRUCTURES

Section 206 of the Standard Specifications is hereby revised for this project as follows:

Section 206 shall include the following:

Structure excavation, structure backfill, filter material and bedding material required for all pipes culverts and pipe culvert extensions, inlets, storm sewer pipes, manholes and other drainage structures, will not be paid for separately but shall be included in the work. Compaction, water, pumping, bailing, draining, de-watering, sheeting, bracing and all other work necessary to complete the above items will not be measured and paid for separately, but shall be included in the work.

Subsection 206.02 (a) 1 shall include the following:

The Contractor may also substitute Structure Backfill (Class 3) as backfill for culverts and sewer pipes, if allowed by the Engineer.

Class 3 Structure Backfill shall be a sandy gavel mix and shall meet the following gradation:

<table>
<thead>
<tr>
<th>Sieve Size</th>
<th>Square Mesh Sieves</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.5mm (3/8&quot;)</td>
<td>90 to 100</td>
</tr>
<tr>
<td>4.75mm (#4)</td>
<td>45 to 80</td>
</tr>
<tr>
<td>0.075mm (#200)</td>
<td>5 to 12</td>
</tr>
</tbody>
</table>

Delete Subsection 206.02(a)(2) and replace with the following:

Flow fill shall be a self-leveling concrete material with the following specifications:

1. Slump of 7 to 10 inches when tested in accordance with ASTM C143.
2. Compressive strength F’C = 1,000 psi at 28 days when tested in accordance with ASTM D4832.
3. Weight of a minimum of 329 pounds ASTM 150 Type I-II.
4. Course aggregates when tested in accordance with ASTM-33 shall be a minimum of 1,000 pounds.
5. Fine Aggregate when tested in accordance with ASTM-33 shall be a minimum of 2,000 pounds.
6. Air Entraining Agent (Sika Air) shall be a minimum of 1.0 ounces per cubic yard when measured in accordance with ASTM C260.
7. Water shall be a minimum of 150 pounds.
8. Flash fill shall not be used in lieu of Flow Fill unless approved by the Engineer.

The Contractor shall submit a Process Control (PC) Plan with the mix design to the Engineer. The PC plan shall address the batching, mixing, testing and placement of the structure backfill (Flow-Fill). The Contractor shall submit a Structure Backfill (Flow-Fill) mix design for approval prior to placement. The mix design shall include the following laboratory test data:

1. ASTM C321, Air Content
2. ASTM D6023, Unit Weight
3. ASTM C143, Slump or ASTM D6103, Flow Consistency
4. ASTM D4832, 28-day Compressive Strength

Subsection 206.03 shall include the following after paragraph 3:

The subgrade beneath any structural element shall be scarified to the depth specified in Section 203.07 of the Specifications or as directed by the Engineer. The type of compaction shall be the same as that required below.
In subsection 206.03 delete the 17th paragraph and replace with the following:

When Flash Fill is used, it shall be batched with a volumetric mixing truck. Volumetric mixing trucks used to produce Flow-Fill and Flash Fill shall have a computer batching system, capable of producing the approved mix design and printing tickets. For Flash Fill, the batch weights of cement and/or fly ash per cubic yard shall be within 2 percent of the mix design batch weights and the batch weight of water per cubic yard shall be within 2 percent of the mix design batch weight.

Prior to the placement of structure backfill (Flow-Fill), the Contractor shall sample the structure backfill (Flow-Fill) in accordance with ASTM D5971. The Contractor shall test the structure backfill (Flow-Fill) unit weight in accordance with ASTM D6023. For Flash Fill, the measured unit weight shall be within 5.0 percent or 5.0 pounds per cubic foot, whichever is larger, of the approved mix design unit weight. The Contractor shall test the structure backfill (Flow-Fill) for slump in accordance with ASTM C143 or flow consistency according to ASTM D6103.

Subsection 206.08 shall include the following:

Excavate and replace within same working day the structural excavation and structural backfill that is located below retaining walls.

Subsection 206.09 shall include the following:

Excavations shall not be left open for extended periods of time. Excavations left open overnight shall be surrounded by orange construction safety fence and shall be subsidiary to the work.

END OF SECTION
REVISION OF SECTION 207
TOPSOIL

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

Subsection 207.01 shall include the following:

This work consists of removing existing on-site topsoil material, stockpiling the existing topsoil material and redistributing the existing topsoil material onto the re-graded slopes at a depth of four (4) inches minimum. The topsoil material shall be generally evenly distributed throughout the project limits. Any excess topsoil generated from this project shall become the property of the Contractor and shall be hauled off the Project.

Subsection 207.02(a) shall be added:

The source of topsoil for this project is undesignated. Topsoil can be salvaged from the project site or imported. Imported topsoil shall be approved by the County before use. The Contractor shall submit a 1-pound sample of the product four (4) weeks before its use on the project site for the County's approval. A Certificate of Compliance shall be provided to the County to verify the organic matter content, pH and carbon matter to nitrogen ratio. Soil tests shall be method of Soil Analysis used at the Colorado State University Soil Testing Laboratory.

Topsoil salvaged from the project site must be amended/conditioned to meet the requirements of this specification.

The topsoil shall have an acidic reaction of 6.0 to 7.5 pH and shall contain between 1 and 4 percent well composted organic matter. Any organic amendments shall include the following:

An organic product containing a mixture of well-rotted/composted cow or sheep manure and or composted aspen humus or wood residue or approved equal (sphagnum or native mountain peat is not acceptable). Organic product that has been aerobically and naturally processed in such a manner as to maintain a consistent temperature of 140 degrees Fahrenheit 60 degrees Celsius or greater for a period of time that is long enough to accomplish the following specifications:

1. The windrows of composted organic amendment (cow or sheep manure) have to be composted for 70 to 90 days. Certification must be provided to prove the product has gone through this process.
2. Eradicate harmful pathogens including coliform bacteria.
3. Free from noxious weeds or their seeds or any plant, root or seeds that would be toxic or harmful to growth.
4. Create a carbon to nitrogen ratio of no less than 15/1 to 25/1.
5. Contain no solid particle greater than 13 mm ½” in diameter.
6. Have a non-offensive smell like fresh turned soil.
7. Contain no significant level of dirt or soil and contain a maximum of 30% composted wood residue (pine or aspen wood) (saw dust is unacceptable).
8. The pH after composting shall be between 5.0 and 7.5 with an organic matter content of not less than 30%.
9. Soluble salts shall not be greater than 3mmhos/cm.

Topsoil shall contain the following minimum ammonium DTPA (chelate) extractable nutrients (this is the extracting solution used by CSU Soil Testing Laboratory).

<table>
<thead>
<tr>
<th>Nitrogen</th>
<th>5 ppm Air Dried Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphorus</td>
<td>5 ppm</td>
</tr>
<tr>
<td>Potassium</td>
<td>30 ppm</td>
</tr>
<tr>
<td>Iron (Fe)</td>
<td>5 ppm</td>
</tr>
</tbody>
</table>
REVISION OF SECTION 207

TOPSOIL

Topsoil shall not include any minerals or elements detrimental to plant growth. Soluble salts measured in saturation extract shall be less than 3 mmhos/cm.

Subsection 207.04 replace the last paragraph with the following:

Imported Topsoil and Topsoil salvaged from the roadways that meets the requirements of Section 207 will be measured by the cubic yard. The volume of Topsoil will be determined by measuring the area in which the Topsoil is placed and multiplying the area by 0.5 feet.

Subsection 207.04 shall include the following:

The addition of manure or soil amendments needed to bring the topsoil into conformance with the specifications will not be measured and paid for separately but shall be included in the work. Stockpile topsoil activities shall be included in the price of the work. Soil analysis shall not be paid for separately but shall be included in the cost of the work.

Topsoil will not be re-measured, but payment shall be based on the quantity identified in the bid tabulation, unless the quantity of Topsoil is significantly changed during construction by an approved Change Order. Loading and hauling to redistribute stockpiled topsoil uniformly throughout the project limits shall not be measured and paid for separately but shall be included in the work.

Subsection 207.05 shall include the following:

Payment for Topsoil shall include imported Topsoil and Topsoil salvaged from the roadways and placed in stockpiles or windrows, and subsequently placed upon completed cut and fills slopes. Salvaged Topsoil shall meet the requirements of this specification. All materials and work required to amend salvaged Topsoil so that it meets the requirements of Section 207 shall be included in the unit price bid for Topsoil. All work required for Topsoil shall be included in the unit price bid.

Payment will be made under:

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stockpile Topsoil</td>
<td>Cubic Yard</td>
</tr>
<tr>
<td>Redistribute Topsoil (6&quot; thick)</td>
<td>Cubic Yard</td>
</tr>
</tbody>
</table>

END OF SECTION
REVISION OF SECTION 208
EROSION CONTROL

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

Subsection 208.11 shall include the following:

All BMPs measured by the linear foot shall be determined along the centerline of the BMP. Measured length will not include required overlap.

All BMPs measured by the square yard shall not include the required overlap.

Erosion Control Management will be measured as Lump Sum.

Subsection 208.12 shall include the following:

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erosion Control Management</td>
<td>Lump Sum</td>
</tr>
<tr>
<td>Sediment Control Logs (8-inch) (Type 2) (10')</td>
<td>Linear Foot</td>
</tr>
</tbody>
</table>

END OF SECTION
Section 209 of the Standard Specifications is hereby revised for this project as follows:

**Subsection 209.01 shall include the following:**

Application of dust palliative to detour roadways must be completed prior to detouring traffic onto those roadways.

**Subsection 209.02 shall include the following:**

The Contractor is responsible for obtaining a legal source for water to complete the work as specified in the Contract Documents, including any necessary permits or fees.

**Subsection 209.05 are deleted and replaced with the following:**

The Contractor shall furnish and apply a dust palliative in accordance with the list below on WCR 50.5, WCR 41 and WCR 39 at the locations as determined by the Engineer.

Dust palliative shall consist of magnesium chloride and water. Application of dust palliative shall be done with acceptable sprinkling equipment at an appropriate rate as approved by the Engineer.

Magnesium Chloride dust palliative shall be applied as follows:

1. Contractor will apply the magnesium chloride dust palliative in two applications of 0.25 gallon per square yard in each application.
2. Allow to soak for 30 minutes after each application.
3. Roll the surface with a pneumatic tire roller, as specified in the Contract.
4. Do not permit traffic on the treated surface until approved.

**Subsections 209.07 paragraph 1 is deleted and replaced with the following:**

Water required for all work covered under the Contract will not be measured and paid for separately but shall be incidental to the work.

**END OF SECTION**
REVISION OF SECTION 210
RESET STRUCTURES

Section 210 of the Standard Specifications is hereby revised for this project as follows:

Subsection 210.04, Paragraph 4 and Paragraph 5 are deleted and replaced with the following:

The existing double gate to be reset is ‘BW Farm and Ranch’ brand and is in good condition. The existing hardware should be salvaged and reused. If the hardware cannot be reused, the Contractor shall buy and install new hardware per manufacturer’s specifications. Contractor shall install gate posts as per the details included in the plans. The bottom of the reset double gate shall be no closer than 6 inches from the finished ground surface, and when the reset gate is closed no less than ½ inch and no greater than 1 inch shall be provided between the gate panels. Work area is limited to the Right of Entry area shown on the project plans unless the Contractor makes different arrangements with the landowner.

This pay item will include for the resetting of the existing double gate as shown in the project plans due to the configuration of the new roadway, including new hardware if required. If the existing double gate is damaged during removal/storage by the Contractor, the Contractor shall provide a new equivalent gate at no additional cost to the project.

Payment will be made under:

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reset Double Gate</td>
<td>Each</td>
</tr>
</tbody>
</table>

END OF SECTION
REVISION OF SECTION 211
DEWATERING AND STREAM DIVERSION

Section 211 of the Standard Specifications is hereby added for this project as follows:

Subsection 211.01 Description shall include the following:

This work consists of dewatering temporary excavations required to control groundwater, site drainage, and storm flows for the installation of culverts and pipes. All other dewatering work including any dewatering associated with the installation of cofferdams and sheet piling is to be incidental to the work as specified in Subsection 206. Contractor is cautioned that the work involves construction in and around drainage channels, local rivers, and areas of local drainage. These areas are subject to frequent periodic inundation.

Subsection 211.02 Materials shall include the following:

On-site materials may be used within the limits of construction to construct temporary dams and berms. Materials such as plastic sheeting, sand bags, inflatable devices and storm sewer pipe may also be used if desired by Contractor.

Subsection 211.03 Construction Requirements shall include the following:

Requirements for controlling surface and groundwater during construction are as follows:

A. General. For all excavation, Contractor shall provide suitable equipment and labor to remove water and shall keep the excavation dewatered so construction can be carried on under dewatered conditions. The Contractor’s method of dewatering shall be approved by the Engineer prior to implementation. The Contractor shall submit a dewatering plan for review and approval 5 calendar days prior to implementation in accordance with Subsection 105.02. The dewatering plan shall include the following:

   a. Method statement addressing all requirements including copies of the relevant permits required for dewatering; and

   b. Plans and design calculations, sealed and signed by a Professional Engineer licensed in the State of Colorado, support the dewatering plan including but not limited to:

      1) Method for determining design flow;
      2) Map showing location of discharge points;
      3) Phasing Plans; and
      4) Site restoration plans showing how to return the area to its original configuration.

The Contractor shall dewater, by pumping or by excavating trenches leading to a positive gravity outlet, to a depth of at least three feet below the underside of any permanent structural element including but not limited to footings, cutoff walls, headwalls, etc. prior to exposing their proposed bearing surfaces. The dewatering process shall be commenced sufficient amount of time in advance of placing excavation equipment thereon to prevent undue disturbance of the foundation soil. If in the opinion of the Engineer, equipment is causing undue disturbance, the Engineer may require further drying of the bearing area or place limitations on the type of equipment permitted on the bearing area. The Engineer may require the Contractor to place (at the Contractor’s expense) additional filter material beyond any limits that may be shown on the plans to compensate for the loss of bearing capacity.

The water level shall be maintained below the level of placed concrete for at least three days before the water level is allowed to rise.
2

REVISION OF SECTION 211
DEWATERING AND STREAM DIVERSION

The Contractor’s method of dewatering and water disposal, including pumping and discharge equipment, must be approved by the Engineer prior to implementation. The Contractor shall submit a dewatering plan for review and approval 30 calendar days prior to implementation in accordance with Subsection 105.02. Water Disposal shall be in accordance with Subsection 107.25 - “Water Quality Control”. Contractor shall obtain all necessary permits and submit copies to the Engineer prior to commencing any dewatering activities.

Water control shall be accomplished such that no damage is done to adjacent channel banks or structures. Contractor is responsible for investigating and becoming familiar with all site conditions that may affect the work including surface water, potential flooding conditions, level of groundwater and the time of year the work is to be done. All excavations made as part of dewatering operations shall be backfilled with the same type material as was removed and compacted to ninety five percent (95%) of Maximum Standard Proctor Density (ASTM D698) except where replacement by other materials and/or methods are required.

Contractor shall conduct operations in such a manner that stormwater or other waters may proceed uninterrupted along their existing drainage courses. By submitting a bid, Contractor acknowledges that Contractor has investigated the risk arising from such waters and has prepared the bid accordingly and assumes all of said risk.

At no time during construction shall Contractor affect existing surface or subsurface drainage patterns of adjacent property. Any damage to adjacent property resulting from Contractor’s alteration of surface or subsurface drainage patterns shall be repaired by Contractor at no additional cost to the Owner.

Contractor shall remove all temporary water control facilities when they are no longer needed or at the completion of the Project, whichever occurs first.

Pumps and generators used for dewatering and water control shall be quiet equipment enclosed in sound deadening devices.

B. Surface Water Control. Surface water control generally falls into the following categories:

1. Normal low flows along the channel
2. Storm/flood flows along the channel
3. Flows from existing storm drain pipelines; and
4. Local surface inflows not conveyed by pipelines

Contractor shall coordinate, evaluate, design, construct, and maintain temporary water conveyance systems. These systems shall not worsen flooding, alter major flow paths, or worsen flow characteristics during construction. Contractor is responsible to ensure that any such worsening of flooding does not occur. Contractor is solely responsible for determining the methods and adequacy of water control measures.

At a minimum, Contractor shall be responsible for diverting the quantity of surface flow around the construction area so that the excavations will remain free of surface water for the time it takes to install these materials, and the time required for curing of any concrete or grout. Contractor is cautioned that the minimum quantity of water to be diverted is for erosion control and construction purposes and not for general protection of the construction-site. It shall be Contractor’s responsibility to determine the quantity of water which shall be diverted to protect the Work from damage caused by stormwater.
3

REVISION OF SECTION 211
DEWATERING AND STREAM DIVERSION

Contractor shall, at all times, maintain a flow path for all channels. Temporary structures such as berms, sandbags, pipeline diversions, etc., may be permitted for the control of channel flow, as long as such measures are not a major obstruction to flood flows, do not worsen flooding, or alter historic flow routes.

The Contractor’s method of diverting the surface water shall be approved by the Engineer prior to implementation. The Contractor shall submit a diversion plan for review and approval 30 calendar days prior to implementation in accordance with Subsection 105.02. The diversion plan shall include the following:

   c. Method statement addressing all requirements including copies of the relevant permits required for stream diversion; and
   d. Plans and design calculations, sealed and signed by a Professional Engineer licensed in the State of Colorado, support the diversion plan including but not limited to:
      1) Method for determining design flow;
      2) Surface water profiling and conveyance calculations;
      3) Phasing Plans; and
      4) Site restoration plans showing how to return the area to its original configuration.

A. Groundwater Control. Contractor shall install adequate measures to maintain the level of groundwater below the foundation subgrade elevation and maintain sufficient bearing capacity for all structures, pipelines, earthwork, and rock work. Such measures may include, but are not limited to, installation of perimeter sub-drains, pumping from drilled holes or by pumping from sumps excavated below the subgrade elevation. Dewatering from within the foundation excavations shall not be allowed. The foundation bearing surfaces are to be kept dewatered and stable until the structures or other types of work are complete and backfilled. Disturbance of foundation subgrade by Contractor operations shall not be considered as originally unsuitable foundation subgrade and shall be repaired at Contractor's expense.

Any temporary dewatering trenches or well points shall be restored following dewatering operations to reduce permeability in those areas as approved by Engineer.

Subsection 211.04 Method of Measurement shall include the following:

The quantity measured will be for each day that dewatering activities take place including all work required to size, design, obtain approvals, install, maintain and removal upon completion of the work. In order to construct culverts and pipes, it is possible that the Contractor will need to maintain flow in a channel. If needed, diverting flows in the channel shall be included as part of the Dewatering pay item.

No separate measurement for payment will be made for any labor, equipment, and materials required for this item. The price will include all of Contractor's costs. This BID item includes:

1. Implementing measures to control surface water and groundwater
2. Obtaining and transferring all required permits, upon approval.
3. Providing temporary power as required.
4. Evaluating, designing, constructing, maintaining, and monitoring dewatering measures
5. Installing check dams, pumps, dewater bags, earth embankments, diversion channels, sheet pile, wells, or any other material necessary for dewatering.
6. Monitoring, sampling, analysis, and water quality reports if required.
7. Protect work from base flows and storm events.
8. Providing all other related and necessary labor, equipment, and materials to complete the WORK.
Subsection 211.05 Basis of Payment shall include the following:

Payment will be on a per Day basis for the time that the Contractor starts to put the Water Control and Dewatering in place to the time it is removed as accepted by the Project Engineer. Dewatering requires pre-approval by the Engineer.

Payment will be made under:

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dewatering</td>
<td>Day</td>
</tr>
</tbody>
</table>

END OF SECTION
Section 212 of the Standard Specifications is hereby added for this project as follows:

**In Subsection 212.02(a) delete second paragraph beginning with “Seed types…” and replace with:**

**SEEDING**

Mycorrhiza shall be added to the seed mix at time of seeding as a seed coating. The rate will be at two (2) pounds per acre of seed. Unless specified otherwise, the Contractor will supply the Project Manager with information on the source and type of Mycorrhiza being used. Cost to add Mycorrhiza shall be included in bid unit price of the placement.

**SEED MIXTURE**

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Pounds PLS/Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western wheatgrass (Arriba, Barton, Rosana)</td>
<td>2.50</td>
</tr>
<tr>
<td>Blue Grama (Hachital, Lovington)</td>
<td>1.50</td>
</tr>
<tr>
<td>Sideoats Grama (Vaughn, Butte, Niner, El Reno, Haskell)</td>
<td>2.25</td>
</tr>
<tr>
<td>Smooth Brome (Lincoln, Manchar)</td>
<td>2.00</td>
</tr>
<tr>
<td>Sand dropseed</td>
<td>0.25</td>
</tr>
<tr>
<td>Perennial Ryegrass (Caliba or Garibaldi tetraploid)</td>
<td>0.75</td>
</tr>
<tr>
<td>Slender Wheatgrass (Pryor, Revenue, or San Luis)</td>
<td>2.50</td>
</tr>
<tr>
<td>Alkaligrass (Fults II, Salt on Sea)</td>
<td>1.25</td>
</tr>
<tr>
<td>Switchgrass (Nebraska 28, Blackwell)</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Total 14.0

Sterile Wheat will be added to the Seed Mixtures as a nurse crop at a rate of 15 PLS per acre.

Seeding rates shall be doubled when placed by hand broadcasting or by Hydraulic Seeding (if approved by the Engineer). Native grass seeding shall be done using a Native Grass Drill. The sterile wheat shall be done using a Grain Drill.

**In subsection 212.03 delete the seeding seasons table and replace it with the following:**

<table>
<thead>
<tr>
<th>Zone</th>
<th>Spring Seeding</th>
<th>Fall Seeding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 6000'</td>
<td>April 1&lt;sup&gt;st&lt;/sup&gt; or thaw to June 15&lt;sup&gt;th&lt;/sup&gt;</td>
<td>October 1&lt;sup&gt;st&lt;/sup&gt; to December 15&lt;sup&gt;th&lt;/sup&gt; or until consistent ground freeze</td>
</tr>
</tbody>
</table>

Section 212.06 shall be modified to include the following:

Soil in all areas to receive native seed shall be fertilized and conditioned.

(a) Fertilizing and Soil Conditioning. Soil in all areas to receive native seed shall be fertilized and conditioned. For soil preparation of native grass areas, the fertilizer shall be a complete starter fertilizer having the chemical analysis of 8% Nitrogen, 2% Phosphoric Acid, and 1% Potassium or an approved equivalent. The soil conditioner shall be an approved hydraulic growth medium (HGM) as outlined in this section.

HGMs are composed from a combination of thermally and mechanically processed straw and flexible flax fibers; sphagnum peat moss or certified compost and other organic growth enhancing additives. HGMs shall be based on their composition for different soil building, vegetation establishment and erosion control characteristics. All materials shall be prepackaged and at no time shall it be allowed for onsite mixing of fiber materials.
The HGM shall be used to provide a substance on or in which plants can be grown, for seed germination, plant growth/establishment and soil-building characteristics in conditions of marginal or extremely poor soils where there is minimal to no organic matter present.

HGMs shall be applied according the manufacturer’s recommendation. Special application rate considerations are required depending on environmental and soil conditions along with erosion potential on the site.

Organic Fiber Materials - **At no time will field mixing of organic fiber materials be allowed.**

The HGM shall be a minimum of 40% by volume of thermally and mechanically processed straw, flexible flax fibers; a minimum of 58% by volume of sphagnum peat moss or compost, and a minimum of 2% by volume of addition materials that provides plant derived valuable trace minerals, sugars, starches, proteins, fiber and 16 amino acids, growth stimulant/regulator, and mycorrhiza inoculants.

**Soil Chemistry Materials**
Soil chemistry and stabilizer shall be a composition of materials made from long chain polymer and cross-linking molecules in conjunction with a hydrocolloid vegetable gum based bonding agent.

**Submittals**
The Contractor shall submit the Application Rates Guide, Installation and Mixing Instructions, and Product Specifications to the Engineer for approval. The Contractor shall submit a letter of certification from the Manufacturer or Representative that the products meet or exceed all material composition requirements, laboratory testing properties, and product packaging requirements. Certification shall detail that the straw or fiber was processed at over 160 degrees Fahrenheit to ensure material is weed free.

**Delivery, Storage, and Handling**
All materials shall be delivered in ultraviolet and weather resistant factory labeled packages. Material shall be store in a cool dry place away from open flames ensuring strict adherence to manufacturer recommendations.

**Installation**
A. Strictly comply with manufacturer's installation instructions and recommendations.

B. Mixing:
1. Fill tank with water to a level where the paddles are ¼ covered and may be activated.
2. Activate the mechanical agitation system.
3. Prime pump and any discharge hoses before adding any HGMs.
4. Add the appropriate amount and type of soil stabilizer and tackifier as recommended for the site-specific application. Allow soil stabilizer and tackifier and water to mix for 5 minutes prior to adding HGMs. See manufacturer application rate chart for amounts of specific Soil Stabilizer & Tackifier and HGMs.
5. Continue filling tank with water to approximately ¾ full and begin adding bags of HGMs.
6. All quantity of HGMs should be added before the water level reaches 85% of the tanks capacity.
7. Add seed and/or other amendments to slurry as required.
8. Completely fill tank with water and allow slurry to mix for a minimum of 5 minutes or until all HGMs are mixed into a consistent slurry.
C. Application:
1. Prior to application and mixing of the HGM, the site shall be measured and marked to known areas to ensure appropriate seed, amendment, and HGMs application rates.
2. Bring sprayer to appropriate operating speed and agitator speed for slurry application.
3. Apply in a consistent and even manner across soil surface.
4. Apply from opposite directions to ensure the highest level of coverage, effectiveness, and performance.
5. If spraying is stopped at any time, close the spray nozzle at the end of the hose to avoid water draining from the hose. If you are using a tower applicator, stop normally and upon restart remove the spray tip, discharge a small amount of HGMs, replace the tip and return to applying the product.

Cleaning

Clean equipment per the equipment manufacturer’s recommendations.

Fertilizer and soil conditioner shall be scarified and turned under the area designated to be seeded to a depth of four inches (4") to free seeds and other plants. Apply the specific fertilizer in the native grass area at the recommended rate and work it into the soil to a depth of four inches (4") with a disc, spring tooth harrow or other suitable equipment. Apply the soil conditioner in the native grass area at the recommended rate and work it into the soil to a depth of four inches (4") with a disc, spring tooth harrow or other suitable equipment. All seeded areas will then be raked and rolled to the desired finished grades with gently sloping surfaces to adequately drain all surface water runoff.

(c) Seeding. Grade seeding areas to a smooth, even surface with a loose, uniformly fine texture. Roll, rake and remove ridges and fill depressions, as required to meet finish grades. Limit fine grading to areas that can be planted within 24 hours after fine grading has been completed. No additional payment will be made if the Contractor has to complete fine grading or for fine grading more than one time.

Subsection 212.07 shall be amended to include the following:

No separate measurement and payment will be made for fine grading, fertilizer, and soil conditioning for seeding. This work shall be included in the Unit Price bid for seeding. The unit price paid for seeding shall include all the Contractor’s costs including all labor, material, equipment and incidentals required to install seed, mulch, and mulch tackifier.

Subsection 212.08 shall include the following:

Payment for seeding shall be full compensation for all work necessary to complete the seeding. The actual quantity will be measured in-place by the County.

Payment will be made under:

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seeding (Native) (Sterile Wheat)</td>
<td>Acre</td>
</tr>
</tbody>
</table>

The HGM incorporated into the seeding process will not be paid for separately but shall be included in the work.

END OF SECTION
1

REVISION OF SECTION 213
MULCHING

Section 213 of the Standard Specifications is hereby revised for this project as follows:

In subsection 213.04, Delete the second paragraph and replace with the following:

The quantity of hydro-mulch and tackifier will not be measured separately but will be included in the measurement for seeding.

In subsection 213.05, Add the following:

Mulching (Hydro-mulch with Tackifier) if approved by Weld County shall be considered incidental to seeding (native).

END OF SECTION
REVISION OF SECTION 216
SOIL RETENTION COVERING

Section 216 of the Standard Specifications is hereby deleted for this project and replaced with the following:

Delete Subsection 216.01 and replace with the following:

This work consists of furnishing, preparing, applying, placing, and securing soil retention blankets and turf reinforcement mats for erosion control on roadway ditches, slopes, or channels as designated in the Contract or as directed by the Engineer.

In Subsection 216.02(a) delete Table 216-2 and replace with the following:

<table>
<thead>
<tr>
<th>Product Class</th>
<th>Slope Application “C” Factor1 ASTM D 6459</th>
<th>Channel Application Permissible Shear Stress2 (Un-vegetated) ASTM D 6460</th>
<th>Minimum Tensile Strength ASTM D 6818</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>&lt; 0.10@3:1</td>
<td>2.00 lbs/sf</td>
<td>100 lbs/ft</td>
</tr>
<tr>
<td>2</td>
<td>&lt; 0.10@3:1</td>
<td>2.25 lbs/sf</td>
<td>125 lbs/ft</td>
</tr>
</tbody>
</table>

Notes:
"C" Factor calculated as ratio of soil loss from soil retention blanket protected slope (tested at specified or greater gradient, h:v) to ratio of soil loss from unprotected (control) plot in large-scale testing.

Permissible shear stress is the minimum shear stress that a product must be able to sustain without physical damage or excess soil loss when it is installed on a bare soil channel. Failure is defined as ½ inch of soil loss during a 30-minute flow event in large scale testing.

In Subsection 216.02(a) add the following language after Table 216-2:

A sample of the staples and a copy of the manufacturer's product data showing that the product meets the Contract requirements shall be submitted for approval at the environmental preconstruction conference.

In Subsection 216.02(b) delete Table 216-4 and replace with the following:

<table>
<thead>
<tr>
<th>Product Class</th>
<th>Tensile Strength MD ASTM D 6818</th>
<th>UV Stability @ 500 Hours ASTM D 4355</th>
<th>Maximum Permissible Shear Stress1 (Unvegetated) ASTM D 6460</th>
<th>Maximum Permissible Shear Stress1 (Vegetated) ASTM D 6460</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>125 lbs/ft</td>
<td>80%</td>
<td>1.8 lbs/sf</td>
<td>6.0 lbs/sf</td>
</tr>
<tr>
<td>2</td>
<td>150 lbs/ft</td>
<td>80%</td>
<td>2.5 lbs/sf</td>
<td>8.0 lbs/sf</td>
</tr>
<tr>
<td>3</td>
<td>175 lbs/ft</td>
<td>80%</td>
<td>3.1 lbs/sf</td>
<td>10.0 lbs/sf</td>
</tr>
</tbody>
</table>

Notes:
Permissible shear stress is the minimum shear stress that a product must be able to sustain when placed on a fully vegetated channel without physical damage or excess soil loss. Failure is defined as ½ inch of soil loss during a 30-minute flow event in large scale testing.
Subsection 216.02(b) shall include the following:

After installation, the TRM shall be covered with one inch of topsoil in accordance with Section 207. After the topsoil has been placed, seeding shall be done by hand broadcasting in accordance with Section 212.

In Subsection 216.02(c) delete paragraph one and replace with the following:

Staples. Staples shall be made of ductile steel wire. For use in Channel: 0.165 inch, “U” shaped staples shall be 8 inches long and have a 1-inch crown. For use on Slope: 0.165 inch, “U” shaped staples shall be 8 inches long and have a 1-inch crown. “T” shaped pins shall not be used.

Subsection 216.08 shall be revised as follows:

Payment will be made under:

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soil Retention Blanket (S-C) (BioD CL 2)</td>
<td>Square Yard (SY)</td>
</tr>
<tr>
<td>Turf Reinforcement Mat (Class 3)</td>
<td>Square Yard (SY)</td>
</tr>
</tbody>
</table>

Preparation of seedbed, fertilizing, soil conditioning, and seeding will be measured and paid for in accordance with Sections 207, 212, and 213.

Staples will not be paid for separately but shall be included in the work.

END OF SECTION
REVISION OF SECTIONS 304 AND 703
AGGREGATE BASE COURSE

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

**Subsection 304.01 shall include the following:**

This work consists of furnishing and placing aggregate as shoulder material adjacent to the edges of pavement.

This work consists of furnishing and placing aggregate as surface material on the gravel roadways as designated in the plans.

**Subsection 304.02 shall include the following:**

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

The aggregate base course (Class 6) must meet the gradation requirements and have a resistance value of at least 69 when tested by the Hveem Stabilometer method.

Materials for Aggregate Base Course (Shouldering) shall meet all the requirements for Class 6. Materials for Aggregate Base Course (Surface Gravel) shall meet all the requirements in Section 703.03. Approval of the surface gravel will be contingent on material meeting the requirements in Table 703-3.

**Subsection 304.03 shall include the following:**

Commercial Mineral Fillers will not be allowed in Aggregate Base Course (Shouldering) or in Aggregate Base Course (Surfacing).

**Subsection 304.04 shall include the following:**

A device capable of placing the shoulder material in its final position shall be used. The device is subject to the Engineer’s approval. **Dumping of shoulder material on the roadway surface will not be permitted.**

**Subsection 304.06 shall include the following:**

Shoulder gravel shall be compacted by double wheel roll with a loaded tandem truck. Compaction of shoulder gravel shall achieve a density of not less than 95% of the modified proctor.

**Subsection 304.07 shall be deleted and replaced with the following:**

The Contractor shall be aware that the plan quantities are based upon unit weight and in-place density, as describe in the Plans. The Contractor’s bid unit cost shall account for differing unit weights intended to be furnished to the project as no quantity adjustments will be made for differing unit weights. The Project Inspector will verify that the plan quantity has been incorporated into the project utilizing information from delivery tickets furnished by the material supplier. Failure to comply with the requirements of this subsection shall be grounds for withholding of progress payments. At the sole discretion of Weld County, failure to comply with the requirements of this subsection shall be grounds for replacement of damaged roadway sections by the contractor at no cost to the County.
Subsection 304.08 shall include the following:

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate Base Course (Class 6)</td>
<td>Ton</td>
</tr>
</tbody>
</table>

END OF SECTION
Section 401 of the Standard Specifications is hereby revised as follows:

Subsection 401.02(a) add paragraph (4) to include the following:

(4) The job-mix formula for Pavement shall be established by a testing laboratory approved by the County and at the Contractor’s expense. Copies of all test data shall be provided to and approved by the County prior to construction.

Subsection 401.17, first paragraph, shall be modified to include the following:

If the Contractor can demonstrate to Weld County that all the manufacturer’s recommendations were followed, and the pneumatic tire roller is detrimental to the finished surface of the HMA, the Contractor may request Weld County to waive the pneumatic tire roller requirement.

END OF SECTION
Payment will be made under:

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hot Mix Asphalt (Grading S) (75) (PG 64-22)</td>
<td>Ton</td>
</tr>
<tr>
<td>Hot Mix Asphalt (Grading SX) (75) (PG 64-22)</td>
<td>Ton</td>
</tr>
</tbody>
</table>

Aggregate, asphalt recycling agent, additives, hydrated lime, and all other work necessary to complete each hot mix asphalt item will not be paid for separately but shall be included in the unit price bid. When the pay item includes the PG binder grade, the asphalt cement will not be measured and paid for separately but shall be included in the work. When the pay item does not include the PG binder grade, asphalt cement will be measured and paid for in accordance with Section 411. Asphalt cement used in Hot Mix Asphalt (Patching) will not be measured and paid for separately but shall be included in the work.

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

The Contractor shall collect the scale ticket on each load when it is delivered to the project site and ensure that the information required in subsection 109.01 is shown on each ticket.

The scale tickets shall be available on site for County personnel to inspect.

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

A. On each envelope: Project number, location, date of paving, type of material, daily total and cumulative total.

B. One of the following:
   1. Two adding machine tape tabulations of the weight tickets with corresponding total run and signed by two different persons,
   2. One signed adding machine tape tabulation of the weight tickets that has been checked and signed by a second person, or
   3. Signed check tape of computer scale tickets that have a cumulative total. These scale tickets must be consecutive and without voids or adjustments.

C. A listing of any overweight loads on the envelope, including ticket numbers and amount over legal limit.

D. A comparison of the actual yield for each day's placement to the theoretical yield. Theoretical yield shall be based on the actual area paved, the planned thickness, and the actual density of the mixture being placed. Any variance greater than +2.5% shall be indicated on the envelope and a written explanation included.

E. Asphalt acceptance shall be based on gradation acceptance.

END OF SECTION
Section 411 of the Standard Specifications is hereby revised as follows:

Delete Subsection 411.05 and replace with the following:

Bituminous materials will not be measured and paid for separately but shall be included in the unit prices bid for Hot Mix Asphalt (Grading S) (75) (PG 64-22), and Hot Mix Asphalt (Grading SX) (75) (PG 64-22).

END OF SECTION
Section 420 of the Standard Specifications is hereby revised for this project as follows:

Subsection 420.01 shall include the following:

This work includes furnishing and installing geosynthetic material over unsuitable subgrade materials in accordance with these specifications and the details shown on the plans.

Subsection 420.02 shall include the following:

Geotextile (Separator)(Class 1) shall meet the requirements of subsection 712.08, including Table 712-2a.

The aggregate fill to be placed over the top of the geosynthetic material shall meet all the specifications of Aggregate Base Course (Class 6).

Subsection 420.06 shall include the following:

Geotextile Separator (Drainage) shall meet the requirements of subsection 712.08 and Table 712-b.

Subsection 420.07 shall be deleted and replaced with the following:

Geotextile shall be installed as follows:

Subgrade Preparation: Clear, grub and excavate (as required) to the plan subgrade or undercut elevation, stripping topsoil, deleterious debris and unsuitable material from the site. Cut stumps and other projecting vegetation as close and even to the ground surface as practical. Specialized equipment with low ground pressure, as directed by the Engineer, may be required for very soft soils (CBR ≤ 1.5%) to minimize subgrade disturbance. In addition, it may also be beneficial to leave root mats in place in such instances. The surface of the subgrade should be relatively smooth and level, and depressions or humps greater than 6 inches should be graded out.

Geosynthetic Deployment: The geosynthetic reinforcement shall be placed directly on the prepared subgrade. It should be rolled out flat and tight with no folds or wrinkles. Unroll the geosynthetic in the direction of travel so that the machine direction (i.e., long axis) of the roll is parallel with channelized traffic patterns. Adjacent rolls should be overlapped along their sides and ends as a function of subgrade strength as follows:

<table>
<thead>
<tr>
<th>CBR</th>
<th>Overlap</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥ 3%</td>
<td>12” to 18” overlap</td>
</tr>
<tr>
<td>1% ≤ CBR ≤ 3%</td>
<td>24” to 36” overlap</td>
</tr>
<tr>
<td>0.5% ≤ CBR &lt; 1%</td>
<td>36” or Sewn</td>
</tr>
<tr>
<td>CBR &lt; 0.5%</td>
<td>Sewn</td>
</tr>
</tbody>
</table>

If the need for 40” inches of overlap is reached, it is strongly suggested that the overlap is sewn or otherwise adhered to limit the potential formation of a slip plane between the overlapped panels. Note: very heavy loading and very soft subgrades will also warrant sewn seams instead of overlapping panels. Prior to fill placement, the geosynthetic can be held in place using U-shaped sod staples or simply by strategically placing shovelfuls of the fill to weigh down the geosynthetic. Overlap the geosynthetics in the
direction fill will be spread to avoid peeling-back of the geosynthetic at overlaps by the advancing fill. Cut and overlap the geosynthetic to accommodate curves. Cutting may be done with sharp shears, razor knives or handheld power (i.e., "cutoff") saws. Cut the geosynthetic to conform to immovable protrusions, such as manhole covers and vertical utilities. Overlap lengths will not be paid for separately but will be considered subsidiary to item 420.

Fill Placement: Aggregate fill, as specified, should be placed directly over the geosynthetic in 8 - 12-inch loose lifts. Typically, if the design section thickness is ≤ 16 inches, the entire section should be placed and compacted in one single lift to minimize further degradation of the subgrade. On relatively competent subgrades (CBR ≥ 4%), standard, highway-legal, rubber-tired vehicles (end dumps and belly dumps) may be driven over the exposed geosynthetic at slow speeds (less than 5 mph), and in straight paths. These vehicles can dump aggregate fill as they advance, provided this construction traffic will not cause significant rutting upon bare subgrade. Sudden braking, sudden starting and sharp turning should be avoided. Tracked construction equipment must not be operated directly upon the exposed geosynthetic. A minimum aggregate fill thickness of 6 inches is required prior to operation of tracked equipment on the geosynthetic. In addition, turning of tracked equipment should be kept to a minimum to prevent tracks from displacing the fill and damaging the geosynthetic. Over softer subgrades (CBR < 4%), aggregate fill should be end-dumped from the edge of the previously placed material, spreading from the middle outward.

Compaction: Standard compaction methods may be used unless the soils are very soft (CBR ≤ 1.5%). In such cases, static compaction with a light smooth drum roller is considered prudent.

Installation and Repairs for Damaged Areas: Repairs to roadway reinforcement geosynthetics can be made in the field by placing a repair panel or patch over the damaged area. The repair panel should extend a minimum of 3 ft beyond the edges of the damaged geosynthetics. Pullout and/or direct sliding calculations should be performed by the project engineer to verify the minimum required overlap length to meet a specific project’s requirements.

Geotextile that is damaged after placement shall be removed and replaced at the Contractor’s expense.

Subsection 420.09 shall include the following:

Geotextile (Separator)(Class 1) will be measured in place by the square yard of surface area, completed and accepted.

Subsection 420.10 shall include the following:

Geotextile Separator (Drainage) shall be included in the cost (subsidiary) of the riprap pay item.

Payment will be full compensation for all work and materials required to complete the item.

Subsection 712.08 shall include the following:

The material for Geotextile (Separator)(Class 1) shall meet the properties in Table 712-2a.
Table 712-2a
Geotextile (Separator) (Class 1) - Physical and Mechanical Properties

<table>
<thead>
<tr>
<th>Physical Properties</th>
<th>Unit</th>
<th>Typical Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roll Length (minimum)</td>
<td>Feet</td>
<td>300</td>
</tr>
<tr>
<td>Roll Width (minimum)</td>
<td>Feet</td>
<td>15</td>
</tr>
<tr>
<td>Roll Area (minimum)</td>
<td>Sq. Yd.</td>
<td>500</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mechanical Properties</th>
<th>Test Method</th>
<th>Unit</th>
<th>Minimum Average Roll Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRENGTH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tensile Modulus @ 2% strain (CD)</td>
<td>ASTM D4595</td>
<td>lbs/ft</td>
<td>1,800</td>
</tr>
<tr>
<td>Tensile Modulus @ 5% strain (CD)</td>
<td>ASTM D4595</td>
<td>lbs/ft</td>
<td>4,380</td>
</tr>
<tr>
<td>HYDRAULIC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flow Rate</td>
<td>ASTM D4491</td>
<td>gal/min/ft²</td>
<td>75</td>
</tr>
<tr>
<td>Permittivity</td>
<td>ASTM D4491</td>
<td>sec⁻¹</td>
<td>1.0</td>
</tr>
<tr>
<td>SOIL RETENTION</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apparent Opening Size (AOS)</td>
<td>ASTM D4751</td>
<td>U.S. Sieve (mm)</td>
<td>40</td>
</tr>
<tr>
<td>Pore Size 0₉₅</td>
<td>ASTM D6767</td>
<td>microns</td>
<td>337</td>
</tr>
<tr>
<td>Pore Size 0₅₀</td>
<td>ASTM D6767</td>
<td>microns</td>
<td>192</td>
</tr>
<tr>
<td>SOIL INTERACTION</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction Coefficient</td>
<td>ASTM D6706</td>
<td>--</td>
<td>0.9</td>
</tr>
<tr>
<td>Factory Sewn Seam</td>
<td>ASTM D4884</td>
<td>lbs/ft</td>
<td>3,000</td>
</tr>
<tr>
<td>UV Resistance (at 500 hours)</td>
<td>ASTM D4355</td>
<td>% strength retained</td>
<td>90</td>
</tr>
</tbody>
</table>

Minimum overlap shall be 12” on compactable soil and 18” on non-compactable soil. Minimum overlap shall be 18” where placed on top of geogrid. All overlap will not be paid for separately but shall be considered subsidiary to the flat surface and edge areas.

Mirafi® H2R/i or equivalent meeting the requirements below.

<table>
<thead>
<tr>
<th>Mechanical Properties</th>
<th>Test Method</th>
<th>Unit</th>
<th>Minimum Average Roll Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>MD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wide Width Tensile Strength</td>
<td>ASTM D4595</td>
<td>lbs/ft (kN/m)</td>
<td>5280 (77.0)</td>
</tr>
<tr>
<td>Wide Width Tensile Strength @ 2% strain</td>
<td>ASTM D4595</td>
<td>lbs/ft (kN/m)</td>
<td>480 (7.0)</td>
</tr>
<tr>
<td>Maximum Opening Size</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apparent Opening Size (AOS)</td>
<td>ASTM D4751</td>
<td>U.S. Sieve (mm)</td>
<td>40 (0.425)</td>
</tr>
<tr>
<td>Minimum Roll Value</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permittivity</td>
<td>ASTM D4491</td>
<td>sec-1</td>
<td>0.4</td>
</tr>
<tr>
<td>Flow Rate</td>
<td>ASTM D4491</td>
<td>gal/min/ft² (l/min/m²)</td>
<td>30 (1222)</td>
</tr>
</tbody>
</table>
Minimum Test Value

<table>
<thead>
<tr>
<th></th>
<th>ASTM</th>
<th>microns</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pore Size (050)</td>
<td>D6767</td>
<td></td>
<td>85</td>
</tr>
<tr>
<td>Pore Size (095)</td>
<td>D6767</td>
<td></td>
<td>195</td>
</tr>
<tr>
<td>Wet Front Movement 1 (24 minutes)</td>
<td>C15592</td>
<td>inches</td>
<td>6.0</td>
</tr>
<tr>
<td>Wet Front Movement 1 (983 minutes) Zero Gradient</td>
<td>C15592</td>
<td>inches</td>
<td>73.3</td>
</tr>
</tbody>
</table>

Minimum overlap shall be 12” on compactable soil and 18” on non-compactable soil. All overlap will not be paid for separately but shall be considered subsidiary to the flat surface and edge areas. The overlap shall be ‘shingled’ such that the overlap of a layer nearer the road centerline is placed over a layer further from the road centerline.

TriAx TX160 Geogrid or equivalent meeting the requirements below.

General
1. The geogrid is manufactured from a punched polypropylene sheet, which is then oriented in there substantially equilateral direction so that the resulting ribs shall have a high degree of molecular orientation, which continues at least in part through the mass of the integral node.
2. The properties contributing to the performance of the mechanically stabilized layer include the following:

<table>
<thead>
<tr>
<th>Index Properties</th>
<th>Longitudinal</th>
<th>Diagonal</th>
<th>Transverse</th>
<th>General</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rib Pitch (2), mm (in)</td>
<td>40 (1.60)</td>
<td>40 (1.60)</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Mid-rib depth (2), mm (in)</td>
<td>--</td>
<td>1.6 (0.06)</td>
<td>1.4 (0.06)</td>
<td>--</td>
</tr>
<tr>
<td>Mid-rib width (2), Mm (in)</td>
<td>--</td>
<td>1.0 (0.04)</td>
<td>1.2 (0.05)</td>
<td>--</td>
</tr>
<tr>
<td>Rib shape</td>
<td></td>
<td></td>
<td></td>
<td>rectangular</td>
</tr>
<tr>
<td>Aperture shape</td>
<td></td>
<td></td>
<td></td>
<td>triangular</td>
</tr>
</tbody>
</table>

| Structural Integrity            |              |          |            | General |
| Junction efficiency (3), %      |              |          |            | 93      |
| Aperture stability (4), kg-cm/deg @5.0kg-cm (2) |              |          |            | 3.6     |
| Radial stiffness at low strain (5), kN/m @0.5% strain (pb/ft @ 0.5% strain) |              |          |            | 300     |
| (20580)                         |              |          |            |         |

| Durability                      |              |          |            | General |
| Resistance to chemical degradation (6) |              |          |            | 100%    |
| Resistance to ultra-violet light and weathering (7) |              |          |            | 100%    |
Dimension and Delivery

The TX Geogrid shall be delivered to the jobsite in roll form with each roll individually identified and nominally measuring 3.0 meters (9.8 feet) and/or 4.0 meters (13.1 feet) in width and 75 meters (246 feet) in length.

Notes
1. Unless indicated otherwise, values shown are minimum average roll values determined in accordance with ASTM S4759-02. Brief description of test procedures is given in the following notes.
2. Nominal dimensions.
3. Load transfer capability determined in accordance with GRI-GG2-87 and GRI-GG1-87 and expressed as a percentage of ultimate tensile strength.
4. In-plane torsional rigidity measured by applying a moment to the central junction of a 225, x 225mm specimen restrained at its perimeter in accordance with GRI-GG9.
5. Radial stiffness is determined from tensile stiffness measured in any in-plane axis from testing in accordance with ASTM D6637-10.
6. Resistance to loss of load capacity or structural integrity when subjected to chemically aggressive environments in accordance with EAP 9090 immersion testing.
7. Resistance to loss of load capacity or structural integrity when subjected to 500 hours of ultraviolet light and aggressive weathering in accordance with ASTM D4355-05.

Minimum overlap shall be 18". All overlap will not be paid for separately but shall be considered subsidiary to the flat surface and edge areas.
The material for Geotextile Separator (Drainage) shall meet the properties in Table 712-2b.

### Table 712-2b

**Geotextile Separator (Drainage) - Physical and Mechanical Properties**

<table>
<thead>
<tr>
<th>Physical Properties</th>
<th>Unit</th>
<th>Typical Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roll Length (minimum)</td>
<td>Feet</td>
<td>300</td>
</tr>
<tr>
<td>Roll Width (minimum)</td>
<td>Feet</td>
<td>12.5</td>
</tr>
<tr>
<td>Roll Area (minimum)</td>
<td>Sq. Yd.</td>
<td>417</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mechanical Properties</th>
<th>Test Method</th>
<th>Unit</th>
<th>Minimum Average Roll Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRENGTH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grab Tensile Strength</td>
<td>ASTM D4632</td>
<td>lbs</td>
<td>400 (MD) 335 (CD)</td>
</tr>
<tr>
<td>Grab Tensile Elongation</td>
<td>ASTM D4632</td>
<td>%</td>
<td>20 (MD) 15 (CD)</td>
</tr>
<tr>
<td>Trapezoid Tear Strength</td>
<td>ASTM D4533</td>
<td>lbs</td>
<td>145 (MD) 125 (CD)</td>
</tr>
<tr>
<td>CBR Puncture Strength</td>
<td>ASTM D6241</td>
<td>lbs</td>
<td>1,250</td>
</tr>
<tr>
<td>HYDRAULIC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flow Rate</td>
<td>ASTM D4491</td>
<td>gal/min/ft²</td>
<td>115</td>
</tr>
<tr>
<td>Permittivity</td>
<td>ASTM D4491</td>
<td>sec⁻¹</td>
<td>1.5</td>
</tr>
<tr>
<td>Percent Open Area</td>
<td>COE-02215</td>
<td>%</td>
<td>8</td>
</tr>
<tr>
<td>SOIL RETENTION</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apparent Opening Size (AOS)</td>
<td>ASTM D4751</td>
<td>U.S. Sieve</td>
<td>30</td>
</tr>
<tr>
<td>SOIL INTERACTION</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UV Resistance (at 500 hours)</td>
<td>ASTM D4355</td>
<td>% strength retained</td>
<td>90</td>
</tr>
</tbody>
</table>

**END OF SECTION**
REVISION OF SECTION 506
RIPRAP

Section 506 of the Standard Specifications is hereby revised for this project as follows:

**Subsection 506.02 shall include the following:**

The Contractor shall supply Riprap $d_{50}$ per Table 506-2. Prior to delivering this material to the jobsite, the Contractor shall supply laboratory testing data from the supplier, for approval by the Project Inspector.

**Subsection 506.03 shall include the following:**

Geotextile (Separator) - Class 1 shall meet the material requirements of the revision to Subsection 712.08 Geotextiles and table 712-2a. This item shall be included in the cost (subsidiary) of the riprap pay item unless listed separately in the Contract.

END OF SECTION
Section 601 of the Standard Specifications is hereby revised for this project as follows:

Subsection 601.01 shall include the following:
This work shall include the furnishing and placing of reinforcing steel in accordance with these specifications and in conformity with the plans.

Subsection 601.20 shall include the following:

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete (Class D)</td>
<td>Cubic Yard</td>
</tr>
</tbody>
</table>

END OF SECTION
Section 603 of the Standard Specifications is hereby revised for this project as follows:

**Subsection 603.02 shall include the following:**

Reinforced concrete pipe shall be manufactured from concrete that meets the requirements for severity of sulfate exposure Class 0 specified in subsection 601.04 and in conformity with the plans.

**Subsection 603.07(a) delete the second paragraph and replace with the following:**

Joints for all circular and elliptical reinforced concrete pipes will be made with confined rubber gaskets. Concrete collars will be required at all non-standard joints (not tongue and groove or bell and spigot) and at all connections to existing pipe.

**END OF SECTION**
Section 607 of the Standard Specifications is hereby revised for this project as follows:

**Subsection 607.01** is hereby revised as follows:

Work in this section will include installation of temporary 5-strand barbed wire fence per the Plans.

**Subsection 607.03** is hereby revised to include the following paragraphs:

The temporary 5-Strand Barbed Wire Fence shall be placed 2’ inside the temporary construction easement line. The permanent Barbed Wire Fencing (5-Strand) shall be placed on the right of way line. It shall be installed per the Plans.

**Subsection 607.04** is hereby revised as follows:

All fence types will be measured by the Linear Foot including posts at the base of the fence.

Gate installation shall be per the reset gate provision.

Wetland fence shall be orange construction fence with green flagging per the Plans.

**Subsection 607.05** is hereby revised as follows:

Payment for all fences will be full compensation for all labor, materials, and equipment required to construct the fence.

<table>
<thead>
<tr>
<th><strong>Pay Item</strong></th>
<th><strong>Pay Unit</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Temp. 5-Strand Barbed Wire Fence</td>
<td>Linear Foot (LF)</td>
</tr>
<tr>
<td>Construction Fence (Plastic)</td>
<td>Linear Foot (LF)</td>
</tr>
<tr>
<td>Barbed Wire Fencing (5-Strand)</td>
<td>Linear Foot (LF)</td>
</tr>
</tbody>
</table>

END OF SECTION
Section 612 of the Standard Specifications is hereby revised for this project as follows:

Subsection 612.02 is hereby revised to include the following paragraph:

For delineators marking a culvert, use a white carsonite delineator post 60” to 66” in height and 3.75” in width. The reflective elements will use the minimum HIP reflective sheeting (yellow Class 3).

For delineators marking the edge of road, use a green carsonite delineator post 60” to 66” in height and 3.75” in width. The reflective elements will use the minimum HIP reflective sheeting (white Class 1).

Subsection 612.05 is hereby revised to include the following:

Payment will be made under:

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delineator (Type I)</td>
<td>Each</td>
</tr>
<tr>
<td>Delineator (Type III)</td>
<td>Each</td>
</tr>
</tbody>
</table>

END OF SECTION
Section 614 of the Standard Specifications is hereby revised for this project as follows:

**Subsection 614.02 is hereby revised to include the following paragraph:**

Steel square tube type perforated sign posts and anchors shall meet or exceed the following:

1. Posts – 2 1/4” x 2 1/4” square posts, 12-gauge, ASTM designation A570, Grade 50, drilled with 7/16” diameter holes on 1” centers.
2. Anchors – 2 ½” x 2 ¼” x 30” tall square tube, 12-gauge, ASTM designation A570, Grade 50, drilled with 7/16” diameter holes on 1” centers.
3. J-bolts or corner bolts shall be used to attach the posts to the anchors.
4. Coating – all posts and anchors shall be galvanized to ASTM designation A653, G90, Structural Quality, Grade 50, Class 1. The steel shall also be coated with a chromate conversion coating and a clear organic polymer topcoat.
5. All stop sign posts shall be equipped with reflective markings on all four (4) sides of the posts.

Structure signs shall be green with white lettering and shall be attached to the bridge structure wherever possible.

**Subsection 614.09 is hereby revised to include the following paragraph:**

Steel square tube type perforated sign posts and anchors placed in concrete or asphalt shall be either core drilled with a 4” diameter hole, or a 4” diameter piece of PVC pipe may be placed into the concrete or asphalt full depth and flush with the surface.

**Subsection 614.13 is hereby revised to include the following paragraphs:**

Steel square tube type perforated sign posts will be measured by the length in linear feet of post installed. The associated 30” tall anchor will not be measured separately and shall be included in the cost of the post.

The reflective tape for the stop sign posts will not be measured separately and shall be included in the cost of the post.

The J-bolts or corner bolts will not be measured separately and shall be included in the cost of the post.

**Subsection 614.14 is hereby revised to include the following:**

Payment will be made under:

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel Sign Post (2.25x2.25 Inch Square Post)</td>
<td>Lineal Foot</td>
</tr>
</tbody>
</table>

END OF SECTION
REVISION OF SECTION 620
FIELD FACILITIES (FIELD OFFICE)

Subsection 620.02 shall include the following:

The requirements for a remote communication office trailer shall deliver quality communications at any location. As construction sites are often isolated and remote, this poses problems. The basic requirement of fast and reliable internet connection in a construction trailer is throughput and reliability. Services required include SSL VPN, VOIP, and other internet services.

Internet connections in the field office are for the use of Weld County employees or agents. The Contractor shall provide internet connections for their employees separate from the County internet connections.

The order of preference for internet connections is provided below. If reliable data services are not available, data signal boosters may be required to meet the bandwidth and throughput requirements.

1. Hard wired broadband or DSL
2. Radio broadband – if speed and signal requirements are met
3. Satellite broadband – if speed and signal requirements are met
4. Cellular radio – if speed and signal strength requirements are met. Cellular 4G grants greater than 5Mbps download speeds that will allow for 2 – 4 computer endpoints. Cellular boosters strengthen signals and should allow for more throughput and increased speeds. With a booster, 3G could increase up to 1.4 Mbps allowing greater usability and an additional endpoint. Additional endpoints may be connected to either scenario, however overall performance may degrade.
5. Wireless hotspots – only if there is no other option. One hotspot shall be provided per County employee assigned to the project. Wireless hotspot configurations must include WPA2 and AES encryption for SSID authentication.

Cable broadband and DSL are always preferred and will grant an increased number of endpoints, however in many locations this may simply not be a viable alternative. A fully inclusive list of connection alternatives includes Cable, DSL, Point to Point wireless, 4G, 3G, satellite and dialup.

Weld County will only supply the field office trailer. The Contractor shall transport and furnish all other related items in Section 620 and M-620-2, including but not limited to, furniture, printers, telephone service and power. Weld County field office trailer is located at CR 34 and CR 13 Intersection. Field office trailer shall be moved from at CR 34 and CR 13 Intersection by the contractor and brought back to 1111 H Street after the project is completed. Contractor is responsible to return the field office trailer in same or better condition.

The Contractor shall be responsible for locating the County provided trailer in a location that is acceptable to Weld County. The Contractor shall obtain the necessary permits for the trailer.

Field office shall be set up at the start of construction. Start of construction shall be anything other than mobilization and surveying. Set up locations shall be within ½ mile of the construction site. Field office shall stay on site and operational until final acceptance is given by the county.

If field office is not set up at the start of construction 5% each day will be deducted from the lump sum bid amount item for the field office.

Subsection 620.07 shall include the following:

Electricity: If commercial power is available, the service shall be a minimum of 3,000-watt, 115-125 AC facility for each field office and field laboratory. If commercial power is not available, independent generators shall be provided. Generators shall be a minimum of 25kW.
REVISION OF SECTION 620
FIELD FACILITIES (FIELD OFFICE)

Parking: The Contractor shall provide an all-weather parking area with one parking space per County employee assigned to the project plus 6 visitor parking spaces.

Janitorial: The Contractor shall provide weekly janitorial services.

Access: The Contractor shall provide maintenance of the exterior of the office trailer included but not limited to access to parking and snow removal.

Office Supplies: One office type color laser printer/copier/scanner (a multi-purpose desktop printer will not suffice) with an 8.5” x 11” tray and an 11” x 17” tray or approved equal including paper, toner, parts, service and repairs. This device shall be capable of wireless networking with all offices in the field office. The device scanner shall be capable of scanning documents up to 11” x 17” and transmitting the scanned file to multiple email addresses.

Office Furniture: Shall be in accordance with CDOT Standard Plan M-620-12 with the following exceptions:
1. Each office shall be provided with a minimum of 2 five-gallon trash cans. The common area shall be provided with a minimum 35-gallon trash can. All trash cans shall have appropriately sized trash bags.
2. Each office shall be provided with 2 rolling office chairs. All rolling office chairs are to be ergonomically designed.
3. The common area shall have a minimum of 15 metal folding chairs that can be used for meetings.
4. Each office shall be provided with one folding table a minimum of 6 feet long.
5. The common area is equipped with a conference table and does not required any additional tables.

Subsection 620.08 shall include the following:

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field Office</td>
<td>Each</td>
</tr>
</tbody>
</table>

END OF SECTION
Section 624 of the Standard Specifications is hereby revised for this project as follows:

Subsection 624.03 shall include the following:

Contractor shall camera the Town of LaSalle vitreous clay sanitary sewer line between the manhole upstream and downstream of the proposed road crossing two (2) times. The first time shall be before mobilization and the second time shall be after construction but prior to substantial completion. The results shall be made available to the Weld County and Town of LaSalle Public Works within 24 hours. Contractor shall be responsible for any damage to the Town of LaSalle vitreous clay sanitary sewer line. The camera of the Town of LaSalle vitreous clay sanitary sewer line shall be subsidiary to Clearing and Grubbing.

END OF SECTION
Section 625 of the Standard Specifications is hereby revised for this project as follows:

Subsection 625.01 shall include the following:

If the Revision of Section 102 Project Plans and Other Data states 3D modeling data is available, the Contractor may choose to perform 3D Engineered Construction Surveying (3DECS).

3DECS is the use of global positioning and or robotic instruments to guide construction equipment operations by comparing 3D model information in real time. For 3DECS, either the construction equipment is fed modeling information and makes automatic adjustments (machine control) or the equipment operator is fed the information and makes manual adjustments.

Delete Subsection 625.04 and replace with the following:

Contractor's surveyor shall establish horizontal and vertical survey control points prior to the beginning of construction. The County must verify the accuracy of those control points before construction operations can begin. The Contractor must protect those points, and immediately re-establish any that are damaged or removed during the progress of the project. The establishment of the control points shall be done in accordance with the CDOT Survey Manual, Chapter 6.

Prior to beginning construction, the Contractor's surveyor shall stake out all Right of Way corners, Permanent Easements, and Temporary Construction Easements shown on the approved ROW plans with temporary (for the duration of the project) points using re-bar, lath, or hubs and marked with flagging so they are easily visible. Those indicating the limits of construction within which the Contractor is allowed to work must be maintained throughout the project. The Contractor must protect those points, and immediately re-establish any that are damaged or removed during the progress of the project.

If the Contractor uses 3D Engineered Surveying the following shall apply:

(1) All surveying shall be based on the Primary Horizontal and Vertical Control established by the Department.

(2) The Contractor shall provide construction stakes for the control points of the project centerline or Engineer approved offset line (i.e. POT, POC, PCC, PC, PT, TS, ST, SC, CS per the Survey Manual) and angle points, all of which shall be established from primary control monuments and their assigned coordinates as shown on the plans.

(3) Staking for the project centerline or offset, shall be established from the project centerline control points as shown on the plans in order to provide a method of machine control equipment checks, inspection, and field verification.

(4) The maximum staking interval for the project centerline shall be 100 feet on tangents and 25 feet on curves or as specified on the survey tabulation sheet. All project centerline control points as shown on the plans shall be staked.

(5) Within the first week of the Contractor utilizing 3DECS, the Contractor shall check their 3DECS system and verify on writing to Weld County that the accuracy of the system complies with the contract requirements.

At no cost to the Department, the Contractor shall revert to traditional surveying and disband using 3DECS should the Engineer determine the existence of contractor quality or accuracy issues related to 3DECS.

During construction, the Contractor’s surveyor shall provide and maintain story stakes with offsets for the County’s use. The story stakes shall include information required by the CDOT Survey Manual, Chapter 6. The Contractor shall protect and immediately re-establish any story stakes that are damaged throughout the project. The 3DECS shall not be used in lieu of the story stakes. If 3DECS is used by the
2

REVISION OF SECTION 625
CONSTRUCTION SURVEYING

Contractor, a GPS rover with accurate and up to date files shall be made available to the County in addition to the story stakes.

Before final payment is made, all construction survey markers shall be removed. It is not acceptable to hammer the markers into the ground as they pose a hazard to agricultural operations.

Subsection 625.06 shall include the following:

3D Engineered surveying accuracy and tolerances shall be the same as the staking accuracy and tolerances stated in the CDOT Survey Manual.

Subsection 625.13 shall include the following:

All costs associated with 3DECS surveying will not be measured and paid for separately but shall be included in the work.

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

Subsection 626.01 shall be revised to include the following:

Construction of a temporary access road into the work areas, and removal of the access road after construction is completed, shall be included in the Mobilization bid item.

CONSTRUCTION STAGING AND TEMPORARY CONSTRUCTION EASEMENTS: The Contractor shall take responsibility to find adequate staging area(s) for the project. Any agreements made for staging on private property shall be made in writing and copies of the written agreements shall be provided to the County prior to Construction. All staging areas shall be secured with temporary fencing and restored to original conditions after construction. The Contractor shall provide erosion and sediment control for all staging areas and shall modify the Erosion and Sediment Control Plans to include staging areas.

The County has acquired Temporary Construction Easements (TCE) for work on the project. If the Contractor needs to perform work on private property outside of the easements shown on the drawings, then the Contractor shall obtain additional TCEs. All agreements made between the Contractor and the private property owners for additional TCEs shall be made in writing and a copy of all written agreements shall be furnished to the County prior to any disturbance. The Contractor shall provide erosion and sediment control for all areas encompassed within the additional TCEs obtained by the Contractor and shall modify the Erosion and Sediment Control Plans to include TCEs.

The Contractor shall inform the property owners and the tenants at the properties prior to construction. The Contractor shall limit construction activities to those areas within the limits of disturbance as shown on the plans to the maximum extent practical. All costs whatsoever the nature required for staging and additional temporary construction easements including temporary fencing and erosion and sediment control shall be considered incidental to the project.

Any disturbance beyond the limits presented on the drawings shall be restored to the original condition at Contractor’s expense. Construction activities, in addition to normal construction procedures, shall include parking of vehicles or equipment, consolidation of construction debris or materials, and disposing of litter and any other action which alters existing conditions. All disturbances outside the Project Limits shall be pre-approved by the County and secured by the Contractor, at Contractor’s expense.

In addition, the Contractor will be required to secure Right of Entry for property owners’ access that extend beyond the Right of Way Line. No separate payment will be made. Contractor to review the access plans and determine the extent of the right of entry required. Weld County shall be notified of the right of entry prior to entry.

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

**Subsection 630.01 shall include the following:**

This work includes furnishing, operating, and maintaining a portable message sign panel.

The Contractor shall submit a traffic control plan to the County for review and approval prior to construction. The plan shall address all phases of construction. The Plans provide a sample traffic control plan to be used for bidding purposes.

The Contractor shall take all necessary measures to maintain a normal flow of vehicular and pedestrian traffic to prevent accidents and to protect the work throughout the entire project. The Contractor shall make the necessary arrangements to reroute traffic, provide and maintain barriers, cones, guards, barricades, and construction warning and regulatory signs. Detours, street closures, and driveway closures which are required for the protection of the traveling public during construction of this project are included within the scope of traffic control and shall not be paid for separately. It shall be the Contractor’s responsibility to maintain roadway traffic safety, adequately, and continuously on all portions of existing roads and cross roads affected by this work. The Contractor shall maintain that portion of the existing roadway being used to carry traffic so that traffic may readily pass over it, including provisions of any requiring temporary pavement markings.

If it becomes necessary to properly move traffic through the construction area, flaggers shall be posted to slow down and reroute traffic. Flaggers are required when workers or equipment intermittently block a traffic lane. Flaggers shall be wearing Class 3 high visibility safety apparel and shall be equipped with a sign paddle.

**Add subsection 630.03(a) immediately following subsection 630.03 as follows:**

**630.03 Portable Message Sign Panel.** Portable message sign panel shall be furnished as a device fully self-contained on a portable trailer, capable of being licensed for normal highway travel, and shall include leveling and stabilization jacks. The panel shall display a minimum of three - eight-character lines. The panel shall be a dot-matrix type with an LED legend on a flat black background. LED signs shall have a pre-default message that activates before a power failure. The sign shall be solar powered with independent back-up battery power. The sign shall be capable of 360 degrees rotation and shall be able to be elevated to a height of at least five feet above the ground measured at the bottom of the sign. The sign shall be visible from one-half mile under both day and night conditions. The sign shall be legible from a minimum of 750 feet. The sign shall automatically adjust its light source to meet the legibility requirements during the hours of darkness. The sign enclosure shall be weather tight and provide a clear polycarbonate front cover.

Solar powered message signs shall be capable of operating continuously for 10 days without any sun. All instrumentation and controls shall be contained in a lockable enclosure. The sign shall be capable of changing and displaying sign messages and other sign features such as flash rates, moving arrows, etc.

Each sign shall also conform to the following:

1. In addition to the onboard solar power operation with battery back-up, each sign shall be capable of operating on a hard wire, 100-110 VAC, external power source.
2. All electrical wiring, including connectors and switch controls necessary to enable all required sign functions shall be provided with each sign.
3. Each sign shall be furnished with an operating and parts manual, wiring diagrams, and trouble-shooting guide.
(4) The portable message sign shall be capable of maintaining all required operations under Colorado mountain-winter weather conditions.
(5) Each sign shall be furnished with an attached license plate and mounting bracket.
(6) Each sign shall be wired with a 7-prong male electric plug for the brake light wiring system.

Subsection 630.13 shall include the following:

The portable message sign panel shall be on the project site at least 14 calendar days prior to the start of active roadway construction. Maintenance, storage, operation, relocation to different sites during the project, and all repairs of portable message sign panels shall be the responsibility of the Contractor.

Subsection 630.15 shall include the following:

Portable message sign panels will be measured one of the two following ways:

(1) By the actual number of days each portable message sign is used on the project as approved by the Engineer.
(2) By the maximum number of approved units in use on the project at any one time.

Subsection 630.16 shall include the following:

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
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<tbody>
<tr>
<td>Portable Variable Message Sign Panel</td>
<td>Day</td>
</tr>
</tbody>
</table>

END OF SECTION
1

REVISION OF SECTION 632
NIGHT WORK LIGHTING

Section 632 is hereby added to the Standard Specifications for this project as follows:

DESCRIPTION

632.01 This work consists of furnishing, installing, operating, maintaining, moving, adjusting, and removing lighting to illuminate construction work spaces for night work. Night work will be defined as work performed between 30 minutes before sunset and 30 minutes after sunrise.

MATERIALS AND EQUIPMENT

632.02 The Contractor shall provide lighting for night work in the activity area work space where construction equipment, workers on foot, or both are present. The work space is that portion of the roadway closed to road users, or outside of the roadway, set aside for workers, equipment and materials performing contract work. The work space may be stationary or may move as the work progresses.

Illumination may be accomplished by using a combination of portable lights, floodlights, equipment mounted lights, or other lighting methods that will provide the required minimum lighting intensity. Light fixtures that are mounted on the construction equipment shall have a secure connection to minimize vibration and ensure that the view of the equipment operator is not obstructed. Portable lights shall be aimed either generally parallel or perpendicular to the roadway, aimed downward towards the work to avoid glare to oncoming drivers. Existing street and highway lighting shall not eliminate the need for the Contractor to provide work area lighting. Vehicle headlights shall not be permitted as the sole means of illumination while working.

632.03 Portable Generator and Inverter Generator. The Contractor shall provide a portable generator, inverter generator, or both as needed to power the added equipment mounted lights on motorized equipment if the existing power supply on the equipment is insufficient to power the added lights. Fuel tank capacity and availability of fuel on site shall be sufficient to permit uninterrupted operation throughout the planned shift. All power sources shall be equipped with a ground-fault circuit interrupter. The generator shall be placed or temporarily mounted on the equipment without obstructing access onto the equipment or the view of the operator.

632.04 Light Meter. The Contractor shall furnish a light meter for use by the Engineer. The meter shall have a digital display calibrated to NIST standards, shall be cosine and color corrected with an accuracy of +/- 5 percent. The light meter shall remain the property of the Contractor after final acceptance.

CONSTRUCTION REQUIREMENTS

632.05 Lighting for night work shall include:

(1) Minimum lighting intensity of 5 foot candles for work space illumination.

(2) Illuminate the stationary work space as stated in (1) above where construction equipment, workers on foot or both are present.

(3) Light sources shall be positioned not to interfere with or impede traffic in any direction and not cause glare for motorists or onto adjacent properties whenever possible. The Contractor shall make adjustments, use visors or shields, or both to minimize glare.
REVISION OF SECTION 632
NIGHT WORK LIGHTING

(4) Illumination for mobile operations within a closed travel lane with traffic control devices will be defined as 20 feet in front of and behind and 5 feet to each side of each piece of moving equipment.

(5) The Contractor shall provide portable lights for Engineer’s and contractor personnel performing materials testing for either mobile or stationary operations to illuminate the testing work space as stated in (1) above. For concrete operations at night, the Contractor shall illuminate the designated concrete truck washout location including the access and the wash out site.

(6) Workers on foot, performing work within a moving work space (i.e. striping layout/installation, surveying, etc.) shall wear ANSI approved high visibility apparel and headwear for Class 3 risk exposure including vest, Class E pants or leg gaiters, and reflective tape on hard hats. Workers may use portable lighting that can be worn on the hard hats that provide 360-degree visibility.

(7) Portable light towers and lights mounted on stands shall be sturdy and free-standing without the aid of guy wires or bracing. Minimum illumination levels as stated in (1) above shall be maintained at a distance of 5 feet on all sides of stationary equipment with equipment mounted or free-standing lights.

(8) The Contractor shall ensure that all pieces of equipment have operating lights to illuminate operator’s controls, backhoe and loader buckets, and illuminate the equipment reach limits around rotating equipment (i.e. the paving machine shall have illumination for the hopper, auger, and screed areas).

(9) The TCS vehicle shall have the rear of the truck illuminated while installing, maintaining, and removing traffic control devices unless sufficient lighting levels exist with stationary lights.

(10) The Contractor shall maintain a uniformity ratio no greater than 5:1 over the stationary work space. Uniformity ratio is the ratio of average to minimum horizontal illuminance within the work space. The uniformity ratio shall be determined by dividing the average of all light meter measurements by the light meter measurement at the darkest spot within the illuminated area.

632.06 Night Work Lighting Plan. The Contractor shall submit a lighting plan to the Engineer for review signed by the Contractor’s designated person three days in advance of the Preconstruction Conference. The lighting plan shall appropriately describe the work and include the following:

(1) Layout drawing and supplemental narrative showing light locations, equipment mounted lights, and configuration including both typical spacing and lateral placement for each work activity.

(2) Tabulation of lights for those lights that are included within the Night Work Lighting pay item. Lights included in the tabulation such as tower lights, lights mounted on stands and lighting mounted to mobile equipment (not original equipment lights) but those additional equipment mounted lights or portable lights that provide the 20 feet in front and behind illumination zone shall have catalog cuts giving the specific brand names, model numbers, lamp type and wattage.

(3) Narrative description of those operations where workers will be on foot in a moving work space.

(4) Details of hoods, visors, louvers, shields or other means to be used to minimize glare.

The plan shall be revised and updated by the Contractor as requested by the Engineer during the progress of the work to accommodate changes to the work.
3
REVISON OF SECTION 632
NIGHT WORK LIGHTING

632.07 Inspection of Lighting. Lighting inspection by the Engineer will be performed jointly with the Contractor’s designated person on a drive through the project to include (1) observation of the lighting setup to evaluate glare potential for drivers and workers and (2) light meter measurements to determine minimum illumination levels. The Contractor shall make adjustments to the lighting as needed based on the Engineer’s inspection. In the event of any failure of the lighting system, the Engineer may determine to discontinue work until the required level of illumination is restored. Delays due to insufficient lighting levels are the responsibility of the Contractor. Any corrections and deficiencies needed to provide the minimum illumination levels shall be addressed by the start of the next work shift.

The Engineer will take light meter measurements to verify the minimum lighting levels using a light meter provided by the Contractor during the night work shift. Light meter readings will be taken within the work space where work is being performed, in a horizontal plane, light sensor part of the meter held parallel to the ground with the sensor aimed upward, 3 feet above the pavement or ground surface. Meter readings will be taken at the source at 5 foot intervals out to the illuminated work space perimeter. These measurements will be documented and filed in the project records.

632.08 Lighting for Flagger Stations. For nighttime flagging, flagger stations shall be illuminated by an overhead light source providing a minimum lighting intensity level of 5 foot candles measured 1 foot out from the flagger’s chest. The flagger station light shall illuminate the station area with a radius of at least the width of the lane plus 5 feet, and be centered on the flagger in the initial flagging position. The size of the illuminated area shall be increased to account for flagger movements required to control traffic. The flagger station lighting shall be maintained at an adequate height above the pavement and be capable of being shielded through the use of visors, hoods, louvers, or screens as needed to minimize glare to approaching traffic and spilling over onto adjacent properties.

METHOD OF MEASUREMENT

Flagger station lighting, designated person, light meters, and additional power sources (generator and inverter) will not be measured and paid for separately but shall be included in the work.

END OF SECTION
FORCE ACCOUNT ITEMS

DESCRIPTION

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

BASIS OF PAYMENT

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

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

<table>
<thead>
<tr>
<th>Force Account Item</th>
<th>Estimated Quantity</th>
<th>Amount</th>
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<tbody>
<tr>
<td>F/A Wetland Restoration</td>
<td>F/A</td>
<td>$18,000</td>
</tr>
<tr>
<td>F/A Wetland Mitigation (Fine Grading)</td>
<td>F/A</td>
<td>$12,000</td>
</tr>
<tr>
<td>F/A 5’x8’x1” Steel Plates</td>
<td>F/A</td>
<td>$30,000</td>
</tr>
<tr>
<td>F/A Minor Contract Revisions</td>
<td>F/A</td>
<td>$230,000</td>
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<tr>
<td>F/A Asphalt Pavement Quality Incentive/Disincentive</td>
<td>F/A</td>
<td>$8,000</td>
</tr>
<tr>
<td>F/A Erosion Control</td>
<td>F/A</td>
<td>$30,000*</td>
</tr>
<tr>
<td>F/A Asphalt Pavement Smoothness Incentive</td>
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</tr>
<tr>
<td>F/A Paving Spring 2020</td>
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<td>$100,000</td>
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</table>

F/A Wetland Restoration and F/A Wetland Mitigation (Fine Grading) - see Wetland Protection, Restoration & Replacement Below.

REVISION OF SECTION 700

WETLAND PROTECTION, RESTORATION & REPLACEMENT

Section 700 of the Standard Specifications is hereby revised for this project as follows:

Insert the following paragraph:

Wetland Protection, Restoration & Replacement

Weld County received a Nationwide Permit from the US Army Corps of Engineers on Date TBD. In addition to other requirements set out in the Contract for compliance with the Contract the Contractor shall adhere to the following requirements:

1. The contractor shall limit the disturbance of the wetlands as documented in the plans and shall in no circumstances exceed a disturbance of 0.283 acres of wetlands during construction. Where wetland areas exist between the right-of-way line and temporary construction easement line, they shall be fenced and protected as shown in the project plans. Any damage to protected wetland areas during construction shall result in $1,000 of liquidated damages to the contractor per incident.
2. The wetland mitigation design as prepared by Tiglas Ecological Services and accepted by the US Army Corps of Engineers is available from the Engineer. The Contractor must consult with Tiglas Ecological Services regarding the installation of the wetland mitigation areas as identified on the wetland mitigation design and in the project plans. The wetland mitigation areas must be installed by the Contractor at the direction of Tiglas Environmental Services.

3. Prior to planting wetlands, the Contractor shall perform fine earthwork grading within the wetland mitigation areas as per the wetland mitigation design and at the direction of Tiglas Ecological Services. This grading must be performed with small tracked equipment and must not rut/disturb the wetland mitigation areas or surrounding areas. Hand work will be required at the discretion of Weld County at no additional cost.

4. The Contractor shall re-vegetate the wetlands in kind. There shall be a one-year warranty period on the initially established wetlands. During the warranty period, the Contractor shall remove/replace undesirable, dead, or dying vegetation.

5. The Engineer performed an estimate of the vegetation expected to be impacted and has determined that the following:
   
   a. 0.315 acres of wetland planting shall be required.
   
   b. Specification 211 and 214 as revised by Weld County shall be adhered to and followed as a part of this replacement.

6. The payments shall be made based on the plan quantity mentioned in Item 5. The Contractor shall visit the site prior to bid in order to estimate construction methods and determine their impacts to include in the pay items below.

7. Only the consulting fees for Tiglas Ecological Services will be paid for separately by Weld County by separate contract.

Payment will be made under:

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>700 Wetland Restoration</td>
<td>Force Account (FA)</td>
</tr>
<tr>
<td>700 Wetland Mitigation (Fine Grading)</td>
<td>Force Account (FA)</td>
</tr>
</tbody>
</table>

The Contractor shall be responsible for complying with the applicable requirements of this permit. Should any fines be levied by the Army Corps of Engineers or the State of Colorado, the Contractor shall be responsible for all such fines.

F/A 5’x8’x1” Steel Plates – This work consists of installing steel plates over the top of the Town of LaSalle sanitary sewer line as shown in the project plans. The Contractor shall provide rental documentation as to the cost of the steel plates with a maximum of 15% profit. The plates shall remain in place until no more equipment will drive over the area.

F/A Minor Contract Revisions – This work consists of minor work authorized and approved by the Engineer, which is not included in the contract drawings or specifications and is necessary to accomplish the scope of work for this contract.
3

FORCE ACCOUNT ITEMS

DESCRIPTION

**F/A Asphalt Pavement Quality Incentive/Disincentive** – This account will be used to pay for the asphalt pavement quality incentive in accordance with the steps outlined in Section 105.05 of the Revised Standards and Specifications in use for this project.

**F/A Erosion Control** – This work consists of minor erosion control work authorized and approved by the Engineer which is not included in the contract drawings or specifications and is necessary to accomplish the scope of work for this contract. All items shall be pre-approved by the engineer prior to installation. Failure to obtain pre-approval will result in the materials being supplied to the project at no additional cost.

**F/A Asphalt Pavement Smoothness Incentive** – This account will pay for the asphalt pavement smoothness incentive in accordance with the steps outlined in Section 105.07 of the Revised Standards and Specifications in use for this project.

**F/A Paving Spring 2020** – This work consists of paving in the Spring of 2020 should the Army Corp of Engineers imposes a delay due to necessary project permitting. The Engineer shall pre-approve all items prior to the use of this F/A. Costs shall be justified in writing with a maximum of 15% profit added in for the Contractor. Failure to obtain pre-approval will result in the materials being supplied to the project at no additional cost.

Items considered for this F/A are as follows:
- Traffic Control beyond the 75-calendar days with only paving left to install.
- An increase in asphalt oil prices should they go up beyond the 75-calendar day contract.
- A second mobilization due to an Army Corp of Engineers permit delay creating a late start.
- A second mobilization due to an Army Corp of Engineers permit delay creating the need to touch up Class 6 road base final grade and fix soft spots before asphalt paving.
- Signing and striping should the cost change on these items beyond the 75-calendar day contract.

Items which will not be considered for this F/A include but are not limited to the following:
- See section 104.02(a).
- Delays caused by the Contractor not finishing the 75-calendar days contract on time.
- Weather Days where weather is such that the Contractor cannot work.

END OF SECTION
1

TRAFFIC CONTROL PLAN

The key elements of the Contractor's method of handling traffic (MHT) are outlined in subsection 630.10. The components of the traffic control plan (TCP) for this project are included in the following:

(1) Subsection 104.04 and Section 630 of the specifications.
(3) MUTCD Manual of Uniform Traffic Controlling Devices. Chapter 6H
(4) Temporary Traffic Control Plans.

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

The Contractor shall not have construction equipment or materials in the lanes open to traffic at any time, unless directed. Access to private properties shall be maintained at all times.

Traffic shall not be delayed for more than 15 minutes or as directed by the Engineer when the roadway is open to traffic.

Two weeks prior to any road closure, the Contractor shall notify the Weld County Public Works Department.

The Traffic Control Management (TCM) bid item quantity is intended for days in which a new traffic control setup (MHT) is being implemented. Under all other conditions, the Traffic Control Inspector (TCI) daily bid item shall apply.

The Contractor shall not perform any work on the roadway between the hours of 6 p.m. and 6 a.m. unless approved by the Engineer.

END OF SECTION
1

UTILITIES COORDINATION

The work described in these plans and specifications requires coordination between the Contractor and the utility companies in accordance with subsection 105.10 in conducting their respective operations as necessary to complete the utility work with minimum delay to the project. The known utilities are shown on the Contract Drawings. However, additional unknown utilities may exist within the project limits, and the location of known utilities is estimated and the accuracy of shown utility locations is not guaranteed.

The Contractor shall comply with Article 1.5 of Title 9, CRS ("Excavation Requirements") when excavation or grading is planned in the area of underground utility facilities. The Contractor shall notify all affected utilities at least two (2) business days, not including the day of notification, prior to commencing such operations. The Contractor shall contact the Utility Notification Center of Colorado (UNCC) at 1-800-922-1987 to have locations of UNCC registered lines marked by member companies. All other underground facilities shall be located by contacting the respective company. Utility service laterals shall also be located prior to beginning excavating or grading.

Known utilities within or near the limits of this project are:

<table>
<thead>
<tr>
<th>UTILITY OWNER</th>
<th>UTILITY TYPE</th>
<th>CONTACT</th>
<th>PHONE/EMAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atmos Energy</td>
<td>Natural Gas</td>
<td>Curtis Rau</td>
<td>Phone: (970) 304-2089</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Cell: (970) 534-0288</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Email: <a href="mailto:Curtis.Rau@atmosenergy.com">Curtis.Rau@atmosenergy.com</a></td>
</tr>
<tr>
<td>CDOT ITS/Fiber</td>
<td>Fiber Optics</td>
<td>USIC</td>
<td>Phone: (800) 778-9140</td>
</tr>
<tr>
<td>Comcast</td>
<td>Telecommunications</td>
<td>Comcast Mapping</td>
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<tr>
<td>DCP Midstream, LLC</td>
<td>Natural Gas</td>
<td>Gregory Tosh</td>
<td>Phone: (806) 354-3512</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Cell: (806) 722-9720</td>
</tr>
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<td></td>
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<td></td>
<td>Email: <a href="mailto:gktosh1@dpmdstream.com">gktosh1@dpmdstream.com</a></td>
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<td>Level 3</td>
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<td><a href="mailto:CenturyLinkNationalOSPRelocations@CenturyLink.com">CenturyLinkNationalOSPRelocations@CenturyLink.com</a></td>
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<tr>
<td>Comm/Century Link</td>
<td>Petroleum Pipeline</td>
<td>Jeff King</td>
<td>Phone: (970) 381-1026</td>
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<tr>
<td>Noble Energy, Inc.</td>
<td></td>
<td></td>
<td>Email: <a href="mailto:jeff.king@nhlenergy.com">jeff.king@nhlenergy.com</a></td>
</tr>
<tr>
<td>XCEL Energy</td>
<td>Electricity &amp; Gas</td>
<td>XCEL Engineering</td>
<td>Phone: (303) 571-6636</td>
</tr>
<tr>
<td>XCEL Energy HP</td>
<td>High Pressure Natural Gas</td>
<td>XCEL Engineering</td>
<td>Phone: (303) 571-6636</td>
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<tr>
<td>PDC Energy</td>
<td>Natural Gas/Petroleum</td>
<td>Scott Braucher</td>
<td>Phone: (970) 506-9272</td>
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<td></td>
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<td></td>
<td>Cell: (970) 505-9050</td>
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<td></td>
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<td></td>
<td>Email: <a href="mailto:Scott.Braucher@pdcenergy.com">Scott.Braucher@pdcenergy.com</a></td>
</tr>
<tr>
<td>Century Link</td>
<td>Telecommunications</td>
<td>USIC</td>
<td>Phone: (800) 778-9140</td>
</tr>
<tr>
<td>U.S. Sprint</td>
<td>Fiber Optics</td>
<td>Ray Moore</td>
<td>Phone: (307) 256-6940</td>
</tr>
<tr>
<td>SRC Energy</td>
<td>Natural Gas/Petroleum</td>
<td>Jason Patten</td>
<td>Phone: (970) 978-6960</td>
</tr>
<tr>
<td>Top Operating</td>
<td>Natural Gas/Petroleum</td>
<td>Rod Herring</td>
<td>Phone (303) 727-9915, Ext. 200</td>
</tr>
<tr>
<td>Zayo Bandwidth</td>
<td>Fiber Optics</td>
<td>Tony Belford</td>
<td>Phone: (800) 267-1063</td>
</tr>
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<td></td>
<td>Email: <a href="mailto:Tony@SCTRL.com">Tony@SCTRL.com</a></td>
</tr>
<tr>
<td>Zayo Bandwidth/360 Networks</td>
<td>Fiber Optics</td>
<td>Clark Whitcomb</td>
<td>Phone: (303) 328-1136</td>
</tr>
<tr>
<td>Central Weld County Water District (CWCWD)</td>
<td>Water</td>
<td></td>
<td>Phone: (970) 352-1284</td>
</tr>
<tr>
<td>Town of LaSalle</td>
<td>Water and Sewer</td>
<td></td>
<td>Phone: (970) 284-5525</td>
</tr>
</tbody>
</table>
2

UTILITIES COORDINATION

The locations of utilities shown on the plans and described herein were obtained from the best available information, but are not to be considered complete as to location or identification of all utilities that could be encountered.

BASIS OF PAYMENT

All costs incidental to the foregoing requirements will not be paid for separately but shall be included in the work. No monetary compensation will be made to the Contractor for delays or any other issues related to utility conflicts.

END OF SECTION
RAILROAD COORDINATION

The majority of the project work is located within the Union Pacific Railroad (UPRR) right of way. The Contractor shall apply for and enter into a Contractor's Right of Entry Agreement (CROE) with UPRR. Minimum insurance coverages and other requirements to work within the UPRR right of way are shown on the attached CROE draft and must be met. The Contractor shall apply for the CROE immediately upon Notice of Award, and the CROE shall be fully executed within 14 calendar days after Notice of Award. Weld County will not provide Notice to Proceed until the fully executed CROE has been provided to Weld County by the Contractor, and UPRR has confirmed that all requirements of the CROE (including insurance) have been met. Obtaining the CROE, meeting its requirements, and any delays thereto that result in a delay of the start of the project, are the sole responsibility of the Contractor.

CONTRACTOR'S RIGHT OF ENTRY AGREEMENT

______________________________

THIS AGREEMENT is made and entered into as of the _____ day of __________________, 2019, by and between UNION PACIFIC RAILROAD COMPANY, a Delaware corporation ("Railroad"); and

______________________________ (Name of Contractor)

a _____________________________ corporation ("Contractor").

RECITALS:

Contractor has been hired by ____________________________ for ____________________________ at Mile Posts 46.60 to 47.20 on the Greeley Subdivision in La Salle, Weld County, Colorado, in the general location shown on the Railroad Location Print marked Exhibit A, attached hereto and hereby made a part hereof, which work is the subject of an Agreement dated __________________, between the Railroad and the Town of La Salle.

The Railroad is willing to permit the Contractor to perform the work described above at the location described above subject to the terms and conditions contained in this Agreement

AGREEMENT:

NOW, THEREFORE, it is mutually agreed by and between Railroad and Contractor, as follows:

ARTICLE 1 - DEFINITION OF CONTRACTOR.

For purposes of this Agreement, all references in this agreement to Contractor shall include Contractor's contractors, subcontractors, officers, agents and employees, and others acting under its or their authority.

ARTICLE 2 - RIGHT GRANTED; PURPOSE.
RAILROAD COORDINATION

Railroad hereby grants to Contractor the right, during the term hereinafter stated and upon and subject to each and all of the terms, provisions and conditions herein contained, to enter upon and have ingress to and egress from the property described in the Recitals for the purpose of performing the work described in the Recitals above. The right herein granted to Contractor is limited to those portions of Railroad's property specifically described herein, or as designated by the Railroad Representative named in Article 4.

ARTICLE 3 - TERMS AND CONDITIONS CONTAINED IN EXHIBITS B, C & D.

The General Terms and Conditions contained in Exhibit B, the Insurance Requirements contained in Exhibit C, and the Minimum Safety Requirements contained in Exhibit D, each attached hereto, are hereby made a part of this Agreement.

ARTICLE 4 - ALL EXPENSES TO BE BORNE BY CONTRACTOR; RAILROAD REPRESENTATIVE.

A. Contractor shall bear any and all costs and expenses associated with any work performed by Contractor, or any costs or expenses incurred by Railroad relating to this Agreement.

B. Contractor shall coordinate all of its work with the following Railroad representative or his or her duly authorized representative (the "Railroad Representative"):____________________

____________________

____________________

C. Contractor, at its own expense, shall adequately police and supervise all work to be performed by Contractor and shall ensure that such work is performed in a safe manner as set forth in Section 7 of Exhibit B. The responsibility of Contractor for safe conduct and adequate policing and supervision of Contractor's work shall not be lessened or otherwise affected by Railroad's approval of plans and specifications involving the work, or by Railroad's collaboration in performance of any work, or by the presence at the work site of a Railroad Representative, or by compliance by Contractor with any requests or recommendations made by Railroad Representative.

ARTICLE 5 - SCHEDULE OF WORK ON A MONTHLY BASIS.

The Contractor, at its expense, shall provide on a monthly basis a detailed schedule of work to the Railroad Representative named in Article 4B above. The reports shall start at the execution of this Agreement and continue until this Agreement is terminated as provided in this Agreement or until the Contractor has completed all work on Railroad’s property.

ARTICLE 6 - TERM; TERMINATION.
RAILROAD COORDINATION

A. The grant of right herein made to Contractor shall commence on the date of this Agreement, and continue until __________________________, unless sooner terminated as herein provided, or at such time as Contractor has completed its work on Railroad's property, whichever is earlier. Contractor agrees to notify the Railroad Representative in writing when it has completed its work on Railroad's property.

B. This Agreement may be terminated by either party on ten (10) days written notice to the other party.

ARTICLE 7 - CERTIFICATE OF INSURANCE.

A. Before commencing any work, Contractor will provide Railroad with the (i) insurance binders, policies, certificates and endorsements set forth in Exhibit C of this Agreement, and (ii) the insurance endorsements obtained by each subcontractor as required under Section 12 of Exhibit B of this Agreement.

B. All insurance correspondence, binders, policies, certificates and endorsements shall be sent to:

Union Pacific Railroad Company
Real Estate Department
1400 Douglas Street, MS 1690
Omaha, NE  68179-1690

UPRR Folder No.: _______________

ARTICLE 8 - DISMISSAL OF CONTRACTOR'S EMPLOYEE.

At the request of Railroad, Contractor shall remove from Railroad's property any employee of Contractor who fails to conform to the instructions of the Railroad Representative in connection with the work on Railroad's property, and any right of Contractor shall be suspended until such removal has occurred. Contractor shall indemnify Railroad against any claims arising from the removal of any such employee from Railroad's property.

ARTICLE 9 - CROSSINGS.

No additional vehicular crossings (including temporary haul roads) or pedestrian crossings over Railroad's trackage shall be installed or used by Contractor without the prior written permission of Railroad.

ARTICLE 10 - CROSSINGS; COMPLIANCE WITH MUTCD AND FRA GUIDELINES.

A. No additional vehicular crossings (including temporary haul roads) or pedestrian crossings over Railroad's trackage shall be installed or used by Contractor without the prior written permission of Railroad.

B. Any permanent or temporary changes, including temporary traffic control, to crossings must
RAILROAD COORDINATION

C. conform to the Manual of Uniform Traffic Control Devices (MUTCD) and any applicable Federal Railroad Administration rules, regulations and guidelines, and must be reviewed by the Railroad prior to any changes being implemented. In the event the Railroad is found to be out of compliance with federal safety regulations due to the Contractor’s modifications, negligence, or any other reason arising from the Contractor’s presence on the Railroad’s property, the Contractor agrees to assume liability for any civil penalties imposed upon the Railroad for such noncompliance.

ARTICLE 11 - EXPLOSIVES.

Explosives or other highly flammable substances shall not be stored or used on Railroad's property without the prior written approval of Railroad.

IN WITNESS WHEREOF, the parties hereto have duly executed this agreement in duplicate as of the date first herein written.

UNION PACIFIC RAILROAD COMPANY
(Federal Tax ID #94-6001323)

By: ____________________________________________
    Daniel Peters
    Real Estate – Public Projects

(Name of Contractor)

By___________________________________________
Printed Name:____________________________________
Title:_____________________________________________
Section 1. NOTICE OF COMMENCEMENT OF WORK - FLAGGING.

A. Contractor agrees to notify the Railroad Representative at least thirty (30) working days in advance of Contractor commencing its work and at least ten (10) working days in advance of proposed performance of any work by Contractor in which any person or equipment will be within twenty-five (25) feet of any track, or will be near enough to any track that any equipment extension (such as, but not limited to, a crane boom) will reach to within twenty-five (25) feet of any track. No work of any kind shall be performed, and no person, equipment, machinery, tool(s), material(s), vehicle(s), or thing(s) shall be located, operated, placed, or stored within twenty-five (25) feet of any of Railroad's track(s) at any time, for any reason, unless and until a Railroad flagman is provided to watch for trains. Upon receipt of such ten (10)-day notice, the Railroad Representative will determine and inform Contractor whether a flagman need be present and whether Contractor needs to implement any special protective or safety measures. If flagging or other special protective or safety measures are performed by Railroad, Railroad will bill Contractor for such expenses incurred by Railroad, unless Railroad and a federal, state or local governmental entity have agreed that Railroad is to bill such expenses to the federal, state or local governmental entity. If Railroad will be sending the bills to Contractor, Contractor shall pay such bills within thirty (30) days of Contractor's receipt of billing. If Railroad performs any flagging, or other special protective or safety measures are performed by Railroad, Contractor agrees that Contractor is not relieved of any of its responsibilities or liabilities set forth in this Agreement.

B. The rate of pay per hour for each flagman will be the prevailing hourly rate in effect for an eight-hour day for the class of flagmen used during regularly assigned hours and overtime in accordance with Labor Agreements and Schedules in effect at the time the work is performed. In addition to the cost of such labor, a composite charge for vacation, holiday, health and welfare, supplemental sickness, Railroad Retirement and unemployment compensation, supplemental pension, Employees Liability and Property Damage and Administration will be included, computed on actual payroll. The composite charge will be the prevailing composite charge in effect at the time the work is performed. One and one-half times the current hourly rate is paid for overtime, Saturdays and Sundays, and two and one-half times current hourly rate for holidays. Wage rates are subject to change, at any time, by law or by agreement between Railroad and its employees, and may be retroactive as a result of negotiations or a ruling of an authorized governmental agency. Additional charges on labor are also subject to change. If the wage rate or additional charges are changed, Contractor (or the governmental entity, as applicable) shall pay on the basis of the new rates and charges.

D. Reimbursement to Railroad will be required covering the full eight-hour day during which any flagman is furnished, unless the flagman can be assigned to other Railroad work during a portion of such day, in which event reimbursement will not be required for the portion of the day during which the flagman is engaged in other Railroad work. Reimbursement will also be required for any day not actually worked by the flagman following the flagman's assignment to work on the project for which Railroad is required to pay the flagman and which could not reasonably be avoided by Railroad by assignment of such flagman to other work, even though Contractor may not be working during such time. When it becomes necessary for Railroad to bulletin and assign an employee to a flagging position in compliance with union collective bargaining agreements, Contractor must provide Railroad a minimum of five (5) days notice prior to the cessation of the need for a flagman. If five (5) days notice of cessation is not given, Contractor will still be required to pay flagging charges for the five (5) day notice period required by
Section 2. **LIMITATION AND SUBORDINATION OF RIGHTS GRANTED**

A. The foregoing grant of right is subject and subordinate to the prior and continuing right and obligation of the Railroad to use and maintain its entire property including the right and power of Railroad to construct, maintain, repair, renew, use, operate, change, modify or relocate railroad tracks, roadways, signal, communication, fiber optics, or other wirelines, pipelines and other facilities upon, along or across any or all parts of its property, all or any of which may be freely done at any time or times by Railroad without liability to Contractor or to any other party for compensation or damages.

B. The foregoing grant is also subject to all outstanding superior rights (including those in favor of licensees and lessees of Railroad's property, and others) and the right of Railroad to renew and extend the same, and is made without covenant of title or for quiet enjoyment.

Section 3. **NO INTERFERENCE WITH OPERATIONS OF RAILROAD AND ITS TENANTS.**

A. Contractor shall conduct its operations so as not to interfere with the continuous and uninterrupted use and operation of the railroad tracks and property of Railroad, including without limitation, the operations of Railroad's lessees, licensees or others, unless specifically authorized in advance by the Railroad Representative. Nothing shall be done or permitted to be done by Contractor at any time that would in any manner impair the safety of such operations. When not in use, Contractor's machinery and materials shall be kept at least fifty (50) feet from the centerline of Railroad's nearest track, and there shall be no vehicular crossings of Railroads tracks except at existing open public crossings.

B. Operations of Railroad and work performed by Railroad personnel and delays in the work to be performed by Contractor caused by such railroad operations and work are expected by Contractor, and Contractor agrees that Railroad shall have no liability to Contractor, or any other person or entity for any such delays. The Contractor shall coordinate its activities with those of Railroad and third parties so as to avoid interference with railroad operations. The safe operation of Railroad train movements and other activities by Railroad takes precedence over any work to be performed by Contractor.

Section 4. **LIENS.**

Contractor shall pay in full all persons who perform labor or provide materials for the work to be performed by Contractor. Contractor shall not create, permit or suffer any mechanic's or materialmen's liens of any kind or nature to be created or enforced against any property of Railroad for any such work performed. Contractor shall indemnify and hold harmless Railroad from and against any and all liens, claims, demands, costs or expenses of whatsoever nature in any way connected with or growing out of such work done, labor performed, or materials furnished. If Contractor fails to promptly cause any lien to be released of record, Railroad may, at its election, discharge the lien or claim of lien at Contractor's expense.
Section 5. PROTECTION OF FIBER OPTIC CABLE SYSTEMS.

A. Fiber optic cable systems may be buried on Railroad's property. Protection of the fiber optic cable systems is of extreme importance since any break could disrupt service to users resulting in business interruption and loss of revenue and profits. Contractor shall telephone Railroad during normal business hours (7:00 a.m. to 9:00 p.m. Central Time, Monday through Friday, except holidays) at 1-800-336-9193 (also a 24-hour, 7-day number for emergency calls) to determine if fiber optic cable is buried anywhere on Railroad's property to be used by Contractor. If it is, Contractor will telephone the telecommunications company(ies) involved, make arrangements for a cable locator and, if applicable, for relocation or other protection of the fiber optic cable. Contractor shall not commence any work until all such protection or relocation (if applicable) has been accomplished.

B. In addition to other indemnity provisions in this Agreement, Contractor shall indemnify, defend and hold Railroad harmless from and against all costs, liability and expense whatsoever (including, without limitation, attorneys' fees, court costs and expenses) arising out of any act or omission of Contractor, its agents and/or employees, that causes or contributes to (1) any damage to or destruction of any telecommunications system on Railroad's property, and/or (2) any injury to or death of any person employed by or on behalf of any telecommunications company, and/or its contractor, agents and/or employees, on Railroad's property. Contractor shall not have or seek recourse against Railroad for any claim or cause of action for alleged loss of profits or revenue or loss of service or other consequential damage to a telecommunication company using Railroad's property or a customer or user of services of the fiber optic cable on Railroad's property.

Section 6. PERMITS - COMPLIANCE WITH LAWS.

In the prosecution of the work covered by this Agreement, Contractor shall secure any and all necessary permits and shall comply with all applicable federal, state and local laws, regulations and enactments affecting the work including, without limitation, all applicable Federal Railroad Administration regulations.

Section 7. SAFETY.

A. Safety of personnel, property, rail operations and the public is of paramount importance in the prosecution of the work performed by Contractor. Contractor shall be responsible for initiating, maintaining and supervising all safety, operations and programs in connection with the work. Contractor shall at a minimum comply with Railroad's safety standards listed in Exhibit D, attached, to ensure uniformity with the safety standards followed by Railroad's own forces. As a part of Contractor's safety responsibilities, Contractor shall notify Railroad if Contractor determines that any of Railroad's safety standards are contrary to good safety practices. Contractor shall furnish copies of Exhibit D to each of its employees before they enter the job site.

B. Without limitation of the provisions of paragraph A above, Contractor shall keep the job site free from safety and health hazards and ensure that its employees are competent and adequately trained in all safety and health aspects of the job.

C. Contractor shall have proper first aid supplies available on the job site so that prompt first aid services may be provided to any person injured on the job site. Contractor shall promptly notify Railroad of any U.S. Occupational Safety and Health Administration reportable injuries. Contractor shall have a nondelegable duty to control its employees while they are on the job site or any other property of Railroad, and to be certain they do not use, be under the influence of, or have in their possession any alcoholic beverage, drug or other substance that may inhibit the safe performance of any work.

E. If and when requested by Railroad, Contractor shall deliver to Railroad a copy of Contractor's safety plan for conducting the work (the "Safety Plan"). Railroad shall have the right, but not the obligation,
to require Contractor to correct any deficiencies in the Safety Plan. The terms of this Agreement shall
control if there are any inconsistencies between this Agreement and the Safety Plan.

Section 8. INDEMNITY.

A. To the extent not prohibited by applicable statute, Contractor shall indemnify, defend and hold harmless
Railroad, its affiliates, and its and their officers, agents and employees (individually an “Indemnified
Party” or collectively “Indemnified Parties”) from and against any and all loss, damage, injury, liability,
claim, demand, cost or expense (including, without limitation, attorney's, consultant's and expert's fees,
and court costs), fine or penalty (collectively, "Loss") incurred by any person (including, without
limitation, any Indemnified Party, Contractor, or any employee of Contractor or of any Indemnified Party)
arising out of or in any manner connected with (i) any work performed by Contractor, or (ii) any act or
omission of Contractor, its officers, agents or employees, or (iii) any breach of this Agreement by
Contractor.

B. The right to indemnity under this Section 8 shall accrue upon occurrence of the event giving rise to the
Loss, and shall apply regardless of any negligence or strict liability of any Indemnified Party, except
where the Loss is caused by the sole active negligence of an Indemnified Party as established by the
final judgment of a court of competent jurisdiction. The sole active negligence of any Indemnified Party
shall not bar the recovery of any other Indemnified Party.

C. Contractor expressly and specifically assumes potential liability under this Section 8 for claims or
actions brought by Contractor's own employees. Contractor waives any immunity it may have under
worker's compensation or industrial insurance acts to indemnify the Indemnified Parties under this
Section 8. Contractor acknowledges that this waiver was mutually negotiated by the parties hereto.

D. No court or jury findings in any employee's suit pursuant to any worker's compensation act or the
Federal Employers' Liability Act against a party to this Agreement may be relied upon or used by
Contractor in any attempt to assert liability against any Indemnified Party.

E. The provisions of this Section 8 shall survive the completion of any work performed by Contractor or
the termination or expiration of this Agreement. In no event shall this Section 8 or any other provision
of this Agreement be deemed to limit any liability Contractor may have to any Indemnified Party by
statute or under common law.

Section 9. RESTORATION OF PROPERTY.

In the event Railroad authorizes Contractor to take down any fence of Railroad or in any manner move
or disturb any of the other property of Railroad in connection with the work to be performed by Contractor,
then in that event Contractor shall, as soon as possible and at Contractor's sole expense, restore such
fence and other property to the same condition as the same were in before such fence was taken down or
such other property was moved or disturbed. Contractor shall remove all of Contractor's tools, equipment,
rubbish and other materials from Railroad's property promptly upon completion of the work, restoring
Railroad's property to the same state and condition as when Contractor entered thereon.

Section 10. WAIVER OF DEFAULT.

Waiver by Railroad of any breach or default of any condition, covenant or agreement herein contained
to be kept, observed and performed by Contractor shall in no way impair the right of Railroad to avail itself
of any remedy for any subsequent breach or default.

Section 11. MODIFICATION - ENTIRE AGREEMENT.
RAILROAD COORDINATION

No modification of this Agreement shall be effective unless made in writing and signed by Contractor and Railroad. This Agreement and the exhibits attached hereto and made a part hereof constitute the entire understanding between Contractor and Railroad and cancel and supersede any prior negotiations, understandings or agreements, whether written or oral, with respect to the work to be performed by Contractor.

Section 12. ASSIGNMENT - SUBCONTRACTING.

Contractor shall not assign or subcontract this Agreement, or any interest therein, without the written consent of the Railroad. Contractor shall be responsible for the acts and omissions of all subcontractors. Before Contractor commences any work, the Contractor shall, except to the extent prohibited by law; (1) require each of its subcontractors to include the Contractor as "Additional Insured" in the subcontractor's Commercial General Liability policy and Business Automobile policies with respect to all liabilities arising out of the subcontractor's performance of work on behalf of the Contractor by endorsing these policies with ISO Additional Insured Endorsements CG 20 26, and CA 20 48 (or substitute forms providing equivalent coverage; (2) require each of its subcontractors to endorse their Commercial General Liability Policy with "Contractual Liability Railroads" ISO Form CG 24 17 10 01 (or a substitute form providing equivalent coverage) for the job site; and (3) require each of its subcontractors to endorse their Business Automobile Policy with "Coverage For Certain Operations In Connection With Railroads" ISO Form CA 20 70 10 01 (or a substitute form providing equivalent coverage) for the job site.

EXHIBIT C

TO CONTRACTOR'S RIGHT OF ENTRY AGREEMENT

INSURANCE REQUIREMENTS

Contractor shall, at its sole cost and expense, procure and maintain during the course of the Project and until all Project work on Railroad's property has been completed and the Contractor has removed all equipment and materials from Railroad's property and has cleaned and restored Railroad's property to Railroad's satisfaction, the following insurance coverage:

A. COMMERCIAL GENERAL LIABILITY INSURANCE. Commercial general liability (CGL) with a limit of not less than $5,000,000 each occurrence and an aggregate limit of not less than $10,000,000. CGL insurance must be written on ISO occurrence form CG 00 01 12 04 (or a substitute form providing equivalent coverage).

The policy must also contain the following endorsement, which must be stated on the certificate of insurance:

- Contractual Liability Railroads ISO form CG 24 17 10 01 (or a substitute form providing equivalent coverage) showing "Union Pacific Railroad Company Property" as the Designated Job Site.
- Designated Construction Project(s) General Aggregate Limit ISO Form CG 25 03 03 97 (or a substitute form providing equivalent coverage) showing the project on the form schedule.

B. BUSINESS AUTOMOBILE COVERAGE INSURANCE. Business auto coverage written on ISO form CA 00 01 10 01 (or a substitute form providing equivalent liability coverage) with a combined single limit of not less $5,000,000 for each accident and coverage must include liability arising out of any auto (including owned, hired and non-owned autos).

The policy must contain the following endorsements, which must be stated on the certificate of
RAILROAD COORDINATION

insurance:

- Coverage For Certain Operations In Connection With Railroads ISO form CA 20 70 10 01 (or a substitute form providing equivalent coverage) showing “Union Pacific Property” as the Designated Job Site.
- Motor Carrier Act Endorsement - Hazardous materials clean up (MCS-90) if required by law.

C. WORKERS’ COMPENSATION AND EMPLOYERS' LIABILITY INSURANCE. Coverage must include but not be limited to:

- Contractor's statutory liability under the workers' compensation laws of the state where the work is being performed.
- Employers' Liability (Part B) with limits of at least $500,000 each accident, $500,000 disease policy limit $500,000 each employee.

If Contractor is self-insured, evidence of state approval and excess workers compensation coverage must be provided.

Coverage must include liability arising out of the U. S. Longshoremen's and Harbor Workers' Act, the Jones Act, and the Outer Continental Shelf Land Act, if applicable.

The policy must contain the following endorsement, which must be stated on the certificate of insurance:

- Alternate Employer endorsement ISO form WC 00 03 01 A (or a substitute form providing equivalent coverage) showing Railroad in the schedule as the alternate employer (or a substitute form providing equivalent coverage).

D. RAILROAD PROTECTIVE LIABILITY INSURANCE. Contractor must maintain Railroad Protective Liability insurance written on ISO occurrence form CG 00 35 12 04 (or a substitute form providing equivalent coverage) on behalf of Railroad as named insured, with a limit of not less than $2,000,000 per occurrence and an aggregate of $6,000,000. A binder stating the policy is in place must be submitted to Railroad before the work may be commenced and until the original policy is forwarded to Railroad.

E. UMBRELLA OR EXCESS INSURANCE. If Contractor utilizes umbrella or excess policies, these policies must “follow form” and afford no less coverage than the primary policy.

F. POLLUTION LIABILITY INSURANCE. Pollution liability coverage must be written on ISO form Pollution Liability Coverage Form Designated Sites CG 00 39 12 04 (or a substitute form providing equivalent liability coverage), with limits of at least $5,000,000 per occurrence and an aggregate limit of $10,000,000.

If the scope of work as defined in this Agreement includes the disposal of any hazardous or non-hazardous materials from the job site, Contractor must furnish to Railroad evidence of pollution legal liability insurance maintained by the disposal site operator for losses arising from the insured facility accepting the materials, with coverage in minimum amounts of $1,000,000 per loss, and an annual aggregate of $2,000,000.

OTHER REQUIREMENTS

G. All policy(ies) required above (except worker's compensation and employers liability) must include Railroad as “Additional Insured” using ISO Additional Insured Endorsements CG 20 26, and CA 20 48.
(or substitute forms providing equivalent coverage). The coverage provided to Railroad as additional insured shall, to the extent provided under ISO Additional Insured Endorsement CG 20 26, and CA 20 48 provide coverage for Railroad’s negligence whether sole or partial, active or passive, and shall not be limited by Contractor's liability under the indemnity provisions of this Agreement.

H. Punitive damages exclusion, if any, must be deleted (and the deletion indicated on the certificate of insurance), unless the law governing this Agreement prohibits all punitive damages that might arise under this Agreement.

I. Contractor waives all rights of recovery, and its insurers also waive all rights of subrogation of damages against Railroad and its agents, officers, directors and employees. This waiver must be stated on the certificate of insurance.

J. Prior to commencing the work, Contractor shall furnish Railroad with a certificate(s) of insurance, executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements in this Agreement.

K. All insurance policies must be written by a reputable insurance company acceptable to Railroad or with a current Best's Insurance Guide Rating of A- and Class VII or better, and authorized to do business in the state where the work is being performed.

L. The fact that insurance is obtained by Contractor or by Railroad on behalf of Contractor will not be deemed to release or diminish the liability of Contractor, including, without limitation, liability under the indemnity provisions of this Agreement. Damages recoverable by Railroad from Contractor or any third party will not be limited by the amount of the required insurance coverage.

EXHIBIT D

TO CONTRACTOR'S RIGHT OF ENTRY AGREEMENT

MINIMUM SAFETY REQUIREMENTS

The term "employees" as used herein refer to all employees of Contractor as well as all employees of any subcontractor or agent of Contractor.

I. CLOTHING

A. All employees of Contractor will be suitably dressed to perform their duties safely and in a manner that will not interfere with their vision, hearing, or free use of their hands or feet.

Specifically, Contractor’s employees must wear:

i. Waist-length shirts with sleeves.
ii. Trousers that cover the entire leg. If flare-legged trousers are worn, the trouser bottoms must be tied to prevent catching.
iii. Footwear that covers their ankles and has a defined heel. Employees working on bridges are required to wear safety-toed footwear that conforms to the American National Standards.
RAILROAD COORDINATION

Institute (ANSI) and FRA footwear requirements.

B. Employees shall not wear boots (other than work boots), sandals, canvas-type shoes, or other shoes that have thin soles or heels that are higher than normal.

C. Employees must not wear loose or ragged clothing, neckties, finger rings, or other loose jewelry while operating or working on machinery.

II. PERSONAL PROTECTIVE EQUIPMENT

Contractor shall require its employees to wear personal protective equipment as specified by Railroad rules, regulations, or recommended or requested by the Railroad Representative.

i. Hard hat that meets the American National Standard (ANSI) Z89.1 – latest revision. Hard hats should be affixed with Contractor’s company logo or name.

ii. Eye protection that meets American National Standard (ANSI) for occupational and educational eye and face protection, Z87.1 – latest revision. Additional eye protection must be provided to meet specific job situations such as welding, grinding, etc.

iii. Hearing protection, which affords enough attenuation to give protection from noise levels that will be occurring on the job site. Hearing protection, in the form of plugs or muffs, must be worn when employees are within:

- 100 feet of a locomotive or roadway/work equipment
- 15 feet of power operated tools
- 150 feet of jet blowers or pile drivers
- 150 feet of retarders in use (when within 10 feet, employees must wear dual ear protection – plugs and muffs)

iv. Other types of personal protective equipment, such as respirators, fall protection equipment, and face shields, must be worn as recommended or requested by the Railroad Representative.

III. ON TRACK SAFETY

Contractor is responsible for compliance with the Federal Railroad Administration’s Roadway Worker Protection regulations – 49CFR214, Subpart C and Railroad’s On-Track Safety rules. Under 49CFR214, Subpart C, railroad contractors are responsible for the training of their employees on such regulations. In addition to the instructions contained in Roadway Worker Protection regulations, all employees must:

i. Maintain a distance of twenty-five (25) feet to any track unless the Railroad Representative is present to authorize movements.

END OF SECTION
OIL AND GAS PRODUCER COORDINATION

The project impacts access to the existing Conlin Federal 01 oil and gas facility located on Project Parcel 02 and operated by SRC Energy. Immediately following Notice of Award, the Contractor shall begin coordinating with SRC Energy regarding the construction schedule and approach as they relate to access of the oil and gas facility. The Contractor is required to coordinate with SRC Energy and maintain access to their oil and gas facility through the project site for the duration of project construction. The contact information for SRC Energy is as follows:

Brian DeRose  
Surface Land Manager  
5400 West 11th Street, Suite C  
Greeley, CO  80634  
(720) 616-4365 (Office)  
(405) 249-7841 (Cell)

This coordination as well as any resulting effects on the construction work will not be considered unexpected. The coordination and any resulting effects on the construction work will not be paid for separately and shall be considered subsidiary to the other work.

END OF SECTION
GENERAL 404 PERMIT

The proposed work as shown on the plans has been permitted by the U.S. Army Corps of Engineers under a General 404 Permit for roadway fill. The Contractor must comply with all special and general conditions attached to the permit. All costs for permit compliance will be included in the costs of the work.

Questions regarding this permit should be directed to the U.S. Army Corps of Engineers, Denver Regulatory Office, 9307 South Wadsworth Blvd., Littleton, CO 80128, (303) 979-4120, Attention: Ms. Celena Cui, Corps File No: NWO-2019-00683

A copy of this permit is available from the Engineer prior to Award.

END OF SECTION
CDOT STANDARD SPECIAL PROVISIONS

The 2017 Standard Specifications for Road and Bridge Construction controls construction of this project. The following special provisions supplement or modify the Standard Specifications and take precedence over the Standard Specifications and plans.

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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.

An issue 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. Issues 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 Contractor shall be barred from any administrative, equitable, or legal remedy for any issue which meets either of the following criteria:

1. The Contractor did not to bring the issue to the Project Engineer’s attention in writing within 20 days of the Contractor being aware of the issue.
2. The Contractor fails to continually (weekly or otherwise approved by both parties) work with CDOT towards a resolution.

A dispute is an issue in which the Contractor and CDOT have not been able to resolve and of which the Contractor submits a written formal notice of dispute per section (b) below.

A claim is a dispute not resolved at the Resident Engineer level or resolved after a DRB recommendation. 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.

An audit may be performed by the Department for any dispute. Refer to subsection 105.24 for audit requirements.

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 written notices of dispute shall be submitted within 30 days of date of the Project Engineer’s Final Acceptance letter; see subsection 105.21(b).

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.

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:
REVISION OF SECTION 105
DISPUTES AND CLAIMS FOR CONTRACT ADJUSTMENTS

1. The date of the dispute.
2. The nature of the circumstances which caused the dispute.
3. A detailed explanation of the dispute citing specific provisions of the Contract and any basis, legal or factual, which support the dispute.
4. If any, the estimated quantum, calculated in accordance with methods set forth in subsection 105.24(b)12., with supporting documentation
5. An analysis of the progress schedule showing the schedule change or disruption if the Contractor is asserting a schedule change or disruption. This analysis shall meet the requirements of subsection 108.08(d).

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, neither party shall provide or present to the DRB any issue or any information that was not contained in the Request for Equitable Adjustment and fully submitted in writing 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. A DRB member shall not be called as witness for future litigation.

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 pre-approved DRB candidates experienced in construction processes and the interpretation of contract documents and the resolution of construction disputes. 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. DRB nominees shall be selected from the list of Pre-Approved candidates. 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 Three-Party 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 Three-Party 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 approved before the Pre-Construction Conference. 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. CDOT and the Contractor shall inform its selected DRB member who the major firms/people are on the project and request its selected DRB member to review the CDOT disclosure requirements and Canon of Ethics and then submit a disclosure statement which shall also be submitted to the other party. DRB candidates shall complete the DRB Disclosure Requirements & DRB Nominee Disclosure Form and disclose to the parties the following relationships:
   a. Prior employment with either party
   b. Prior or current financial interests or ties to either party
   c. Prior or current professional relationships with either party
   d. Anything else that might bring into question the impartiality or independence of the DRB member
   e. 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 the chair or other DRB members based on the disclosures, or based on information not disclosed, which might bring into question the impartiality, independence, or performance 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.
   a. The service of a Board member may be terminated only by written agreement of both parties. 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.
   b. Additional Responsibilities of the Standing Disputes Review Board
      1. General. No later than 10 days after the Three-Party Agreement has been signed by the Chief Engineer, the DRB will coordinate with the parties on the date and location of the initial DRB meeting.
         a) Obtain copies of the Contract documents and Contractor's schedules for each of the Board members.
         b) Agree on the location of future meetings, which shall be reasonably close to the project site.
         c) 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
   a) 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.
   b) 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.
   c) The DRB shall issue a one-page written opinion within 5 days of the hearing.
   d) 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.

Advisory opinions should be limited to merit issues only.

c. 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 an On Demand DRB hearing will be held within 30 days after the Three-Party Agreement is signed by the CDOT Chief Engineer. Unless otherwise agreed to by both parties, a Standing DRB hearing will be held within 30 days after the DRB has been requested per subsection 105.23(a).

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.

**Pre-Hearing Submittal:** All Pre-Hearing Submittals shall include only arguments, supporting documentation, quantum, and other information as previously submitted in writing and as previously disputed in the formal dispute process covered in subsection 105.22 (b), (c), and (d). All Pre-Hearing Submittals planned to be used at the hearing, shall be submitted to the other party 35 days prior to the hearing for review for compliance with this requirement. If either party contends there are new arguments,
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supporting documents, new quantum, or any new information in a pre-Hearing Submittal, and the other party objects to this information being presented to the DRB, the objecting party shall submit its objections in writing to the other party within 10 days. The parties shall meet within 5 days to reconcile the objection before the submittal is submitted to the DRB. If the parties cannot reconcile the objection, but the new argument, supporting documentation, new quantum, or new information does not change either party’s position on merit or quantum, the information shall be allowed in the Pre-Hearing submittal and presented to the DRB. If the parties cannot reconcile the objections within the 5 days allowed, each party shall submit a one page brief on their objections, but not the actual information objected to, to the DRB for a decision on the use of the documents. The DRB shall not approve any information simply because it is relevant to the dispute or referenced during the dispute. Neither party shall attempt to present anything to the DRB which they did not present to the other party during the dispute process. The dispute process shall be delayed while this determination is being made and a new hearing date set, if necessary. Pre-Hearing Submittals to the DRB are as follows:

1. **Joint Statement:** At least 20 days prior to the hearing the Joint Statement(s) shall be submitted to the DRB. The parties shall make every attempt to agree upon a Joint Statement of the dispute. If the parties cannot agree on the Joint Statement, each party’s independent statement shall be submitted to the DRB. The Joint Statement shall summarize, in a few sentences, the nature of the dispute(s) and the scope of the desired decision.

2. **Position Paper:** At least 15 days prior to the hearing, CDOT and the Contractor shall submit by email to the DRB Chairperson their party’s Position Paper. The DRB Chairperson shall simultaneously distribute by email the Position Papers to all parties and other DRB members, if any. The position paper shall contain the following:
   a) The basis and justification for the party’s position, with reference to specific contract language and the supporting documents of each element of the disputes.
   b) A list of proposed attendees for the hearing. In the event of any objection by a party, the DRB shall make a final determination as to who attends the hearing.
   c) When the scope of the hearing includes quantum, 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 be completed.

3. **Supporting Documents:** At least 15 days prior to the hearing, each party shall submit a copy of all its supporting documents to the DRB and the other party. Supporting documents include any presentations, visuals, or handouts planned to be used at the hearing. To minimize duplication and repetitiveness, the parties are encouraged to identify a common set of documents that will be referred to by both parties and submit them in a separate package to the DRB at least 20 days prior to the hearing. Common documents are communications between parties, speed memos, change orders, schedules, request for equitable adjustment, and correspondence, and any document used in the Subsection 105.22 process. CDOT shall submit the common set of documents to the Board and Contractor.

4. If relevant to the dispute and requested by the Board, the Engineer shall provide to the DRB either website links, electronic pdf’s, or hard copies of pertinent contract documents such as plans, specifications, and M&S Standards.
d. **Pre-Hearing Phone Conference:** A pre-hearing phone conference with all Board 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. (Ex. Each party makes a full presentation of their positions or presentations will be made on a “point by point” basis with each party making a presentation only on the individual dispute issue before moving onto the next issue.)

If the pre-hearing position papers and documents have been received by the DRB prior to the conference call, the Chairperson shall discuss the estimated hours of review and activities for the disputes (such as time spent evaluating and preparing recommendation 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. The Engineer shall coordinate the conference call.

e. **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. Rebuttals of the other party’s arguments shall not be presented at this time.
   3. The other party presents its position in detail as supported by previously submitted information and documentation.
   4. The party that requested the DRB presents their rebuttals followed by the other party’s rebuttals.
   5. Upon completion of their presentations and rebuttals, both parties and the DRB will be provided the opportunity to exchange questions and answers. Questions from the parties shall be directed to the Chairperson. Attendees may respond only when board members request a response.
   6. Employees of each party are responsible for leading presentations at the DRB hearing.
   7. 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.
   8. Either party may use experts only if the expert has previously presented to the other party before the DRB process. 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.
   9. 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.
10. If either party attempts to present an argument, documentation, quantum, or new information which the other party feels was not in the Pre-Hearing submittals, the chairperson shall require the party to demonstrate where in the Pre-Hearing submittal the information in question resides.

11. 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.

12. If a party fails to appear at the hearing, the DRB shall proceed as if all parties were in attendance.

**f. 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.

**g. Clarification and Reconsideration of Recommendation.** Either party may request in writing a 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.

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.

**h. 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 and the DRB 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.

i. **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.

j. **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:
      a) Copies of Contract and other relevant documentation
      b) Meeting space and facilities
      c) Secretarial Services
      d) Telephone
      e) Mail
      f) Reproduction
      g) 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.
k. 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).

DRB members shall not be called as witness for future litigation.

DISPUTE REVIEW BOARD

THREE PARTY AGREEMENT PAGE 3
COLORADO PROJECT NO.

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: ______________________________________________________________________________.

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:
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REVISION OF SECTION 105
DISPUTES AND CLAIMS FOR CONTRACT ADJUSTMENTS

**CONTRACTOR'S CLAIM CERTIFICATION**
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: __________________________

**PASS-THROUGH CLAIM CERTIFICATION**
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: __________________________

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
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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, if applicable, 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 (only applies if the dispute also includes a time extension)

      (6) Salaried employees assigned to the project (only applies if the dispute includes a time extension or if the dispute required salaried employee(s) to be added 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.

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.
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.
(e) 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.
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(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 consultive 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.
Rule R-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.
(c) 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.
(d) At least five business days prior to the hearing, the parties shall exchange copies of all exhibits they intend to submit at the hearing.
(e) The arbitrator is authorized to resolve any disputes concerning the exchange of information.
(f) 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 re-determine 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-47. 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.
REVISION OF SECTION 105
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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 purposed 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.
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DISPUTES AND CLAIMS FOR CONTRACT ADJUSTMENTS

Figure 105-1
DISPUTES AND CLAIMS FLOW CHART

105.22 Project Issue – Verbal discussions between Proj. Eng. and Supt.

- Impasse

Contractor provides written notice of dispute to Project Engineer

15 Days – 105.22 (b)

Contractor provides written REA including the following:
(1) Date of dispute
(2) Nature of order and circumstances causing dispute
(3) Contract provisions supporting dispute
(4) Estimated cost of dispute with supporting documentation
(5) Analysis of progress schedule and disruption, if any

15 Days – 105.22 (c)

CDOT Project Engineer and Contractor discuss merit of dispute

- 7 days – 105.22 (c)

PE denies merit of dispute

PE determines dispute has merit

- 7 days – 105.22 (c)

Contractor rejects PE’s denial. Contractor provides written notice to RE.

Contractor accepts denial. Dispute is resolved.

- Disagree on quantum

- Adjustment of payment/schedule in consultation with Program Engineer - Dispute is resolved

Proj Eng/Res Eng & Supt/PM & Contractor’s rep with decision authority above the project level to meet regularly to discuss dispute

- Up to 30 days – 105.22 (d)

105.22(a) Proj Eng initiates DRB process

- 5 Days – 105.23 (a)

Dispute is unresolved

DRB agreement signed

- 30/45 days – 105.23 (b)

20 days – 105.23 (d)

Prehearing Submittal

- 15 days – 105.23 (e)

DRB Hearing

- 30 days – 105.23 (g)

DRB renders a recommendation

- 10 days – 105.23 (h)

Request for Clarification and Reconsideration

- 14 days – 105.23 (i)

Either party rejects DRB recommendation

DRB recommendation is accepted

Figure 105-1 continued on next page
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Figure 105-1 (continued)

Either party rejects DRB recommendation

30 days - 105.24 (a)

105.24 Notice of intent to file a claim

60 days - 105.24 (b)

Contractor submits certified claim package w/RTD (and Audit Unit if over $250K)

60 days - 105.24 (d)

RTD renders a decision

30 days - 105.24 (d)

Contractor accepts decision

Decision is implemented

Adjustment of payment/schedule in consultation with Program Engineer - Dispute is resolved

Chief Engineer renders decision

Request for hearing

45 days - 105.24 (e)

Contractor rejects and appeals RTD decision to CE

15 days - 105.24 (e)

Contractor rejects CE decision

Contractor accepts CE decision

Decision is implemented

Optional Mediation

Dispute is unresolved

Dispute is resolved

Contractor (initiates)

Resolution is implemented

Binding Arbitration or Litigation (Whichever was selected at Contract execution)

Binding Arbitration

Litigation

Arbitrator(s) render recommendation

Court Decision

Appeal process only for damages

END OF SECTION
Sections 105 and 412 of the Standard Specifications are hereby revised for this project as follows:

Delete subsection 105.07 and replace with the following:

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

At least two weeks prior to the Pre-paving Conference the Contractor may request a change to the pavement smoothness category based on the CDOT’s Design Bulletin guidelines for assigning pavement smoothness categories (https://www.codot.gov/business/designsupport/bulletins_manuals/design-bulletins/). The Contractor shall not assume a change will be granted and shall be prepared to build the pavement according to the assigned smoothness category. Once paving operations have been started, a change in pavement smoothness category will not be made.

(a) Smoothness Process Control Testing.

1. The Contractor shall perform Smoothness Process Control (SPC) testing. The test results shall be submitted to the Engineer within 48 hours of completion. SPC test results shall show the Mean Roughness Index (MRI) for each 0.10 mile.

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

SPC testing shall be performed on the first 2,000 tons for the final layer of HMA or each day’s paving within 24 hours after the concrete has achieved sufficient strength for PCCP. SPC testing on SMA will be tested after the sheen has been worn off. The Contractor may continue paving at his own risk. The Contractor shall not perform the SQC testing until after the concrete has attained a compressive strength of 1,000 psi if a light weight profiler is used or 2,000 psi if a high speed profiler is used.

SPC testing shall be performed using the Contractor’s inertial profiler, pursuant to the methods described in subsection 105.07(b). The Contractor’s Inertial Profiler and Operator shall be certified according to CP 78. A list of certified profilers and operators is located at: https://www.codot.gov/business/designsupport/matgeo/pave-smooth-testing

Production shall be suspended if SPC testing indicates that corrective work is required in accordance with subsection 105.07(e). If the SPC data becomes available after production has started for the day, suspension will begin at the end of that production day for HMA. 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 shall not resume until the proposed corrective actions have been accepted by the Engineer in writing.

When production resumes, the Contractor shall profile the first 2,000 tons of HMA or each day’s paving within 24 hours after the concrete has achieved sufficient strength for PCCP. The conditions described 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 adjustments.

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 and for the placement of triggers. The Contractor shall provide the traffic control in accordance with the approved MHT. SA testing shall not be performed without traffic control using the approved MHT.

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

Pavement surfaces shall be tested and accepted for longitudinal smoothness as described herein.

1. 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 inertial profiler (profiler). The Contractor’s Profiler and Operator shall be certified according to CP 78. A list of certified profilers and operators is located at: https://www.codot.gov/business/designsupport/matgeo/pave-smooth-testing.

   The profiler’s 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 10 miles from the project limits. The distance calibration site shall be 1056.0 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 profiler to operate uninterrupted. The limits of the site shall be clearly marked and the distance shall be measured to an accuracy of +/- 1 inch. 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 and direction. 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 adjustments. Shoulders with a width of 12 feet or more, ramps, tapers, turn slots, acceleration lanes and deceleration lanes will be evaluated for MRI and shall require corrective work if a 0.10 mile or fraction thereof section exceeds an MRI greater than 100.0 in/mile. The profile of the entire length of a lane shall be taken at one time. However, a lane profile may be broken into sections to accommodate project phasing. At the Pre-paving Conference, the Contractor shall submit a plan for breaking the project profiling into phases for approval by the Engineer.

   Shoulders less than 12 feet in width and medians will not be profiled and will not be subject to incentive adjustments. Shoulders less than 12 feet in width and medians constructed as part of the project shall be measured in accordance with subsection 105.07(a).

   Pavement 25 feet outside of a traffic circle and traffic circles will not be profiled and will not be subject to incentive adjustments. Traffic circles shall be measured in accordance with subsection 105.07(a).
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. The distance deleted from a profile shall be minimized by reducing testing speed as necessary. Incentive adjustments will not be made for this area. The final surface of these areas shall be tested in accordance with subsection 105.07(a).

The profile shall include transverse joints when pavement is placed on both sides of the joint. When pavement is placed on only one side of the joint, the profile shall start and stop at project paving limits.

The section of pavement 25 feet outside the paving limits to 5 feet inside the paving limits will be evaluated in accordance with subsection 105.07(a).

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 MRI is determined. Incentive adjustments will not be made for these areas. Areas deleted from the profile shall be tested in accordance with subsection 105.07(a).

The profile of the area 25 feet each side of the bridge deck shall be deleted from the profile before the MRI is determined. Incentive adjustments will not be made for this area. When both pavement and a bridge or bridge pavement are being constructed on the project, areas deleted from the profile shall be tested in accordance with subsection 105.07(a). 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 MRI is determined. 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 and the Department by e-mail at DOT_Profiles@state.co.us 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 Department will determine if Smoothness Verification Testing (SV) will be performed. If SV testing will be performed, it will be performed at the same time as the SA testing.

The Engineer will witness the SA profiling. Within 24 hours after each profile is collected, the Contractor shall submit the data electronically along with a SA data submittal form to the Department at DOT_Profiles@state.co.us, and to the Engineer.

2. 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 excluded. These locations shall be marked with temporary paint so that the final SA testing uses the same triggering locations.

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.
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 once. The profile shall be taken in the planned direction of travel. The left and right wheel paths shall be profiled simultaneously. Triggers for the start of the profile, the end of the profile and the locations of each exclusion shall be collected during each run. The collected profiles shall be electronically submitted to the Department and Engineer to be analyzed using CP 74.

The Department will determine a MRI for each 0.1 mile section or fraction thereof of completed pavement. Sections will terminate at the beginning of an exclusion and a new section starts at the end of exclusion. The MRI consists of the left and right wheel path’s profile passed through the International Roughness Index (IRI) filter. The IRI for the left and right wheel paths are averaged to determine MRI.

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 MRI 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(e).

Sections less than 0.005 miles in length shall not be subject to corrective work as specified by Table 105-10. Sections less than 0.005 miles in length shall be evaluated in accordance with subsection 105.07(a).

(c) MRI Category IV. For MRI Category IV pavements, the following shall be used for acceptance:
An MRI for each 0.1 mile section shall be determined on the original pavement surface prior to beginning the work in accordance with subsection 105.07(b) without exclusions.

An MRI for each 0.1 mile section shall be determined on the pavement surface after the work is complete in accordance with subsection 105.07(b) without exclusions.

The original and final profile lengths shall have a difference in the length of each lane less than 0.2 percent. When the profile length difference exceeds 0.2 percent, the final testing shall be repeated.

When a 0.1 mile section has a final MRI greater than 92.0 in/mile and the final MRI is greater than the MRI 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 MRI is equal to or less than the initial MRI or 92.0 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.

When the Contractor fails to collect the profile of the original pavement surface prior to beginning the work, the final pavement surface will be evaluated for corrective work in accordance with the criteria for Category III pavement smoothness.

Incentive adjustments for smoothness will not be made for Category IV.

Pavements evaluated for Category IV that will be overlaid with a surface seal shall be evaluated for pavement smoothness prior to application of the surface seal (e.g. chip seal).
5

REVISION OF SECTIONS 105 AND 412
PAVEMENT SMOOTHNESS

(d) Acceptance and Incentive Adjustments. Acceptance and incentive adjustments for pavement smoothness will be made on a square yard basis in accordance with the following:

Incentive adjustments will be based on the MRI for each 0.1 mile section or fraction thereof. Incentive adjustments for Pavement Smoothness will be made in accordance with Table 105-6 or 105-7. Incentive payments will not be made until all sections requiring corrective work have been corrected.

Final acceptance and incentive adjustments for pavement smoothness will be made on a square yard basis based on the MRI for each 0.1 mile section or fraction thereof from the Contractor’s initial SA testing. Those sections requiring corrective work indicated by the initial SA testing will be re-evaluated. However, incentives will not be earned in these areas, regardless of the final smoothness.

### Table 105-6
HMA PAVEMENT SMOOTHNESS (INCHES/MILE)
MEAN ROUGHNESS INDEX

<table>
<thead>
<tr>
<th>Pavement Smoothness Category</th>
<th>Maximum Incentive Payment ($/sq.yd.)</th>
<th>Incentive Payment ($/sq.yd.)</th>
<th>No Incentive</th>
<th>Corrective Work Required (0.10 mile sections)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>MRI ≤ 46.0</td>
<td>MRI &gt; 46.0 and &lt; 73.0</td>
<td>MRI ≥ 73.0</td>
<td>MRI &gt; 88.0</td>
</tr>
<tr>
<td></td>
<td>I = $1.28</td>
<td>I = 3.46-0.0474 MRI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>MRI ≤ 40.0</td>
<td>MRI &gt; 40.0 and &lt; 67.0</td>
<td>MRI ≥ 67.0</td>
<td>MRI &gt; 82.0</td>
</tr>
<tr>
<td></td>
<td>I = $1.28</td>
<td>I = 3.18 – 0.0474 MRI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>III</td>
<td>MRI ≤ 52.0</td>
<td>MRI &gt; 52.0 and &lt; 80.0</td>
<td>MRI ≥ 80.0</td>
<td>MRI &gt; 97.0</td>
</tr>
<tr>
<td></td>
<td>I = $1.28</td>
<td>I = 3.66 – 0.0457 MRI</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 105-7
PCCP SMOOTHNESS (INCHES/MILE)
MEAN ROUGHNESS INDEX

<table>
<thead>
<tr>
<th>Pavement Smoothness Category</th>
<th>Maximum Incentive Payment ($/sq.yd.)</th>
<th>Incentive Payment ($/sq.yd.)</th>
<th>No Incentive</th>
<th>Corrective Work Required (0.10 mile sections)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>MRI ≤ 46.0</td>
<td>MRI &gt; 46.0 and &lt; 73.0</td>
<td>MRI ≥ 73.0</td>
<td>MRI &gt; 88.0</td>
</tr>
<tr>
<td></td>
<td>I = $2.80</td>
<td>I = 7.57 – 0.1037 MRI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>MRI ≤ 40.0</td>
<td>MRI &gt; 40.0 and &lt; 67.0</td>
<td>MRI ≥ 67.0</td>
<td>MRI &gt; 82.0</td>
</tr>
<tr>
<td></td>
<td>I = $2.80</td>
<td>I = 6.948 – 0.1037 MRI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>III</td>
<td>MRI ≤ 52.0</td>
<td>MRI &gt; 52.0 and &lt; 80.0</td>
<td>MRI ≥ 80.0</td>
<td>MRI &gt; 97.0</td>
</tr>
<tr>
<td></td>
<td>I = $2.80</td>
<td>I = 8.00 – 0.100 MRI</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6
REVISION OF SECTIONS 105 AND 412
PAVEMENT SMOOTHNESS

Table 105-8
CORRECTIVE WORK CRITERA (INCHES/MILE)
0.005 TO 0.10 MILE SECTIONS
MEAN ROUGHNESS INDEX

<table>
<thead>
<tr>
<th>Pavement Smoothness Category</th>
<th>Corrective Work Required</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>D = Section Length (miles)</td>
</tr>
<tr>
<td>I</td>
<td>MRI &gt;134.32 – 463.16 D</td>
</tr>
<tr>
<td>II</td>
<td>MRI &gt; 125.16 – 431.58 D</td>
</tr>
<tr>
<td>III</td>
<td>MRI &gt; 148.05 – 510.53 D</td>
</tr>
</tbody>
</table>

(e) **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 perform corrective work in the areas indicated by the SA testing.

The criteria for determining if a 0.1 mile section requires corrective work is specified in Table 105-6 or 105-7. The criteria for determining if a section less than 0.10 miles in length and greater than 0.005 miles in length requires corrective work is specified in Table 105-8.

Corrective work shall consist of diamond grinding, an approved overlay, or removal and replacement. Corrective work shall conform to one of the following conditions:

1. **HMA 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. **HMA 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 a wheel path. The wheel path is from the stripe to the center of the lane. The grinding process shall produce a pavement surface that is true to grade and uniform in appearance. The grooves shall be evenly spaced. Any ridges on the outside edge next to the shoulder, auxiliary, ramps or adjacent lanes greater than 3/16 inch high shall be feathered out to the satisfaction of the Engineer in a separate, feather pass operation.
The pavement surface after grinding shall have no depressions or misalignment of slope in the longitudinal direction exceeding 1/8 inch in 12 feet when measured with a 12 foot straightedge placed parallel to the centerline. All areas of deviation shall be reground at no additional cost.

The slurry and residue resulting from the grinding operation shall not be allowed to flow across lanes occupied by the traffic and shall be continuously removed during the grinding operation, leaving the pavement in a clean condition. The Contractor shall haul the grinding residue to a suitable location at an approved location at no additional cost.

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.

For HMA pavements, 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 after final SA testing is complete.

When any grinding on concrete pavement occurs where a core for determining pavement thickness has been previously taken, another core shall be taken after the grinding has been completed and shall replace the original core in the calculation of pavement thickness incentive and disincentive. Joint sealant that has been damaged by grinding on concrete pavement shall be repaired or replaced at the Contractor’s expense in accordance with Standard Plan M-412-1 and subsection 412.18.

For PCCP, diamond ground surface texture will be considered acceptable when the average texture depth (ATD) of the panel is greater than 0.05 inch. The Contractor will perform surface texture testing in accordance with CP 77 Method B. Each area in a lane that required diamond grinding will be tested at least once. Areas in a lane with more than 500 continuous feet of grinding will be tested at a frequency of one test per 500 linear feet. Areas with deficient surface texture shall be diamond ground and retested.

Final Smoothness Acceptance Testing. After the Contractor has completed the required corrective work, the Contractor shall retest the pavement in accordance with subsection 105.07(b). Final SA testing shall only be required on lanes with sections requiring corrective work. Final SA testing shall start and stop at the same locations as the Initial SA testing. If additional corrective work is required, the Contractor shall perform the corrective work and perform 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 and the Department by e-mail at DOT_Profiles@state.co.us at least 5 working days in advance of his intention to perform final SA testing. The Department will determine if Smoothness Verification Testing (SV) will be performed. If SV testing will be performed, it will be performed at the same time as the SA testing.

The Initial SA and Final SA profile lengths shall have a difference in the length of each lane less than 0.2 percent. When the profile length difference exceeds 0.2 percent, the Final SA testing shall be repeated.
(c) Department Smoothness Verification Testing (SV). The Department may elect to perform smoothness verification 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. The Contractor shall coordinate with the Department and his profiler to schedule SA and SV to occur at the same time.

The Department will randomly select scheduled Contractor Smoothness Acceptance Testing to verify. A minimum of 25 percent of each scheduled Contractor Smoothness Acceptance Testing by an individual profiler will be verified. The Engineer may also request verification for any Smoothness Acceptance Testing.

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 payment if the following criteria are met:

1. The difference in MRI 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.

2. The difference in average MRI for each lane is less than 6.1 inches/mile.

3. 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 payment and the Contractor’s profiler certification will be suspended and evaluated pursuant to CP 78. The Contractor shall schedule with the Department within 10 working days to perform this evaluation or the profiler will be required to be re-certified in accordance with CP 78.

Delete subsection 105.08.

Delete subsection 412.17 and replace with the following:

412.17 Surface Smoothness. The roadway surface smoothness shall be tested in accordance with subsection 105.07.

Delete subsection 412.18(3) and replace with the following:

(3) Corrective work for pavement smoothness in accordance with subsection 105.07.

END OF SECTION
Section 106 of the Standard Specifications is hereby revised for this project as follows:

Delete subsection 106.11(a) and replace it with the following:

(a) Federal *Buy America* requirements for iron and steel do not apply to this project.

END OF SECTION
1

REVOLUTION OF SECTIONS 106 & 601
CONCRETE TEST REPORTS

Sections 106 and 601 of the Standard Specifications are hereby revised for this project as follows:

Subsection 106.06(a) shall include the following:

The Contractor shall distribute electronically to the concrete supplier all compressive strength process control (PC) data for the concrete supplied to the project. The Contractor shall distribute the PC compressive strength data within two business days of the 7-day and 28-day compressive strength testing. The data shall include the compressive strength and batch ticket number at a minimum.

Subsection 106.06(b) shall include the following:

When compressive strength testing is specified, the Engineer will distribute electronically to the concrete supplier all compressive strength Owner Acceptance (OA) data for the concrete supplied to the project. The Engineer will distribute the OA compressive strength data within two business days of the 7-day and 28-day compressive strength testing. The data will include the compressive strength and batch ticket number at a minimum. The Contractor shall not have a valid dispute or claim as a result of any action or inaction by the Department related to the distribution of test results.

Subsection 601.17(c) shall include the following:

The Engineer will distribute electronically to the concrete supplier all compressive strength Owner Acceptance (OA) data for the concrete supplied to the project. The Engineer will distribute the OA compressive strength data within two business days of the 7-day and 28-day compressive strength testing. The data will include the compressive strength and batch ticket number at a minimum. The Contractor shall not have a valid dispute or claim as a result of any action or inaction by the Department related to the distribution of test results.

END OF SECTION
REVISION OF SECTION 107
WATER QUALITY CONTROL

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

Subsection 107.25(a) shall include the following:

8. Owner. The party that has overall control of the activities and that has funded the implementation of the construction plans and specifications. This is the party with ownership of, a long-term lease of, or easements on the property on which the construction activity is occurring (e.g. CDOT).

9. Operator. The party that has operational control over day-to-day activities at a project site which are necessary to ensure compliance with the permit. This party is authorized to direct individuals at a site to carry out activities required by the permit (e.g. the general contractor).

Delete subsection 107.25(b)8 and replace with the following:

8. Water from dewatering operations shall not be directly discharged into any State waters, unless allowed by a permit. Water from dewatering shall not be discharged into a ditch unless:

   (1) Written permission is obtained from the owner of the ditch.

   (2) It is covered in the approved CDW or Remediation Permit that allows the discharge.

   (3) A copy of this approval is submitted to the Engineer. A copy of the Permit shall be submitted to the Engineer prior to dewatering operations commencing.

Construction Dewatering may be discharged to the ground on projects where CDPHE’s Low Risk Guidance Document for Discharges of Uncontaminated Groundwater to Land are met. The conditions of this guidance are:

(1) The source of the discharge is solely uncontaminated groundwater or uncontaminated groundwater combined with stormwater and does not contain pollutants in concentrations that exceed water quality standards for groundwater referenced above.

(2) Discharges from vaults or similar structures shall not be contaminated. Potential sources of contamination include process materials used, stored, or conveyed in the structures, or introduced surface water runoff from outside environments that may contain oil, grease, and corrosives.

(3) The groundwater discharge does not leave the project boundary limits where construction is occurring.

(4) Land application is conducted at a rate and location that does not allow for any runoff into State waters or other drainage conveyance systems, including but not limited to streets, curb and gutter, inlets, borrow ditches, open channels, etc.

(5) Land application is conducted at a rate that does not allow for any ponding of the groundwater on the surface, unless the ponding is a result of implementing control measures that are designed to reduce velocity flow. If the control measures used result in ponding, the land application shall be done in an area with a constructed containment, such as an excavation or berm area with no outfall. The constructed containment shall prevent the discharge of the ponding water offsite as runoff.
(6) A visible sheen is not evident in the discharge.

(7) Control measures are implemented to prevent any sediment deposited during land application from being transported by stormwater runoff to surface waters or other conveyances.

(8) All control measures used shall be selected, installed, implemented, and maintained according to good engineering, hydrologic, and pollution control practices. The selected control measures shall provide control for all potential pollutant sources associated with the discharge of uncontaminated groundwater to land. The discharge shall be routed in such a way that it will not cause erosion to land surface. Energy dissipation devices designed to protect downstream areas from erosion by reducing the velocity of flow (such as hose attachments, sediment and erosion controls) shall be used when necessary to prevent erosion.

All dewatering operations shall be recorded in the SWMP as follows:

(1) The source is identified in the SWMP and updated by the SWMP Administrator.

(2) The SWMP describes and locates the practices implemented at the site to control stormwater pollution from the dewatering of groundwater or stormwater.

(3) The SWMP describes and locates the practices to be used that will ensure that no groundwater from construction dewatering is discharged from the LOC as surface runoff or to surface waters or storm sewers.

(4) Groundwater and groundwater combined with stormwater do not contain pollutants in concentrations exceeding the State groundwater standards in Regulations 5 CCR 1002-41 and 42.

If surface waters are diverted around a construction area and no pollutants are introduced during the diversion, a CDW Permit is not required. If the diverted water enters the construction area and contacts pollutant sources (e.g. disturbed soil, concrete washout, etc.), the Contractor shall obtain a CDW permit for the discharge of this water to State waters or to the ground.

Delete subsection 107.25(b)13 and replace with the following:

Pollutant byproducts of highway construction, such as concrete, asphalt, solids, sludges, pollutants removed in the course of treatment of wastewater, excavation or excess fill material, and material from sediment traps shall be handled, stockpiled, and disposed of in a manner that prevents entry into State waters, including wetlands. Removal of concrete waste and washout water from mixer trucks, concrete finishing tools, concrete saw, and all concrete material removed in the course of construction operations or cleaning shall be performed in a manner that prevents waste material from entering State waters and shall not leave the site as surface runoff. A minimum of ten days prior to the start of the construction activity, the Contractor shall submit in writing a Method Statement for Containing Pollutant Byproducts to the Engineer for approval.

Subsection 107.25(b) shall include the following:
23. If the project area is covered by a CDPS-SCP, permittees are authorized to discharge stormwater associated with construction activity and specified non-stormwater associated with construction activity to State waters.

A. Allowable Stormwater Discharges:
   (1) Stormwater discharges associated with construction activity.
   (2) Stormwater discharges associated with producing earthen materials, such as soils, sand, and gravel dedicated to providing material to a single contiguous site, or within ¼ mile of a construction site (i.e. borrow or fill areas).
   (3) Stormwater discharges associated with dedicated asphalt, concrete batch plants and masonry mixing stations. (Coverage under the CDPS-SCP is not required if alternative coverage has been obtained.)
   (4) Discharges resulting from emergency firefighting activities.

B. Allowable Non-Stormwater Discharges if identified in the SWMP with appropriate control measures:
   (1) Discharges from uncontaminated springs that do not originate from an area of land disturbance.
   (2) Discharges to the ground of concrete washout water associated with the washing of concrete tools and concrete mixer chutes. Discharges of concrete washout water shall not leave the site as surface runoff or reach receiving waters.
   (3) Discharges of landscape irrigation return flow.

Discharges authorized by the CDPS-SCP shall not cause, have the reasonable potential to cause, or measurably contribute to an exceedance of any applicable water quality standard, including narrative standards for water quality.

All construction site wastes shall be properly managed to prevent potential pollution of State waters. The CDPS-SCP does not authorize on-site waste disposal.

Delete subsection 107.25(c) and replace with the following:

(c) Stormwater Construction Permit. A Colorado Discharge Permit System Stormwater Construction Permit (CDPS-SCP) will be obtained from CDPHE by CDOT. The Contractor and CDOT will be co-permittees. The Contractor shall coordinate with CDOT to become the Operator permittee of the respective permit upon award of the Contract. The Contractor shall provide a copy of permit certification as the Operator to the Engineer prior to or at the Pre-construction Conference. No work shall begin until the CDPS-SCP permit with Owner and Operator has been approved by CDPHE. A copy of the permit shall be placed in the project SWMP.

The Contractor is legally required to obtain all other permits associated with specific activities within or outside of the right of way, such as borrow pits, concrete or asphalt plant sites, waste disposal sites, or other facilities. Staging areas within a ¼ mile, but not within CDOT right of way shall be considered a common plan of development and permits for these facilities require permitting in the
Contractor’s name as Owner and Operator. These permits include local agency, federal, or other stormwater permits. The Contractor shall consult with the Engineer and contact the CDPHE or other appropriate federal, state, or local agency to determine the need for any permit.

When a Utility Company has obtained a CDPS-SCP within a CDOT project area, prior to the Contractor being on-site, the Contractor shall coordinate with the Engineer and the Utility Company to transfer or reassign the permit area within the project’s Limits of Construction to the Contractor and CDOT prior to work commencing. The Contractor shall not commence construction until CDPHE issues a new CDPS-SCP identifying the Contractor as the Operator, and the permit is put in the SWMP.

To initiate acceptance of the stormwater construction work (including seeding and planting required for erosion control), the Contractor shall request in writing a Stormwater Completion Walkthrough. The Engineer will set up the walkthrough. It will include the Engineer or designated representative, Superintendent or designated representative, Stormwater Management Plan (SWMP) Administrator, Region Water Pollution Control Manager (RWPCM), Landscape Architect, and a Regional Maintenance representative. Unsatisfactory and incomplete stormwater and sediment/erosion control work will be identified in this walkthrough and will be summarized by the Engineer in a punch list.

The completed action items associated with the corrective work will be shown as completed on the punch list. Upon completion of all items shown, the Contractor shall notify the Engineer. Upon written agreement that the punch list is completed from the Engineer, the Contractor shall submit the appropriate form to the CDPHE such that CDOT Maintenance becomes the Operator permittee of the CDPS-SCP.

Until the transfer of the permit has been approved by the CDPHE, the Contractor shall continue to adhere to all permit requirements. Requirements shall include erosion control inspections, control measure installation, control measure maintenance, control measure repair including seeded areas, and temporary control measure removal. All documentation shall be submitted to the Engineer and placed in the SWMP.

All costs associated with the Contractor applying for, holding, and transferring the CDPS-SCP permit between parties will not be measured and paid for separately, but shall be included in the work in accordance with subsection 107.02.

END OF SECTION
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 (Task). A portion of the project that requires time and/or resources to complete. An activity has a description, start date, finish date, duration, and one or more logic ties. A critical activity is an activity on the critical path.

Activity ID. A unique, alphanumeric, identification code assigned to an activity that remains constant throughout the project.

Baseline Schedule. The original, approved project schedule before the project begins with no progress.

Calendar. Defined work periods and no work periods that determine when project activities can occur. Multiple calendars may be used.

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 Method (CPM) 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 and the interdependencies of all activities.

Critical Path. The longest logical path through the CPM network driven by calendars, constraints, and activity logic. It consists of activities that determine the shortest time for project completion and the sequence of activities such that a delay to any of the activities on the critical path will prolong contractual project milestones, such as project completion.

Data Date. The starting point from which to schedule all remaining work. It can also be considered the cut-off date wherein all work before this date has actual starts, actual finishes, or both.

Duration. The estimated amount of time needed to complete an activity.

Free Float (Free Slack). The amount of time an activity can be delayed without delaying the Early Start or Early Finish of its successor activity or activities.

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 zero duration used to represent an event.
Near Critical Activity. An activity with a total float of five days or fewer, or as defined by the Engineer.

Open-Ended Activity. An activity that does not have a predecessor activity and a successor activity, or only has a start-to-start as a predecessor or finish-to-finish as a successor.

Planned Completion Date. The date on which the schedule shows work is planned to be completed.

Predecessor Activity. An activity that is defined by schedule logic to precede another activity.

Relationship. The interdependence between activities.

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.

Total Float (Total Slack). 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 causes a delay to the time specified in the Commencement and Completion of Work special provision.

(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 Contractor shall submit schedules for approval by the Engineer. The Contractor’s schedule shall be an accurate plan to complete the work so that the Department can use the schedule to evaluate progress, schedule CDOT resources, inform the project stakeholders, and evaluate the effect of changes to the schedule. A schedule review meeting shall be held to discuss each schedule submittal.

The Contractor shall submit a monthly update as either a Project Schedule Update or Revised Schedule as determined by the Engineer. When the project has a maintenance or landscape establishment period, the Engineer may waive the monthly update requirement during that period. The Contractor shall submit a final update that shows all work through the final acceptance date.

The Engineer will not issue a monthly progress payment if the Engineer has not received an update. The Engineer may not make monthly progress payments for the months following the update submission until the Engineer either approves or approves-as-noted the Project Schedule Update or Revised Schedule.
3

REVISION OF SECTION 108
PROJECT SCHEDULE

The Contractor shall use activity descriptions that ensure the work is easily identifiable. Activity description shall start with an action verb when practicable to clearly communicate what is being performed. The Contractor shall show the no-work days in the schedule calendars. The contract completion date shall be included as an activity.

The Contractor shall use durations for individual construction activities that do not exceed 15 days of work unless approved by the Engineer. The Contractor may group a series of activities with an aggregate duration of five work days or less into a single activity. Non-construction activities may have durations exceeding 15 days of work, 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 in the schedule unless approved by the Engineer:

(1) Negative lags.
(2) Lags in excess of 10 work days.
(3) Start-to-finish relationships.
(4) Open-ended activities.
(5) Constraints.

The Project Schedule shall show all activities required by all parties to complete the work. 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.

The Engineer’s review of the schedule will not exceed 10 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.

Approval of the Project Schedule shall not relieve the Contractor of any contract requirement including the requirement to complete all work within the Contract Time. Contractual requirements shall not change by submission or approval of a schedule, unless specifically amended by a Change Order.

(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 Project Schedule Updates and Revised Schedules, 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:

<table>
<thead>
<tr>
<th>Activity ID</th>
<th>Activity Description</th>
<th>Original Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Float</td>
<td>Early start date</td>
<td>Early finish date</td>
</tr>
<tr>
<td>Late start date *</td>
<td>Late finish date *</td>
<td>Actual Start date ^</td>
</tr>
<tr>
<td>Actual Finish date ^</td>
<td>Calendar used on the activity</td>
<td>Activity Responsibility#</td>
</tr>
<tr>
<td>Remaining Duration ^</td>
<td>Duration Percent Complete ^</td>
<td>Gantt chart</td>
</tr>
</tbody>
</table>

^ Required with the Preliminary and Baseline Schedule.
# Specify subcontractors, vendors, and all stakeholders.

* Required with the Project Schedule Update and Revised Schedule.

The Contractor shall include the following with all schedule submittals:

(1) A Job Progress Narrative Report that includes the following:

(i) Baseline, Preliminary, and Revised Schedules:

[1] A narrative of the critical and near critical work activities. This narrative shall include real or perceived risks and assumptions, including production rates. Particular emphasis shall be made on activities which are the Contractor’s and Department’s responsibilities, third party activities, or long lead procurement items.

[2] A narrative, including attachments if appropriate, of all of the project’s calendars. This narrative shall explain work and non-work periods as well as special weather dependent calendars. A list of the calendars used in the schedule, a description of each calendar’s work and non-work days, a list of the activities using each calendar, and an explanation of how the calendar applies to that work.

[3] A narrative of planned work on night shifts or planned work that will require approval from the Department or other agencies.

[4] A list of all added and deleted activities along with a brief explanation for the change.

[5] All logic and duration changes to any activity along with an explanation for changes to any critical and near critical activities.

[6] A description of site mobilization (such as dates of expected material shipments, planned dates for equipment arrivals, office setup, material laboratory arrival and setup, and anticipated portable crusher or batch plant setup).

[7] A list of the fabrication and delivery of key and long-lead procurement activities.

(ii) Project Schedule Update:

[1] A description of the work performed since the previous month’s schedule update.

5 REVISION OF SECTION 108
PROJECT SCHEDULE

[3] A description of problems encountered or anticipated since the previous month’s schedule submission.

[4] A description of unusual labor, shift, equipment, or material conditions or restrictions encountered or anticipated.

[5] The status of all pending items that could affect the schedule.


[7] Scheduled completion date status and any change from the previous month’s submission.

[8] An explanation for a scheduled completion date forecasted to occur before or after the contract completion date or contract time.

[9] 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. Effect of the delay on other activities, milestones, and completion dates.
   3. Identification of the actions needed to avoid a potential or mitigate an actual delay.
   4. A description of the critical path impact and effect on the scheduled completion date in the previous month’s schedule update.

[10] An explanation of any critical and near critical work that is not progressing as planned.

[11] A list of all added and deleted activities along with a brief explanation for the change.

[12] Any logic and duration changes to a critical or near critical activity along with an explanation for the change.

[13] For working day contracts, a list of planned non-working days with actual work.

(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 USB flash drives or other media as directed by the Engineer with electronic copies of the schedule submittals. Electronic copies of the CPM schedules shall be submitted both in the native file format and in Portable Document Format (PDF).

Each schedule submittal shall be appropriately labeled as a Preliminary Schedule, Baseline Schedule, Project Schedule Update, or Revised Schedule. The title bar shall include the CDOT project number, subaccount, project name, Contractor name, and schedule data date. If an originally submitted schedule is revised during review, the title bar shall also include a revision number (REV1, REV2, etc.) revision date, and submission date.
6
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Project Schedule

(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) 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. Approval of this schedule shall not relieve the Contractor of its obligation to complete the work within the Contract Time. When approved, the Project Schedule Update will become the Project Schedule.

(g) 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 shall be based on the Project Schedule and may be a time-scaled logic diagram or other standard format as approved by the Engineer. Schedule Submittal requirements for reports do not apply to the Weekly Planning Schedule.

(h) Revised Schedule. A Revised Schedule 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,
6. When the Engineer determines that the schedule has a fatal flaw; or
7. When the work cannot be constructed as scheduled.
7
REVISION OF SECTION 108
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The Contractor shall provide a Revised Schedule within 10 days of the Engineer's written notification and shall include the diagrams and reports as described in subsections 108.03(b) and 108.03(c). Once approved, the Revised Schedule becomes the Project Schedule.

(i) Payment. All costs relating to the requirements of this subsection will not be paid for separately but shall be included in the work.

END OF SECTION
1
REVISION OF SECTION 208
EROSION CONTROL

Section 208 of the Standard Specifications is hereby deleted for this project and replaced with the following:

DESCRIPTION

208.01 This work consists of constructing, installing, maintaining, and removing when required, control measures 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.

Stormwater runoff from all disturbed areas and soil storage areas for which permanent or interim stabilization is not implemented, must flow to at least one control measure to minimize sediment in the discharge. This shall be accomplished through filtering, settling, or straining. The control measure shall be selected, designed, installed, and adequately sized in accordance with good engineering, hydrologic, and pollution control practices. The control measures shall contain, or filter flows in order to prevent the bypass of flows without treatment and shall be appropriate for stormwater runoff from disturbed areas and for the expected flow rate, duration, and flow conditions (i.e., sheet or concentrated flow).

The Contractor shall coordinate the construction of temporary control measures with the construction of permanent control measures 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 affecting 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:

<table>
<thead>
<tr>
<th>Material</th>
<th>Approval Process</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erosion Bales (Weed Free)</td>
<td>COC</td>
<td>The Contractor shall provide a transit certificate number or a copy of the transit certificate as supplied from the producer.</td>
</tr>
<tr>
<td>Silt Fence</td>
<td>COC</td>
<td></td>
</tr>
<tr>
<td>Silt Berm</td>
<td>APL</td>
<td></td>
</tr>
<tr>
<td>Erosion Log (Type 1, Type 2, and Type 3)</td>
<td>COC</td>
<td></td>
</tr>
<tr>
<td>Silt Dikes</td>
<td>COC</td>
<td></td>
</tr>
<tr>
<td>Pre-fabricated Concrete Washout Structures (above ground)</td>
<td>APL</td>
<td></td>
</tr>
<tr>
<td>Pre-fabricated Vehicle Tracking Pad</td>
<td>APL</td>
<td></td>
</tr>
<tr>
<td>Aggregate Bag</td>
<td>COC</td>
<td></td>
</tr>
<tr>
<td>Storm Drain Inlet Protection (Type I, II, and III)</td>
<td>APL</td>
<td></td>
</tr>
</tbody>
</table>

COC = Certificate of Compliance; APL = Approved Product List
2
REVISION OF SECTION 208
EROSION CONTROL

The material for control measures 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 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 the Weed Free Forage Coordinator at (303) 869-9038. Also available at www.colorado.gov/ag/csf.

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 46 inches. Wood posts shall be 1.5 inch width by 1.5 inch thickness actual dimensions with 1/8 inch tolerance. Geotextile shall be attached to wood posts with three or more staples per post.

Silt fence geotextile shall conform to the following requirements:

<table>
<thead>
<tr>
<th>Property</th>
<th>Wire Fence Supported Requirements</th>
<th>Self-Supported Requirements Geotextile Elongation &lt;50%</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grab Strength, lbs</td>
<td>90 minimum</td>
<td>124 minimum</td>
<td>ASTM D4632</td>
</tr>
<tr>
<td>Permittivity sec-1</td>
<td>0.05</td>
<td>0.05</td>
<td>ASTM D4491</td>
</tr>
<tr>
<td>Ultraviolet Stability</td>
<td>Minimum 70% Strength Retained</td>
<td>Minimum 70% Strength Retained</td>
<td>ASTM D4355</td>
</tr>
</tbody>
</table>

**Silt Fence (Reinforced).** Silt fence posts shall be metal "studded tee" T-post with a minimum length of 66 inches. Metal posts shall be "studded tee" with 0.095 inch minimum wall thickness. Wire fabric reinforcement for the silt fence geotextile shall be a minimum of 14 gauge with a maximum mesh spacing of 6 inches. Geotextile shall be attached to welded wire fabric with ties or nylon cable ties at 12 inches on center at top, middle 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 out of embankment (subsoil) and not out of salvaged topsoil.
(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 permeable multi-use material consisting of ultraviolet (UV) stabilized high-density polyethylene or other approved material effective in reducing water velocity. Designed and tested system shall be installed on a Turf Reinforcement Mat or Soil Retention Blanket in accordance with Section 216. The segment shall be secured to the ground with either metal or wood stakes. Minimum requirements for securing stakes shall be in accordance with the plans. Dimensions of individual segments shall meet the following criteria:

<table>
<thead>
<tr>
<th>Metric</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>6 - 11 inches</td>
</tr>
<tr>
<td>Height</td>
<td>6 - 10 inches</td>
</tr>
<tr>
<td>Weight</td>
<td>&gt; 0.25 lbs./sq. ft.</td>
</tr>
<tr>
<td>Percent Open Area</td>
<td>20 – 50%</td>
</tr>
</tbody>
</table>

(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 Logs.** Erosion logs shall be one of the following types unless otherwise shown on the plans:

1. Erosion Log (Type 1) shall consist of cylinder casings filled with curled aspen wood excelsior with a consistent width of fibers evenly distributed throughout the log. The casing shall be seamless, photo-degradable tube netting. 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 cylinder casings filled with Erosion Log (Type 2) Compost in accordance with subsection 212.02. The compost-wood chip blend may be pneumatically shot into a geotextile cylindrical casing or be pre-manufactured. The geotextile casing shall consist of HDPE or polypropylene mesh (knitted, not extruded) with openings of ¼ to ⅜ inch and contain the compost-wood chip material while not limiting water infiltration.

3. Erosion Log (Type 3) shall consist of cylinder casings filled with curled aspen wood excelsior with a consistent width of fibers evenly distributed throughout the log. The casing shall be seamless, 100 percent natural fiber cylinder netting (compostable) and shall have minimum dimensions as shown in Table 208-1, based on the diameter of the log shown on the plans. Netting shall be a woven cotton or cellulose base mesh that has an approval to compost certification with a maximum mesh size of 0.075 inches and index values as shown in Table 208-2. The curled aspen wood excelsior shall be fungus free, resin free, and free of growth or germination inhibiting substances.
Natural compostable fiber netting shall not contain any synthetic material woven into the netting such as polypropylene, nylon, polyethylene, or polyester dyes. Oxo-degradable or oxo-biodegradable petrochemical-based fiber shall not be part of the netting material. Burlap netting material shall not be used for Erosion Log (Type 3).

Erosion Log (Type 1, Type 2, and Type 3) shall have minimum dimensions as shown in Table 208-1, based on the specified diameter of the log.

<table>
<thead>
<tr>
<th>Diameter Type 1 &amp; Type 2 (Inches)</th>
<th>Length (feet)</th>
<th>Weight (minimum pounds/foot)</th>
<th>Stake Dimensions (Inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>10</td>
<td>1.6</td>
<td>¾ thickness by ¾ width by 18 long</td>
</tr>
<tr>
<td>12</td>
<td>10</td>
<td>2.5</td>
<td>1.5 thickness by 1.25 width by 24 long</td>
</tr>
<tr>
<td>20</td>
<td>10</td>
<td>4.0</td>
<td>1.5 thickness by 1.25 width by 30 long</td>
</tr>
</tbody>
</table>

Wood stake acceptable tolerance +/- 1/8 inch.

<table>
<thead>
<tr>
<th>Property</th>
<th>Requirement</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fabric Tensile Strength</td>
<td>&gt;70 lbs.</td>
<td>ASTM D3822</td>
</tr>
<tr>
<td>Biodegradable</td>
<td>100%</td>
<td>ASTM D5988</td>
</tr>
<tr>
<td>Mesh Pattern</td>
<td>Rib</td>
<td></td>
</tr>
</tbody>
</table>

Stakes to secure erosion logs shall consist of pinewood or hardwood.

(i) Silt Dikes. Silt dikes shall be pre-manufactured flexible sediment barrier that will fully rebound when driven over by heavy equipment. Material shall consist of outer geotextile fabric covering closed cell urethane or polyethylene foam core. The geotextile fabric aprons shall extend beyond the foam core a minimum of 8 inches on both sides.

<table>
<thead>
<tr>
<th>Property</th>
<th>Requirement</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Flow Rate</td>
<td>100-150 gallons per minute/square foot</td>
<td>ASTM D4491</td>
</tr>
<tr>
<td>Grab Breaking Load</td>
<td>200 lbs. minimum in each direction</td>
<td>ASTM D4632</td>
</tr>
<tr>
<td>Ultraviolet Degradation</td>
<td>70% of original unexposed grab breaking load after 500 hours</td>
<td>ASTM D4595</td>
</tr>
</tbody>
</table>

Each silt dike segment shall have the following dimensions:

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical height after installation</td>
<td>&gt;5 inches</td>
</tr>
<tr>
<td>Geotextile sleeve section to interlock segments</td>
<td>&gt;8 inches</td>
</tr>
</tbody>
</table>

Silt dike segments shall be anchored down using the minimum requirements shown in Table 208-4.
REVISION OF SECTION 208
EROSION CONTROL

Table 208-4
Silt Dike Segment Requirements

<table>
<thead>
<tr>
<th>Surface</th>
<th>Nail</th>
<th>Washers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soil Surface</td>
<td>Installed in 4 inch deep trench with 6 inch nails no more than 4 feet O.C. (on center)</td>
<td>1 inch washers</td>
</tr>
<tr>
<td>Hard Surface</td>
<td>1 inch concrete nails no more than 4 feet O.C.</td>
<td>1 inch washers and solvent-free adhesive</td>
</tr>
</tbody>
</table>

(i) Concrete Washout Structure. The Contractor shall construct a washout structure that will contain washout from concrete placement, construction equipment cleaning operations, and residue from cutting, coring, grinding, grooving, and hydro-concrete demolition. Embankment required for the concrete washout structure may be excavated material, provided that this material meets the requirements of Section 203 for embankment. If the bottom of the excavated structure is within 5 feet of anticipated high ground water elevation or the soil does not have adequate buffering capacity to meet water quality standards, an impermeable synthetic liner shall be installed with the minimum properties shown in Table 208-5.

Table 208-5
Impermeable Synthetic Liner Requirements

<table>
<thead>
<tr>
<th>Tested Property</th>
<th>Test Method</th>
<th>Units</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thickness</td>
<td>ASTM D5199</td>
<td>mil</td>
<td>&gt;30 +/- 1.5</td>
</tr>
<tr>
<td>Tear Strength</td>
<td>ASTM D1004</td>
<td>lbs</td>
<td>&gt;8</td>
</tr>
<tr>
<td>Low Temperature Impact</td>
<td>ASTM D1790</td>
<td>°F</td>
<td>Pass at -20</td>
</tr>
</tbody>
</table>

(k) Pre-Fabricated Concrete Washout Structure. Pre-Fabricated Concrete Washout Structures shall be one of the following types unless otherwise shown on the plans:

(1) Pre-Fabricated Concrete Washout Structure (Type 1). Type 1 portable bins shall be used only when specified in the Contract. It shall consist of a watertight multi-use container designed to contain liquid concrete washout wastewater, solid residual concrete waste from washout operations, and residue from saw cutting, coring, grinding, grooving, and hydro-concrete demolition. Minimum capacity including freeboard shall be 440 gallons.

(2) Pre-Fabricated Concrete Washout Structure (Type 2). Type 2 portable bins shall be used only when specified in the Contract. It shall consist of a watertight one-time use container designed to contain liquid concrete washout wastewater, solid residual concrete waste from washout operations, and residue from saw cutting, coring, grinding, grooving, and hydro-concrete demolition. The structure shall have a system to secure to the ground. Minimum capacity including freeboard shall be 50 gallons.

(l) Vehicle Tracking Pad (VTP). Aggregate for the vehicle tracking pad shall be crushed natural aggregate with at least two fractured faces that meets the following gradation requirements:

<table>
<thead>
<tr>
<th>Sieve size</th>
<th>Percent by weight</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Passing Square Mesh Sieves</td>
</tr>
<tr>
<td>75 mm (3 inch)</td>
<td>100</td>
</tr>
<tr>
<td>50 mm (2 inch)</td>
<td>0-25</td>
</tr>
<tr>
<td>19.0 mm (¾ inch)</td>
<td>0-15</td>
</tr>
</tbody>
</table>
Recycled crushed concrete or asphalt shall not be used for vehicle tracking pads.

Erosion control geotextile shall be a minimum Class 2, conforming to subsection 712.08.

Pre-Fabricated or manufactured vehicle tracking pads shall only be used if specified in the Contract. Multi-use pads shall consist of industrial grade materials and shall be designed to minimize sediment leaving the project.

Minimum dimensions of the modular systems shall be:

<table>
<thead>
<tr>
<th>Width</th>
<th>12 feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of pad</td>
<td>35 feet</td>
</tr>
</tbody>
</table>

To accommodate construction traffic turning radii between the tracking pad and a stabilized surface, additional flared sections of approved pads or aggregate in accordance with this specification shall be used at no additional cost to CDOT.

<table>
<thead>
<tr>
<th>Weight (min.) (lbs./sq. ft.)</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crush strength (min.) (psi)</td>
<td>400</td>
</tr>
</tbody>
</table>

If pads weigh less than 8 pounds per square foot, an anchoring system approved by the manufacturer shall be used for pads placed on soil and hard surfaces.

A thin layer of stone, geotextile, or other stable surface may be required to stop rutting under the pad or area where the vehicles mount or dismount the manufactured trackout control device.

(m) Aggregate Bag. Aggregate bags shall consist of crushed stone or recycled rubber filled fabric with the following properties:

<table>
<thead>
<tr>
<th>Diameter (inches)</th>
<th>Weight (minimum) (pounds per foot)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-8</td>
<td>6</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>12</td>
<td>15</td>
</tr>
</tbody>
</table>

Rubber used in bags shall be clean, 95 percent free of metal and particulates.

Crushed stone contained in the aggregate bags shall conform to Table 703-1 for Coarse Aggregate No. 6.

The aggregate bag shall consist of a woven geotextile fabric with the following properties:
(n) **Storm Drain Inlet Protection.** Storm drain inlet protection shall consist of aggregate filled fabric with the following dimensions:

<table>
<thead>
<tr>
<th>Storm Drain Inlet Protection Properties</th>
<th>Type I</th>
<th>Type II</th>
<th>Type III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter</td>
<td>4 in.</td>
<td>4 in.</td>
<td>N/A</td>
</tr>
<tr>
<td>Minimum Section Length</td>
<td>7 ft.</td>
<td>5 ft.</td>
<td>5 ft.</td>
</tr>
<tr>
<td>Apron Insert</td>
<td>---</td>
<td>30 in. or sized to grate</td>
<td>30 in or sized to grate</td>
</tr>
</tbody>
</table>

1. Type I protection shall be used with Inlet Type R.
2. Type II protection shall be used with Combination Inlet. Option A or B
3. Type III protection shall be used with Vane Grate Inlet only. Option A or B

Note: Options A and B are shown on Standard Plan M-208-1.

The Storm Drain Inlet Protection (Type I, II and III) shall consist of a woven geotextile fabric with the following properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Test Method</th>
<th>Unit</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grab tensile strength</td>
<td>ASTM D4632</td>
<td>lbs.</td>
<td>minimum 150X200</td>
</tr>
<tr>
<td>Mullen Burst Strength</td>
<td>ASTM D3786</td>
<td>lbs.</td>
<td>400</td>
</tr>
<tr>
<td>Trapezoid Tear Strength</td>
<td>ASTM D4533</td>
<td>lbs.</td>
<td>minimum 60X60</td>
</tr>
<tr>
<td>Percent Open Area</td>
<td>COE-22125-86</td>
<td>%</td>
<td>≥20</td>
</tr>
<tr>
<td>Water Flow Rate</td>
<td>ASTM D4491</td>
<td>gal./min./sq. ft.</td>
<td>≥100</td>
</tr>
<tr>
<td>Ultraviolet Resistance</td>
<td>ASTM D4355</td>
<td>%</td>
<td>≥70</td>
</tr>
</tbody>
</table>

Curb roll for Storm Drain Inlet Protection (Type I and II) shall have a weight >4 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 Table 703-1 for Coarse Aggregate No. 6.

### CONSTRUCTION REQUIREMENTS

**208.03 Project Review, Schedule, and Erosion Control Management.** 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.
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(3) The Contractor's Stormwater Management Plan (SWMP) Administrator. The SWMP Administrator is equivalent to the CDPS-SCP Qualified Stormwater Manager.

(4) Supervisors or Foremen of subcontractors working on the project.

(5) The Region Water Pollution Control Manager (RWPCM).

(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, 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 control measures 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, control measures 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 control measure added to the SWMP site map.

Prior to construction, the Contractor shall implement appropriate control measures 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 control measures are required and approved by the Engineer, the Contractor shall implement the additional control measures and the SWMP Administrator shall record and describe them on the SWMP site map. The approved control measures will be measured and paid for in accordance with subsections 208.11 and 208.12.

(a) Project Review. The Contractor shall submit modifications to the Contractor's control measures or SWMP in a written proposal to the Engineer. The written proposal shall include the following information:

(1) Reasons for changing the control measures.

(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.
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The Engineer will approve or reject the written proposal in writing within seven days after receipt of
the submittal. The Engineer may require additional control measures prior to approving the proposed
modifications. Additional modifications and additional control measures 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.

(b) 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. The 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 control measures, the Contractor shall propose revised control measures 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.

(c) Erosion Control Management (ECM). Erosion Control Management for this project shall consist of
SWMP Administration and Erosion Control Inspection. 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 (ECI) and the SWMP
Administrator may be the same person in projects with not more than 40 acres of disturbed area. The
ECI and the SWMP Administrator are equivalent to the CDPS-SCP Qualified Stormwater Manager.

1. SWMP Administration. The SWMP shall be maintained by a SWMP Administrator. The name of
the SWMP Administrator shall be recorded on the SWMP Section 3.B. The SWMP Administrator
shall have full responsibility to maintain and update the SWMP and identify to the Superintendent
critical action items needed to conform to the CDPS-SCP as follows:

   (1) Complete the SWMP as described in subsection 208.03(d).

   (2) Participate in the Environmental Pre-construction Conference.

   (3) Attend weekly erosion and sediment control meetings.

   (4) Attend all Headquarters 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 Headquarters or Region 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 control measures are available as needed.

   (7) During construction, the SWMP site map shall be updated to reflect current field conditions
       and include, at a minimum, the following:

     (i) Limits of Construction (LOC).
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(ii) Areas of disturbance (AD), including areas of borrow and fill.

(iii) Limits of Disturbance (LDA).

(iv) Areas used for storage of construction materials, equipment, soils, or wastes.

(v) Location of dedicated asphalt, concrete batch plants, and masonry mixing stations.

(vi) Location of construction offices and staging areas.

(vii) Location of work access routes during construction.

(viii) Location of waste accumulation areas, including areas for liquid, concrete, masonry, and asphalt.

(ix) Location of temporary, interim and permanent stabilization.

(x) Location of outfalls.

(xi) Flow arrows that depict stormwater flow directions on-site and runoff direction.

(xii) Location of structural and non-structural control measures.

(xiii) Location of springs, streams, wetlands, and other State waters, including areas that require pre-existing vegetation be maintained within 50 horizontal feet of a receiving water, unless infeasible.

(xiv) Location of stream crossings located within the construction site boundary.

(8) The SWMP shall reflect the field conditions and shall be amended to reflect control measures.

(i) A change in design, construction, operation, or maintenance of the site which would require the implementation of new or revised control measures; 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 control measures 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 as part of the SWMP.

(11) Document all inspection and maintenance activities. The SWMP and documentation shall be kept on the project site.
(12) When adding or revising control measures in the SWMP, add a narrative explaining what, when, where, why, and how the control measure is being used, and add a detail to the SWMP.

(i) How to install and inspect the control measure.

(ii) Where to install the control measure.

(iii) When to maintain the control measure.

(13) If using existing topography, vegetation, etc. as a control measure, label it as such on the SWMP site map; add a narrative as to when, where, why, and how the control measure is being used.

(14) Indicate control measures in use or not in use by recording them on Standard Plans M-208-1, M-216-1, and M-615-1 in the SWMP.

(15) Record on the SWMP, the approved Method Statement for Containing Pollutant Byproducts.

(16) Update the Potential Pollutants list in the SWMP and Spill Response Plan throughout construction.

(17) Vegetative buffers shall not be used as a sole control measure. They shall only be used as the final stage of a treatment train.

2. Erosion Control Inspector.

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.

(1) ECI duties shall be as follows:

(i) Coordinate with the SWMP Administrator on reporting the results of inspections. How to install and inspect the control measure.

(ii) Review the construction site for compliance with the Stormwater Construction Permit.

(iii) Inspect with the Superintendent and the Engineer (or their designated representatives) the stormwater management system at least every seven 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 (Stormwater Field Inspection Report – Active Construction) shall be used for all seven-day inspections and inspections following storm events. The Contractor shall notify the ECI when a storm event occurs.
Inspections are not required at sites when construction activities are temporarily halted, when snow cover exists over the entire site for an extended period 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 seven-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.

(2) The order of precedence for required inspections shall be as follows:

(i) Headquarters or Region water quality routine audits

(ii) Post-storm event inspections

(iii) Seven-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.

A seven-day inspection is not required on the same day a Headquarters or Region water quality routine audit is conducted, as long as all of the inspection scope requirements for a seven-day and post-storm event inspection are met. A sheet shall be placed in the inspections area of the SWMP to refer to the date the inspection was performed.

(3) Seven-day inspections and post-storm inspections shall include inspection of the following areas, if applicable, for evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system, or discharging to State waters:

(i) Construction site perimeter

(ii) Disturbed areas

(iii) Designated haul routes

(iv) Material and waste storage areas exposed to precipitation

(v) Locations where stormwater has the potential to discharge offsite

(vi) Locations where vehicles exit the site

(4) Inspections shall include the following:

(i) Visually verify whether all implemented control measures are in effective operational condition and are working as designed in their specifications to minimize pollutant discharges.

(ii) Determine if there are new potential sources of pollutants.

(iii) Assess the adequacy of control measures at the site to identify areas requiring new or modified control measures to minimize pollutant discharges.
(iv) Identify all areas of non-compliance with the permit requirements and, if necessary, implement corrective action in accordance with the CDPS-SCP.

Follow all other agency Stormwater requirements and inspections unless a waiver or other agreement has been made.

(5) The Contractor shall report the following circumstances orally to CDOT, CDPHE, the Contractor’s Superintendent, and the SWMP Administrator within 24 hours from the time the permittee becomes aware of the circumstances, and shall mail to the Division a written report containing the information requested within five working days after becoming aware of the following circumstances:

(i) Noncompliance which may endanger health or the environment, regardless of the cause of the incident.

(ii) Unanticipated bypass which exceeds any effluent limitations in accordance with the CDPS-SCP.

(iii) Upset conditions which causes an exceedance of any effluent limitation in accordance with the CDPS-SCP.

(iv) Daily maximum violations for any of the pollutants limited by the permit. This includes any toxic pollutant or hazardous substance or any pollutant specifically identified as the method to control any toxic pollutant or hazardous substance.

(6) Document spills, leaks, or overflows that result in the discharge of pollutants on the Form 1176. 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. The Engineer will provide an approved SWMP design at the Pre-construction Conference, which is and shall remain the property of CDOT. Prior to construction, CDOT will provide the documentation for items (1) through (4), and (18) as listed below, when available. The Contractor shall provide the contents required for items (5) through (17). The SWMP shall be stored in the CDOT field office or at another on-site location approved by the Division. The SWMP Administrator shall modify and update the SWMP as needed to reflect actual site conditions prior to the change 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 SWMP under the appropriate items by the SWMP Administrator:

   (1) SWMP Plan Sheets – Notes, tabulation, site description. The SWMP shall include a site description which includes, at a minimum, the following:

      (i) The nature of the construction activity at the site.

      (ii) The proposed schedule for the sequence for major construction activities and the planned implementation of control measures for each phase. (e.g. clearing, grading, utilities, vertical, etc.)
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(iii) Estimates of the total acreage of the site, and the acreage expected to be disturbed by clearing, excavation, grading, or any other construction activities.

(iv) A summary of any existing data used in the development of the construction site plans or SWMP that describe the soil or existing potential for soil erosion.

(v) A description of the percent of existing vegetative ground cover relative to the entire site and the method for determining the percentage, in accordance with CDOT Erosion Control and Stormwater Quality Guide.

(vi) A description of any allowable non-stormwater discharges at the site, including those being discharged under a division low risk discharge guidance policy.

(vii) A description of areas receiving discharge from the site. Including a description of the immediate source receiving the discharge. If the stormwater discharge is to a municipal separate storm sewer system, the name of the entity owning the system, the location of the storm sewer discharge, and the ultimate receiving water(s).

(viii) A description of all stream crossings located within the construction site boundary.

(2) SWMP Site Maps and Project Plan Title Sheet

(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.


(6) Weekly meeting sign in sheet and weekly meeting notes.

(7) Calendar of Inspections – Calendar of inspections marking when all inspections take place.

(8) Contractor Stormwater Field Inspection Reports (Forms 1176, 1177, 1388).

(9) All Water Quality Audit 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 control measures 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 including agreements with other MS4s, approved deferral request, CDPHE audit documentation, Water Quality Permit Transfer to Maintenance Punch List, and other miscellaneous documentation such as documented use agreements for areas outside of the permitted area.
(14) TECS Certifications of the SWMP Administrator and all ECIs, kept 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 batch plant, etc.

(17) Photographs Documenting Existing Vegetation – Project photographs shall include the following information with the record: project number, project code, name of the person who took the picture, date and time the picture was taken, and location and approximate station number or mile marker. The Contractor shall submit photographs documenting existing vegetation, prior to construction commencing, on paper with a maximum of four colored images per side of 8 ½ inch by 11 inch sheet or a digital copy on CD-ROM/Flash Drive (JPG format) as directed by the Engineer.

(18) Permanent Water Quality Plan Sheets – Plan sheets and specifications for permanent water quality structures and 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 made at the Contractor’s expense.

2. Reference Materials. 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, the 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. At this meeting the following shall be discussed and recorded in tab 6 of the SWMP:

(1) Recalcitrant, chronic, and severe inspection findings.

(2) Unresolved issues from previous inspections.
(3) Requirements of the SWMP.

(4) Problems that may have arisen in implementing the site specific SWMP or maintaining control measures.

(5) Control measures that are to be installed, removed, modified, or maintained, and associated SWMP modifications.

(6) Planned activities that will affect stormwater in order to proactively phase control measures.

All subcontractors 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 add it to the SWMP.

208.04 Control Measures for Stormwater.

The SWMP Administrator shall modify the SWMP to clearly describe and locate all control measures implemented at the site to control potential sediment discharges.

Vehicle tracking pads 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 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 including, but not limited to, excess concrete removed from forms, spills, slop, and all other unused concrete are potential pollutants that shall be removed from the site or contained at a pre-approved containment area that has been identified in the SWMP. 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 needed, or as directed by the Engineer. The uses of recycled concrete from permitted recycling facilities shall be in accordance with Section 203.

(a) Unforeseen Conditions. The Contractor shall design and implement erosion and sediment control measures 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 control measures. 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), the Environmental Protection Agency (EPA), or a Local Agency 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 prices.

(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 shall be subject to a separate CDPS-SCP and all other necessary permits, as they are considered a common plan of development if within a ¼ mile of the construction site. 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. A documented use agreement between the permittee and the owner or operator of any control measures located outside of the permitted area that are utilized by the permittee’s construction site for compliance with the CDPS-SCP, but not under the direct control of the permittee shall be placed in the project’s SWMP.

(d) Construction Implementation. The Contractor shall incorporate control measures into the project as outlined in the accepted schedule.

(e) Stabilization. Once earthwork has started, the Contractor shall maintain erosion control measures 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 the Contractor’s 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 or underlying soil of a site, such as clearing, grading, road bed preparation, soil compaction, and movement and stockpiling of sediment and materials. Designated topsoil distributed on the surface or in stockpiles shall not receive temporary stabilization. Other stabilization measures may be implemented, as approved. The maximum area of temporary stabilization (excluding areas of designated topsoil) shall not exceed 20 acres.

2. Interim Stabilization. As soon as it is known with reasonable certainty that work will be temporarily halted for 14 days or more, sediment and material stockpiles and disturbed areas shall be stabilized using one or more of the specified following methods:

   (1) Application of 1.5 tons per acres of mechanically crimped certified weed free hay or straw in combination with an approved organic mulch tackifier.

   (2) Placement of bonded fiber matrix in accordance with Section 213.

   (3) Placement of mulching (hydraulic) wood cellulose fiber mulch with tackifier, in accordance with Section 213.
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(4) Application of spray-on mulch blanket in accordance with Section 213. Magnesium Chloride, Potassium Chloride and Sodium Chloride, or other salt products, shall not be used as a stabilization method.

(5) Topsoil stockpiles shall receive interim stabilization unless specified in accordance with Section 207 as a different material than the other disturbed areas on-site.

3. Summer and Winter Stabilization. Summer and winter stabilization is defined as stabilization during 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 topsoil, seeding, mulching with tackifier, soil retention coverings, and such non-erodible methods as 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. All permanent stabilization requirements shown on the plans shall be completed within four working days of the placement of the topsoil in accordance with Section 207.

5. Final Stabilization. Final stabilization is achieved 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 control measures for stormwater pollution prevention shall be maintained in effective operating condition until the CDPS-SCP has been transferred to CDOT. Control measures 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 effective 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 control measures shall be repaired at the Contractor’s expense.

Complete site assessment shall be performed as part of comprehensive inspection and maintenance procedures to assess the adequacy of control measures at the site and the necessity of changes to those control measures to ensure continued effective performance. Where site assessment results in the determination that new or replacement control measures are necessary, the control measures shall be installed to ensure continuous effectiveness. When identified, control measures shall be maintained, added, modified or replaced as soon as possible, immediately in most cases.

Approved new or replaced control measures 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 the Contractor’s expense.
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From the time seeding and mulching work begins until project acceptance 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 control measures 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 control measures were constructed shall be returned to a condition similar to that which existed prior to its disturbance. Removed control measures shall become the property of the Contractor.

If the Contractor fails to complete construction within the approved contract time, the Contractor shall continue erosion and sediment control operations at its expense until acceptance of the work.

Sediment removed during maintenance of control measures and material from street sweeping may be used in or on embankment, provided it meets the requirements 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 control measure, 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 control measures 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). Material containment and removal will not be paid for separately, but shall be included in the work.

208.05 Construction of Control Measures. Control measures shall be constructed in accordance with Standard Plans M-208-1 and M-216-1, and with the following:

(a) **Seeding, Mulching, Sodding, Soil Retention Blanket.** Seeding, mulching, sodding, and soil retention blanket installation 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.

(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 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 or turf reinforcement 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) *Rip rap 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 each Type II and III containment area when it is more than 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 areas 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 so that the top of the stake does not extend past the top erosion log more than 2 inches, at the discretion of the Engineer, a shallower stake depth may be permitted if adverse site conditions are encountered, e.g. rock or frozen ground.
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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. Work on this structure shall not begin until written acceptance of location is provided by the Engineer.

Control measures designed for concrete washout waste shall be implemented. If the bottom of the excavated structure is within 5 feet of anticipated high ground water elevation or the soil does not have adequate buffering capacity to meet water quality standards, an impermeable synthetic liner shall be installed with the minimum properties shown in Table 208-5 or use a prefabricated washout.

The following requirements shall be met:

1. The 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 away 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 in the structure design to reasonably ensure the structure will not overtop during or because of a precipitation event.
7. The Contractor shall prevent tracking of washout material out of the washout structure.
8. Solvents, flocculants, 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 ⅔ the storage capacity of the washout structure.

(o) **Pre-fabricated concrete washout structures (Type 1 and Type 2).** Structures and sites shall meet the following requirements:

1. Structure shall contain all washout water. If bins are determined to be leaking, the Contractor shall replace the bin on-site and clean up the spilled material.
(2) Structure shall be located a minimum of 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 pre-fabricated structure shall be signed as “Concrete Washout”. Sign can be on portable bin.

(3) The site shall be accessible to appropriate vehicles.

(4) Washout bins shall be covered with a tarp tied down to the structure or staked to the ground when a storm event is anticipated.

(5) Solvents, flocculants, and acid shall not be added to wash water.

(6) Concrete waste, liquid and solid, shall not exceed \(\frac{3}{4}\) 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 installed 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.

Delivery to the site shall not occur until written acceptance is provide by the Engineer for both the product and the concrete waste disposal facility.

(p) 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).

(q) Detention Pond. Permanent detention ponds shown on the construction plans may be used as temporary control measures if all the following conditions are met:

(1) The pond is designated as a construction control measure in the SWMP.

(2) The pond outfall and outlet are designed and implemented for use as a control measure 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 control measures, as appropriate.

(3) All silt shall be removed and the pond returned to the design grade and contour prior to project acceptance.
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) 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 the 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 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 control measures at the toe (or within 20 feet of the toe) throughout construction. Control measures 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 activities 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 stabilization of all disturbances to completion.

208.09 Regulatory Mechanism for Water Quality. The Department will identify and document findings not in compliance with the Water Quality Specifications, as specified in subsection 208.09(a)(7), during Headquarters and Region water quality control inspections or observation by the Engineer. The Engineer will immediately notify the Contractor of these findings by issuing Form 105, which will be tracked in ESCAN/CARL software. Failure by the Contractor to clarify a finding location with the Engineer shall not interrupt the timelines noted in subsection 208.09(b).

Timelines noted in subsection 208.09(b) do not indemnify the Contractor from failing to comply with CDPS-SCP timelines for corrective actions. The CDPS-SCP (Part I.D.8) states corrective actions “…must be addressed as soon as possible, immediately in most cases, to minimize the discharge of pollutants.”
(a) Definitions.

1. Compliance Assistance. A low risk event as determined by the Region Water Pollution Control Manager (RWPCM). Compliance assistance events are not considered Findings and not subject to the Regulatory Mechanism noted in subsection 208.09(b).

2. Deferment. A request from the Contractor to the Engineer to delay implementation of corrective actions for Regular Findings pertaining to Water Quality Specifications. Deferments may only be granted due to extraordinary circumstances. However, it is at the Department’s discretion to approve or reject these requests.

3. Finding. An incident discovered through inspection by the Department or by Engineer observation, which is noncompliant with the Water Quality Specifications. A Finding will be classified as one of the following:
   
   (1) Regular Finding. A situation upon inspection that is in noncompliance with the Water Quality Specifications.
   
   (2) Severe Finding. A discharge outside the project’s Limits of Construction (LOC), subsection 107.25(a), to State waters or to a live inlet where the pollutant cannot be reclaimed.
   
   (3) Chronic Finding. A Chronic Finding is assessed when the same Regular Finding at the same location is documented twice in the last three Headquarters or Region water quality control inspections. Engineer observed findings outside these inspections will not apply.

4. Inspection Form 105. The Form 105 issued by the Engineer documenting findings from Headquarters or Region led water quality inspection in accordance with subsection 208.03(c).

5. Location. The place where the finding was observed; can be a document (e.g., stormwater management plan [SWMP]) or physical location. A physical location must be described with enough detail to guide an independent party to the spot of the finding. Physical locations must be supported with at least one photograph.

6. Recalcitrance. Contractor has shown willful negligence or misrepresentation or unwillingness to adhere to the Water Quality Specifications.


(b) Liquidated Damages and Stop Work Orders. The Contractor will be subject to Liquidated Damages for incidents of failure to comply with the Water Quality Specifications and implement corrective actions to resolve noncompliance in the time frame established in subsection 208.09(b and c). Liquidated damages will not be considered a penalty but will be assessed to recover costs associated with environmental damages, and engineering and administrative expenses incurred by the Department for the Contractor’s failure to comply with the Water Quality Specifications. Liquidated damages will accumulate for each finding, for each cumulative day that the finding remains uncorrected. Liquidated damages associated with incidents pertaining to this subsection do not indemnify the Contractor of other Liquidated Damages associated with this project.
In addition to Liquidated Damages, the Contractor will be subject to a project-wide Stop Work Order for recalcitrance and the Engineer may, in writing, issue a Stop Work Order for Chronic and Severe Findings in accordance with subsection 105.01.

Findings are closed when the corrective action is complete, reported to ESCAN and accepted by the Department. The Department will notify the Contractor through ESCAN when the corrective action is accepted or denied. Liquidated damages will be assessed by the type of finding as follows and will continue until the corrective action is approved by the Department.

1. Regular Finding. The time required to repair a Regular Finding shall begin at 11:59 PM on the date the Inspection Form 105 is issued. The Contractor shall have no more than a seven day grace period to correct the Regular Finding before Liquidated Damages are assessed. The grace period extends until 11:59 PM on the seventh day after the Inspection Form 105 was issued.

   The Engineer will issue a Form 105 notifying the Contractor that Liquidated Damages are accruing at $1,500 per day for each full or partial calendar day a Regular Finding remains uncorrected after the seven day grace period. At 11:59 PM on the 14th day after the Form 105 was issued, each uncorrected, undeferred Regular Finding will be assessed as recalcitrant and the Engineer will issue a project-wide stop work order. The Contractor shall fix each recalcitrant finding and submit a plan to avoid future instances of each recalcitrance to the Department for approval. The recalcitrance plan shall be in writing, signed by the Superintendent and shall include:

   (1) Each Recalcitrant Finding.
   (2) Why the corrective action for each Recalcitrant Finding was not implemented within 14 days.
   (3) How the Contractor will avoid future recalcitrance.

   The Department will discuss the recalcitrance plan and may meet with the Superintendent to recommend modifications, if needed. The Engineer will issue a Form 105 accepting or rejecting the recalcitrance plan within 24 hours of the Contractor submitting a plan or resubmitting a modified plan.

   The Contractor will neither be reimbursed for costs incurred to fix each Recalcitrant Finding pertaining to a control measure in the SWMP plan nor costs to prepare the recalcitrance plan. The Contractor shall propose additional control measures, if needed, according to subsection 208.04(a). The project-wide Stop Work Order and Liquidated Damages will be assessed until approval of the corrective action for each Recalcitrant Finding and approval of the Contractor’s recalcitrance plan by the Department is given. After written approval by the Engineer, the project-wide Stop Work Order will be lifted and accrual of Liquidated Damages will cease.

2. Severe Finding. In response to a Severe Finding, the Engineer will issue Inspection Form 105 and immediately assess Liquidated Damages of $3,500 per Severe Finding. Severe Findings shall not be eligible for the seven day grace period (subsection 208.09(b)1). Liquidated damages will accrue at $3,500 per Severe Finding per calendar day beginning at 11:59 PM of day the Inspection Form 105 is issued.

   A. If the Severe Finding is a discharge to State waters, the Contractor shall prevent any further discharge and shall reclaim discharge which has not yet entered State waters. The
Contractor shall report the discharge to CDPHE in accordance with CDPS-SCP requirements.

B. If the Severe Finding is a discharge outside the LOC that does not enter State waters, the Contractor shall fully reclaim the discharge before it enters State waters and implement relevant CDPS-SCP noncompliance notification procedures.

The Engineer may require the Contractor to submit a plan for permanent stabilization of disturbed areas outside the LOC per 208.04(e)4 for approval. Permanent stabilization plans pertaining to Severe Findings and subsequent stabilization activities are not subject to 208.09(b).

The Contractor shall not be reimbursed for activities undertaken to reclaim the discharge, stabilize areas outside the LOC and implement relevant CDPS-SCP noncompliance notification procedures.

3. Chronic Finding. In response to a Chronic Finding, the Engineer will issue Inspection Form 105 and immediately assess Liquidated Damages of $1,500 per Chronic Finding. Chronic Findings shall not be eligible for the seven day grace period (subsection 208.09(b)). Liquidated damages will accrue at $1,500 per Chronic Finding per day beginning at 11:59 PM of day the Inspection Form 105 is issued.

When the Chronic Finding is comprised of two Severe Findings, the Department will assess Liquidated Damages in accordance with this specification.

(c) Deferment. If the Contractor seeks deferment, the Superintendent shall submit a deferment request to the Engineer by 11:59 PM of the day after the issuance of Inspection Form 105. Chronic and Severe Findings are not eligible for deferment. The deferment request shall be in writing, signed by the Superintendent and shall include:

(1) Regular Findings to be deferred

(2) The reasons why the Findings cannot be corrected in seven days

(3) An action plan containing:

(i) Methodology to protect water quality until each deferred Finding is corrected and accepted

(ii) Milestones to measure progress toward completion

(iii) Additional control measures to be implemented until each deferred Finding is corrected and accepted

(iv) Corrective completion dates for each Finding

The Department will discuss the deferment request and may meet with the Superintendent to recommend modifications to the action plan. The Engineer will issue a Form 105 accepting or rejecting the deferment request by 11:59 PM of the third day after the Inspection Form 105 documenting the Regular Finding is issued. The Department will not accept a deferment for operational error, lack of resources, improperly installed control measures, inadequate control measures, lack of preventative maintenance, careless or improper operation, or other non-proactive reason.
Preparation of deferment documentation and additional materials, including additional control measures, required to complete the action plan shall be at the Contractor’s expense. Time frames noted in subsection 208.09(b)1 will not be stopped during the deferment review period, therefore, Liquidated Damages will be assessed beginning 11:59 PM on calendar day seven if the deferment request is rejected and, furthermore, a rejected deferment plan (subsection 208.09(c)) shall not absolve the Contractor from recalcitrance.

The Engineer will assess Liquidated Damages in the amount of $1,500 per calendar day, and partial day, for each uncorrected Deferred Finding. These Liquidated Damages will start on the date the uncorrected work was deferred to be completed (subsection 208.09(c)(3)). In addition, Liquidated Damages of $1,500 per calendar day will be assessed retroactively to 11:59 PM of the day the finding was originally noted on the Inspection Form 105.

(d) Conflict 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.

(e) Exemptions. The Engineer will exempt from subsection 208.09(b) situations of Compliance Assistance, Documented Upset Conditions, Documented Reportable Spills and Documented Winter Exemptions. Release from subsection 208.09(b) does not exempt the Contractor from compliance with CDPS-SCP, Part I.D.8.

1. Documented Upset Condition. The Contractor shall report, both verbally and in writing, the Upset Condition to CDPHE per CDPS-SCP Part II.A.6 and subsection 208.03(c) and provide written documentation to the Engineer. The Engineer will issue a Form 105 and recognize the exemption to the Regulatory Mechanism. The Contractor shall also update the SWMP with the Form 105 and the documented Upset Condition.

2. Documented Reportable Spills. The Contractor shall report, both verbally and in writing, the Reportable Spill to CDPHE per subsection 107.25(b) and provide written documentation to the Engineer. The Engineer will issue a Form 105 and recognize the exemption to the Regulatory Mechanism. The Contractor shall also update the SWMP with the Form 105 and the documented Reportable Spill.

3. Winter Exemptions. The Contractor is unable to address findings noted on the Headquarters or Region led water quality control inspection due to:

   (1) Snow covers the entire site for an extended period and;

   (2) No construction activity and;

   (3) Melting conditions posing a risk of surface erosion do not exist.

   The Contractor shall request a Winter Exemption to the Department. If approved, the Engineer will issue a Form 105 and recognize the exemption to subsection 208.09(b). The Contractor shall also update the SWMP with the Form 105 and the documented Winter Exemption. Liquidated Damages, if assessed, will only accrue up to the point where the Winter Exemptions are approved.

4. Compliance assistance during Headquarters or Region led water quality control inspections. The RWPCM will record compliance assistance in ESCAN/CARL software.

208.10 Items to Be Completed Prior to Requesting Partial Acceptance of Water Quality Work.
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(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.** When Permanent Water Quality control measures are required on the project, the Contractor shall survey the control measures 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 CAD 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 control measures to confirm conformance to material requirements, locations, and dimensions of the Permanent control measures. Permanent control measures 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 control measure. Final as-built plans of the Permanent control measures shall be provided to the Engineer and the CDOT Headquarters and Region Permanent Water Quality Control Specialist for their records.

(c) **Locations of Temporary Control Measures.** The Engineer will identify locations where modification, cleaning, or removal of temporary control measures 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 control measures to remain on the project site.

All punch list and walkthrough items shall be completed and approved by the Engineer and Maintenance.

**METHOD OF MEASUREMENT**

208.11 Erosion Control Management will be measured as the actual number of days of ECM work performed, regardless of the number of personnel required for SWMP Administration and Erosion Control Inspection, including erosion control inspections, documentation, meeting participation, SWMP Administration, and the preparation of the SWMP. If the combined hours of SWMP Administration and Erosion Control Inspection is four hours or less in a day, the work will be measured as ½ day. If the combined hours of SWMP Administration and Erosion Control Inspection is more than four hours in a day, the work will be measured as one day. Total combined hours of ECM work exceeding eight hours in a day will still be paid as one day.

Erosion bales and rock check dams will be measured by the actual number installed and accepted.

Silt fence, silt berms, erosion logs, aggregate bags, silt dikes, temporary berms, 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.

Pre-fabricated concrete washout structures will be measured by the actual number of structures delivered to the site. It shall not include structures moved on-site.

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 up 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.

Pre-fabricated vehicle tracking pads will be measured by the actual number of pads delivered to the site and set up to the minimum dimensions. It shall not include pads moved on-site.

### BASIS OF PAYMENT

#### 208.12 ECM and control measures will be paid for at the Contract unit price for each of the items listed below that appear in the bid schedule.

<table>
<thead>
<tr>
<th>Pay Item</th>
<th>Pay Unit</th>
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<tbody>
<tr>
<td>Aggregate Bag</td>
<td>Linear Foot</td>
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<tr>
<td>Concrete Washout Structure</td>
<td>Each</td>
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<tr>
<td>Erosion Bales (Weed Free)</td>
<td>Each</td>
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<td>Erosion Control Management</td>
<td>Day</td>
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<tr>
<td>Erosion Log (Type 1) (_____ Inch)</td>
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<td>Erosion Log (Type 2) (______Inch)</td>
<td>Linear Foot</td>
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<td>Erosion Log (Type 3) (_____Inch)</td>
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<tr>
<td>Pre-Fabricated Concrete Washout Structure (Type 2)</td>
<td>Each</td>
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<tr>
<td>Pre-Fabricated Vehicle Tracking Pad</td>
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<td>Maintenance Aggregate (Vehicle Tracking Pad)</td>
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<td>Removal of Trash</td>
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<td>Silt Fence (Reinforced)</td>
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<td>Storm Drain Inlet Protection (Type__)</td>
<td>Linear Foot</td>
</tr>
<tr>
<td>Storm Drain Inlet Protection (Type__)</td>
<td>Each</td>
</tr>
<tr>
<td>Sweeping (Sediment Removal)</td>
<td>Hour</td>
</tr>
<tr>
<td>Temporary Berm</td>
<td>Linear Foot</td>
</tr>
<tr>
<td>Temporary Diversion</td>
<td>Linear Foot</td>
</tr>
<tr>
<td>Temporary Slope Drain</td>
<td>Linear Foot</td>
</tr>
<tr>
<td>Vehicle Tracking Pad</td>
<td>Each</td>
</tr>
</tbody>
</table>
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) to (18) in subsection 208.03(d)1 and required updates to the SWMP.

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 due to construction errors or survey errors by the Contractor shall be made at the Contractor's expense.

Surface roughening and vertical tracking (temporary stabilization) will not be measured and paid for separately but shall be included in the work. Payment for each control measure item will be full compensation for all work and materials required to furnish, install, maintain, and remove the control measure 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 and wood 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.

Compost and wood stakes for Erosion Log (Type 2) 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 control measure 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. The 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 as Maintenance Aggregate (Vehicle Tracking Pad).

Seeding, sod, mulching, soil retention blanket, and riprap will be measured and paid for in accordance with Sections 212, 213, 216, and 506.

All work and materials required to perform the permanent control measure 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 control measures replaced as approved by the Engineer. Temporary erosion and sediment control measures 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.

END OF SECTION
REVISION OF SECTION 213
MULCHING

Section 213 of the Standard Specifications is hereby revised for this project as follows:

Delete subsection 213.02 (f)(1) and replace with the following:

(1) Spray-on Mulch Blanket (Type 1) shall be a hydraulically applied matrix containing organic fibers, water soluble cross-linked tackifier, and reinforcing biodegradable fibers. The reinforcing fibers shall completely break down and not release any metals or toxins (compostable). Mulch Blanket (Type 1) shall conform to the following:

<table>
<thead>
<tr>
<th>Properties</th>
<th>Requirement</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organic Fibers</td>
<td>71% Min.</td>
<td>ASTM D2974</td>
</tr>
<tr>
<td>Cross linked Tackifiers</td>
<td>10% ± 2% Min.</td>
<td></td>
</tr>
<tr>
<td>Reinforcing Fibers</td>
<td>2.5% Min.</td>
<td></td>
</tr>
<tr>
<td>Biodegradability</td>
<td>100%</td>
<td>ASTM D5338</td>
</tr>
<tr>
<td>Ground Cover at Application Rate</td>
<td>90% Min.</td>
<td>ASTM D6567</td>
</tr>
<tr>
<td>Functional Longevity</td>
<td>12 Months Min.</td>
<td></td>
</tr>
<tr>
<td>Cure Time</td>
<td>&lt; 8 hours</td>
<td></td>
</tr>
<tr>
<td>Application</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Application Rate</td>
<td>3000 lbs./acre</td>
<td></td>
</tr>
</tbody>
</table>

The organic fiber shall not contain lead paint, printing ink, varnish, petroleum products, seed germination inhibitors, or chlorine bleach. The organic fibers and reinforcing fibers cannot be produced from sawdust, cardboard, paper, or paper by-products.

END OF SECTION
Section 401 of the Standard Specifications is hereby revised for this project as follows:

Subsection 401.02(b) shall include the following:

Reclaimed Asphalt Pavement (RAP) is allowed in hot mix asphalt (HMA) up to a maximum binder replacement of 23 percent for all lifts, provided all specifications for HMA are met. Fine Aggregate Angularity requirements shall apply only to the virgin fraction of the fine aggregate. The RAP shall not contain clay balls, vegetable matter, or other deleterious substances, and must meet the uniformity requirements as outlined below.

HMA Project Verification Testing for asphalt content and gradation will be performed at the frequencies listed in the Field Materials Manual in accordance with CP-L 5120.

The Contractor shall have an approved mix design for the amount of RAP to be used. The AC content of the RAP utilized in the Contractor RAP mix design shall be the average AC content determined in accordance with 1B or 1C, below, or alternatively, a minimum of five samples of the Contractors RAP stockpile may be sampled and the average AC content of the RAP be determined using AASHTO T-164, Method A or B, or in accordance with 1C below. The Contractor shall determine the total binder replaced by the binder in the RAP pursuant to the following equation:

\[
\text{Total Binder Replaced} = (A \times B) \times \frac{100}{E}
\]

Where:

- \(A\) = RAP % Binder Content *
- \(B\) = RAP % in Mix *
- \(E\) = Total Effective Binder Content *

* in decimal format (i.e. 2% is 0.02)

The Total Binder Replaced by the binder in the RAP shall not exceed 23 percent of the effective binder content of either the mix design or the produced mix.

The use of RAP shall be controlled in accordance with subsections 105.05 and 106.05. If the Contractor elects to use RAP, the following additional conditions shall apply:

1. The Contractor shall have an approved Process Control (PC) Plan that details how the RAP will be processed and controlled. The PC plan shall address the following:

   A. RAP Processing Techniques. This requires a schematic diagram and narrative that explains the processing (crushing, screening, and rejecting) and stockpile operation for this specific project.

   B. Control of RAP Asphalt Binder Content (AASHTO T-164, Method A or B). RAP Asphalt Binder Content may also be determined in accordance with CP-L 5120, provided a RAP AC content correction factor is determined through correlation testing with AASHTO T-164, Method A or B. The correction factor shall be determined by performing correlation testing on the first five samples of the RAP AC content, then at a frequency of one for every five AC content tests thereafter. The correction factor shall be determined by calculating the average difference in AC content between CP-L 5120 and AASHTO T-164, Method A or B, and applying the correction to the AC content determined in accordance with CP-L 5120:

   \[
   \text{Frequency: } \frac{1}{1000} \text{ tons of processed RAP material (minimum five tests)}
   \]
C. Alternative Control of RAP Binder Content. The Contractor may propose a RAP asphalt content correction factor to be used in conjunction with CP-L 5120. The proposed CP-L 5120 RAP asphalt content correction factor shall be used with all RAP asphalt contents tested for the mixture design and quality control sampling and testing. The methodology of the proposed CP-L 5120 RAP asphalt content correction factor shall be outlined in detail in the approved RAP PC Plan. At a minimum, the proposed CP-L 5120 correction factor shall identify the principal source locations of the RAP aggregate, gradation of the material tested, and specific ignition oven serial number used in all the RAP asphalt content testing. The RAP source locations, material gradation, and specific equipment used shall substantiate the CP-L 5120 asphalt content correction factor used for the testing. The substantiation must be from data gathered from historical information or specific asphalt content correction data obtained from tests performed on similar virgin aggregate sources, virgin material gradations, and the specific equipment used.

D. Control of RAP Gradation (CP31 or AASHTO T-30):
   - Frequency: 1/1000 tons of processed RAP material (minimum three tests)

E. Process Control Charts shall be maintained for binder content and each screen listed in subsection 401.02(b), during addition of any RAP material to the stockpile. The Contractor shall maintain separate control charts for each RAP stockpile. The control charts shall be displayed and shall be made available, along with RAP AC extraction testing laboratory reports, to the Engineer upon request.

2. The processed RAP must be 100 percent passing the 31.5 mm (1¼ inch) sieve. The aggregate obtained from the processed RAP shall be 100 percent passing the 25.0 mm (1 inch) sieve. The aggregate and binder obtained from the processed RAP shall be uniform in all the measured parameters in accordance with the following:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Binder Content</td>
<td>0.5</td>
</tr>
<tr>
<td>Percent Passing 19 mm (¾&quot;)</td>
<td>4.0</td>
</tr>
<tr>
<td>Percent Passing 12.5 mm (½&quot;)</td>
<td>4.0</td>
</tr>
<tr>
<td>Percent Passing 9.5 mm (¾&quot;)</td>
<td>4.0</td>
</tr>
<tr>
<td>Percent Passing 4.75 mm (#4)</td>
<td>4.0</td>
</tr>
<tr>
<td>Percent Passing 2.36 mm (#8)</td>
<td>4.0</td>
</tr>
<tr>
<td>Percent Passing 600 μm (#30)</td>
<td>3.0</td>
</tr>
<tr>
<td>Percent Passing 75 μm (#200)</td>
<td>1.5</td>
</tr>
</tbody>
</table>

*Uniformity is the Maximum allowable Standard Deviation of test results of processed RAP.

3. If RAP millings generated are incorporated in the same project, in accordance with CPL 5145 the Contractor shall pave with a virgin mix design until sufficient amount of processed RAP has been stockpiled and tested to allow full production of a RAP HMA mix.

END OF SECTION
Sections 601 and 701 of the Standard Specifications are hereby revised for this project as follows:

In subsection 601.02(2), after the sentence starting with “Deviations from the Standard Class ...”, delete item (2) and replace it with the following:

(2) 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.

Subsection 601.03 shall include the following in the materials table:
Slag Cement 701.05

In subsection 601.04, under Class 1 requirements for sulfate resistance, delete items (5) and (6) and replace them with the following:

(5) ASTM C595 Type IL(MS), IL(HS), IT(MS) or (HS); Class C fly ash shall not be substituted for cement.

In subsection 601.04, under Class 2 requirements for sulfate resistance, delete items (1), (2), (5), (6), (7), (8) and (9) and replace them with the following:

(1) ASTM C150 Type V with a minimum of a 20 percent substitution of Class F fly ash or slag cement by weight
(2) ASTM C150 Type II or III with a minimum of a 20 percent substitution of Class F fly ash or slag cement by weight. The Type II or III cement shall have no more than 0.040 percent expansion at 14 days when tested according ASTM C452
(5) ASTM C1157 Type MS plus Class F fly ash, slag cement, or High-Reactivity Pozzolan where the blend has less than 0.05 percent expansion at 6 months or 0.10 percent expansion at 12 months when tested according to ASTM C1012
(6) A blend of portland cement meeting ASTM C150 Type II or III with a minimum of 20 percent Class F fly ash or slag cement by weight, where the blend has less than 0.05 percent expansion at 6 months or 0.10 percent expansion at 12 months when tested according to ASTM C1012.
(7) ASTM C595 Type IP(HS), IL(HS) or IT(HS). Class F fly ash, slag cement, or High-Reactivity Pozzolan may be substituted for Type IL cement. Class C fly ash shall not be substituted for cement.
(8) ASTM C595 Type IL(MS) or IT(MS) plus Class F fly ash, slag cement, or High-Reactivity Pozzolan where the blend has less than 0.05 percent expansion at 6 months or 0.10 percent expansion at 12 months when tested according to ASTM C1012.

In subsection 601.04, under Class 3 requirements for sulfate resistance, delete items (1), (2), (3), (5), (6) and (7) and replace them with the following:

(1) A blend of Portland cement meeting ASTM C150 Type II, III, or V with a minimum of a 20 percent substitution of Class F fly ash or slag cement by weight, where the blend has less than 0.10 percent expansion at 18 months when tested according to ASTM C1012.
(2) ASTM C 1157 Type HS having less than 0.10 percent expansion at 18 months when tested according to ASTM C1012. Class F fly ash, slag cement, or High-Reactivity Pozzolan may be substituted for cement. Class C fly ash shall not be substituted for cement.
(3) ASTM C1157 Type MS or HS plus Class F fly ash, slag cement, or High-Reactivity Pozzolan where the blend has less than 0.10 percent expansion at 18 months when tested according to ASTM C1012.
(5) ASTM C595 Type IL(MS) or IT(MS) plus High-Reactivity Pozzolan where the blend has less than 0.10 percent expansion at 18 months when tested according to ASTM C1012.
REVISION OF SECTIONS 601, 701, AND 711
STRUCTURAL CONCRETE

(6) ASTM C595 Type IP(HS), IL(HS) or IT(HS) having less than 0.10 percent expansion at 18 months when tested according to ASTM C1012. Class F fly ash, slag cement, or High-Reactivity Pozzolan may be substituted for Type IL cement. Class C fly ash shall not be substituted for cement.

(7) ASTM C595 Type IL with a minimum of a 20 percent substitution of Class F fly ash or slag cement by weight, where the blend has less than 0.10 percent expansion at 18 months when tested according to ASTM C1012.

(8) ASTM C150 Type I, II, III or V plus a minimum of 20% Class F fly ash when the R factor of the fly ash is less than 0.75. R factor is determined using the following from the chemical composition of the fly ash.

\[ R = \frac{CaO - 5}{Fe_2O_3} \]

In subsection 601.04, the last paragraph shall include the following:

ASTM C1012 test results are acceptable for up to two years from the completion date of the test.

In subsection 601.05, first paragraph, delete the sixth (last) sentence and replace it with the following:

When determining the w/cm, the weight of cementitious material (cm) shall be the sum of the weights of the cement, slag cement, fly ash, silica fume, and high-reactivity pozzolan.

In subsection 601.05 delete the fifteenth through twenty-second paragraphs and replace them with the following:

The Concrete Mix Design Report shall include certified test reports showing that the cement, fly ash, slag cement, high-reactivity pozzolan, and silica fume meet the specification requirements and shall support this statement with actual test results. The certification for silica fume shall state the solids content if the silica fume admixture is furnished as slurry.

For all concrete mix designs with ASTM C150 cements, up to a maximum of 20 percent Class C fly ash, 30 percent Class F fly ash, or 30 percent high-reactivity pozzolan by weight of total cementitious material may be substituted for cement. Up to a maximum of 50% slag cement by weight of total cementitious material may be substituted for cement. When slag cement and pozzolans are substituted for cement, the total substitution of cement shall not exceed 50% by weight of total cementitious material.

For all concrete mix designs with ASTM C595 Type IL cements, up to a maximum of 20 percent Class C fly ash, 30 percent Class F fly ash, or 30 percent high-reactivity pozzolan by weight of total cementitious material may be substituted for cement. Up to a maximum of 50% slag cement by weight of total cementitious material may be substituted for cement. When slag cement and pozzolans are substituted for cement, the total substitution of cement shall not exceed 50% by weight of total cementitious material. For all concrete mix designs with ASTM C595 Type IP, IP(MS), IP(HS) or IT cements: fly ash or high-reactivity pozzolan shall not be substituted for cement.

For all concrete mix designs with ASTM C595 IT cements: slag cement shall not be substituted for cement.

For all concrete mix designs with ASTM C595 Type IP, IP(MS), IP(HS) cements, when slag cement is substituted for cement, the total substitution of cement shall not exceed 50% by weight of total cementitious material.
For all concrete mix designs with ASTM C1157 cements, the total pozzolan content including pozzolan in cement shall not exceed 30 percent by weight of the cementitious material content. Up to a maximum of 30% slag cement by weight of total cementitious material may be substituted for cement.

The Contractor shall submit a new Concrete Mix Design Report meeting the above requirements when a change occurs in the source, type, or proportions of cement, slag cement, fly ash, high-reactivity pozzolan, silica fume, or aggregate. When a change occurs in the source of approved admixtures, the Contractor shall submit a letter stamped by the Concrete Mix Design Engineer approving the changes to the existing mix design. The change shall be approved by the Engineer prior to use.

Delete 601.17(g) and replace it with 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 laboratory trial mix for the Concrete mix design except when an optimized gradation is the only deviation from the Standard Class B, Class BZ, Class D, Class DT, Class E, and Class P concrete requirements. 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.

In subsection 701.01, the third paragraph shall include the following:

ASTM C595 Type IL(MS)
ASTM C595 Type IL(HS)
ASTM C595 Type IT(MS)
ASTM C595 Type IT(HS)

Add subsection 701.05 as follows:

701.05 Slag Cement Slag cement shall conform to the requirements of ASTM C989. Slag cement shall be Grade 100 or Grade 120. Slag cement shall have a maximum Aluminum Oxide content of 11.0% Slag cement shall be from a pre-approved source listed on the Department’s Approved Products List. Slag Cement shall be subject to sampling and testing by the Department. Test results that do not meet the physical and chemical requirements may result in the suspension of the use of Slag Cement until the necessary corrections have been taken to ensure that the material conforms to the specifications.

Subsection 711.03 shall include the following:

Corrosion inhibiting admixtures shall conform to the requirements of ASTM C1582. Pigments for integrally coloring concrete shall conform to the requirements of ASTM C979.

END OF SECTION
REVISION OF SECTION 703
AGGREGATE FOR BASES (RAP ALLOWED)

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

In subsection 703.03, first paragraph, delete the first sentence and replace with the following:

Aggregates for bases other than Aggregate Base Coarse (RAP) shall be crushed stone, crushed slag, crushed gravel, natural gravel, crushed reclaimed concrete or crushed reclaimed asphalt pavement (RAP).

Aggregates for bases shown on the plans Class 57 and 67 shall be a 50%/50% blend. All rock within this blend shall have a minimum of two fractured faces and conform to the quality requirements of AASHTO M 147. This rock blend shall be wrapped with the specified geofabric specified on the plans.

END OF SECTION
Section 706 of the Standard Specifications is hereby revised for this project as follows:

**Delete subsection 706.02 and replace with the following:**

706.02 **Reinforced Concrete Pipe.** This pipe shall conform to the requirements of AASHTO M 170 for the specified diameters and strength classes. Unless otherwise specified, pipe wall design and use of elliptical reinforcement in circular pipe are optional. Reinforced concrete pipe being jacked shall be Class V and shall be furnished with grouting nipples spaced not more than 8 feet apart. Joints for this pipe shall come equipped with steel rings and rubber gaskets conforming to ASTM C361.

Elliptical pipe conforming to AASHTO M 207 shall be furnished when required on the plans. Arch pipe conforming to AASHTO M 206 shall be furnished when required on the plans.

Precast reinforced concrete end sections shall have: (1) at least one line of reinforcement conforming to the requirements of AASHTO M 170 equivalent to the square inches per linear foot for elliptical reinforcement in circular pipe, Class II, Wall B, or (2) macro fiber at 5.0 lb./cy.

Pipe shall be obtained from a manufacturer that is a current plant quality certified member of the American Concrete Pipe Association (ACPA), meeting all current ACPA requirements for this certification.

A copy of the ACPA certification shall be submitted to the Engineer prior to delivery of the pipe.

**END OF SECTION**